



BUREAU OF ENERGY EFFICIENCY



Energy Conservation: Building Blocks of a Sustainable Future

ANNUAL REPORT 2022-2023





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1. General

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1.1 The Mission

The mission of the Bureau of Energy Efficiency (BEE) is to develop policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 (EC Act). The primary objective is to aim for reducing energy intensity of the Indian economy. This would be achieved with active participation of all stake holders, resulting in accelerated and sustained adoption of energy efficiency in all potential sectors of the Indian economy.

1.2 The Objectives of BEE and its Role

Objectives of BEE

- To develop policies and programmes on efficient use of energy and its conservation with the involvement of stakeholders.
- To plan, manage and implement energy conservation initiatives as envisaged in the EC Act.
- To assume leadership and provide policy framework and direction to national energy efficiency and conservation efforts and programmes.
- To demonstrate energy efficiency delivery mechanisms, as envisaged in the EC Act, through Public-Private Partnership (PPP).
- To establish systems and procedures to measure, monitor and verify energy efficiency results in individual sectors as well as at the national level.
- To leverage multi-lateral, bi-lateral and private sector support in the implementation of programmes and projects on efficient use of energy and its conservation.
- To promote awareness of energy savings and energy conservation among targeted groups of consumers.

Role of BEE

BEE coordinates with Designated Agencies, Potential Consumers and other organizations working in the field of energy conservation/efficiency to recognize and utilize the existing resources and infrastructure in performing the functions assigned to the Bureau under the Energy Conservation Act.

The Act provides regulatory mandate for: Standards & Labeling of equipment and appliances; formulation of Energy Conservation Building Code for commercial buildings; and energy consumption norms for energy intensive industries.

The EC Act was amended in 2010 to incorporate few additional provisions required to better equip BEE to manage ever evolving sphere of energy efficiency in the country. The main amendments made to the original Act are given below:

- The Central Government may issue the energy savings certificate to the designated consumer whose energy consumption is less than the prescribed norms and standards in accordance with the procedure as may be prescribed.
- The designated consumer whose energy consumption is more than the prescribed norms and standards shall be entitled to purchase the energy savings certificate to comply with the prescribed norms and standards.



- The Central Government may, in consultation with the Bureau, prescribe the value of per metric ton of oil equivalent of energy consumed.
- Commercial buildings which are having a connected load of 100 kW or contract demand of 120 kVA and above brought under the purview of ECBC under EC Act.

Recently Energy Conservation (Amendment) Act, 2022 passed in both the houses of Parliament and got assent of the President of India on 19th December, 2022. The main amendments made to the original Act are given below:

- Non-fossil Source usage norms (Hydrogen/ Renewable)
- Framework for Carbon Markets
- Buildings Sector
 - Inclusion of Large Residential Buildings
 - Enhanced scope of Building Code to include renewables, water and waste
- Strengthening Implementation
 - Rationalizing Penalty Provisions
 - Functions of State Electricity Regulatory Commissions

Promotional Role

The Promotional Role of BEE primarily includes:

- Create awareness and disseminate information on energy efficiency and conservation among masses.
- Arrange and organize training of personnel and specialists in the techniques for efficient use of energy.
- Strengthen consultancy services in the field of Energy Efficiency.
- Promote research and development.
- Develop testing and certification procedures and promote testing facilities.
- Formulate and facilitate implementation of pilot projects and demonstration projects.
- Promote use of energy efficient processes, equipment, devices and systems.
- Take steps to encourage preferential treatment for use of energy efficient equipment or appliances.
- Promote innovative financing of energy efficiency projects.
- Give financial assistance to institutions for promoting efficient use of energy and its conservation.
- Prepare educational curriculum on efficient use of energy and its conservation.
- Implement international co-operation programmes relating to efficient use of energy and its conservation.



1.3 Governing Council Composition

The general superintendence, direction and management of the affairs of the Bureau vest in the Governing Council which consist of not less than thirty-one, but not exceeding thirty-seven, members to be appointed by the Central Government. The Governing Council consists of the following:

S. No.	Designation	Name	Status
1.	Hon'ble Minister of Power	Shri R. K. Singh	Ex-officio Chairperson
2.	Secretary, Ministry of Power	Shri Pankaj Agarwal	Ex-officio Member
3.	Secretary, Ministry of Petroleum and Natural Gas	Shri Pankaj Jain	Ex-officio Member
4.	Secretary, Ministry of Coal	Shri Amrit Lal Meena	Ex-officio Member
5.	Secretary, Ministry of New and Renewable Energy Sources	Shri Bhupinder Singh Bhalla	Ex-officio Member
6.	Secretary, Department of Atomic Energy	Dr. Ajit Kumar Mohanty	Ex-officio Member
7.	Secretary, Department of Consumer Affairs	Shri Rohit K. Singh	Ex-officio Member
8.	Secretary, Ministry of Environment, Forest and Climate Change	Mrs. Leena Nandan	Ex-officio Member
9.	Secretary, Ministry of Housing and Urban Affairs	Shri Manoj Joshi	Ex-officio Member
10.	Secretary, Ministry of Road Transport and Highways	Shri Anurag Jain	Ex-officio Member
11.	Secretary, Ministry of Steel	Shri Nagendra Nath Sinha	Ex-officio Member
12.	Secretary, Ministry of Civil Aviation	Shri Vumlunmang Vualnam	Ex-officio Member
13.	Secretary, Ministry of Ports, Shipping and Waterways	Shri T. K. Ramachandram	Ex-officio Member
14.	Secretary, Ministry of Micro, Small and Medium Enterprises	Shri S. C. L Das	Ex-officio Member
15.	Secretary, Ministry of Heavy Industries	Shri Kamran Rizvi	Ex-officio Member
16.	Principal Secretary (Energy), Bihar	Shri Sanjeev Hans	Ex-officio Member
17.	Principal Secretary (Energy), Gujarat	Smt Mamta Verma	Ex-officio Member
18.	Principal Secretary (Power), Punjab	Shri Tejveer Singh	Ex-officio Member
19.	Principal Secretary (Power), Assam	Shri Niraj Verma	Ex-officio Member



S. No.	Designation	Name	Status
20.	Additional Chief Secretary (Power), Kerala	Shri Paul Antony	Ex-officio Member
21.	Member, Railway Board (in charge of Energy), Ministry of Railways	Shri Naveen Gulati	Ex-officio Member
22.	Chairman, Central Electricity Authority	Shri Ghanshyam Prasad	Ex-officio Member
23.	Director-General, Central Power Research Institute	Shri. B A Sawale	Ex-officio Member
24.	Executive Director, Petroleum Conservation Research Association	Shri Asheesh Joshi	Ex-officio Member
25.	Chairman-cum-Managing, Director, Central Mine Planning and Designing Institute Limited	Shri Manoj Kumar	Ex-officio
26.	Director-General, Bureau of Indian Standards	Shri Pramod Kumar Tiwari	Ex-officio Member
27.	Director-General, National Test House	Dr. Alok Kumar Srivastava	Ex-officio Member
28.	Director-General, National Productivity Council	Shri S Gopalakrishnan	Ex-officio Member
29.	Managing Director, Indian Renewable Energy Development Agency Limited	Shri Pradip Kumar Das	Ex-officio Member
30.	President, Associated Chambers of Commerce and Industry of India (ASSOCHAM)	Shri Ajay Singh	Member
31.	Director General, Confederation of India Industry (CII)	Shri Chandrajit Banerjee	Member
32.	President, Consumer Electronics and Appliance Manufacturers Association (CEAMA)	Shri Eric Braganza	Member
33.	Chief Scientist and Head, Central Building Research Institute (CBRI)	Dr. Ashok Kumar	Member
34.	Chief Operating Officer, Voluntary Organization in Interest of Consumer Education (VOICE)	Shri Amit Chauhan	Member
35.	Director General, The Energy and Resources Institute (TERI)	Dr. Vibha Dhawan	Member
36.	Director, Indian Institute of Technology (IIT), Delhi	Prof. Rangan Banerjee	Member
37.	Director General, Bureau of Energy Efficiency	Shri Abhay Bakre	Ex-officio Member- Secretary



1.4 Report of the Director General

- India is one of the fastest growing economies among countries in the world and has witnessed rapid increase in the energy consumption. The rise in energy consumption is mainly attributed to rapid economic growth, access to affordable energy, increased industrialization, building infrastructure and other end uses of energy.
- In recent years, India has emerged as the global leader in addressing climate change and promotion of sustainable development.
- Energy efficiency across all sectors of the economy is essential to enable decoupling of energy supply growth from economic growth, while ensuring that energy services demands are met.
- Perform Achieve and Trade (PAT) scheme, one of the flagship programmes of Bureau of Energy Efficiency is aimed at improving energy efficiency in energy intensive industries. The programme is a major contributor towards reduction in GHG gas emissions and energy savings in the country. PAT cycle –VII was notified in October 2021 for the period 2022-23 to 2024-25 wherein 707 DCs have been notified with overall energy saving target of 8.485 MTOE. The PAT scheme has covered 1333 units from 13 sectors for participation as on June 2023.
- With an objective to accelerate Energy Transition in Industrial Sectors, BEE developed “User Manuals” for different stakeholders of PAT scheme. The User Manuals developed by Bureau of Energy Efficiency for key stakeholders will definitely be useful in providing necessary guidance for effective and efficient implementation of the PAT scheme.
- During the 2022-23 period, the Energy and Resource Mapping activities have been initiated in fifteen (15) SME clusters of three (3) sectors i.e. namely Textile, Food Processing and Leather to conduct the detailed survey on the consumption of energy and its flow within the MSME facilities, technological status, operating practices, knowledge perception etc.
- In the appliance sector, the Standards and Labelling (S&L) programme of BEE has been very successful in providing the consumer an informed choice about energy intensive appliances and equipment. Voluntary star labelling program for Side by Side / Multi Door Refrigerators, Pedestal Fans, Table / Wall Fans and Induction Hobs were launched in March, 2023. With these additions, the programme now covers 34 appliances out of which 14 appliances are under the mandatory regime while the remaining 20 appliances are under the voluntary phase.
- In the Building energy sector, till March 2023, there are 22 States and 2 UTs who have adopted Energy Conservation Building Code (ECBC). 392 Urban Local Bodies



(ULBs) from various States have incorporated provisions of ECBC for building approval process.

- With the objective of accelerating the pace of proliferation of electric vehicles within all segments of Indian Economy, BEE has developed policy measures to support zero emission goals, energy security, fuel efficiency etc. in this sector. Creation of Public Charging Infrastructure across the country has been identified as one of the critical areas to accelerate adoption of Electric Vehicles in the country and BEE is supporting Ministry of Power and other Ministries in prescribing policy measures to ensure accelerated deployment of this critical Infrastructure
- The Ministry of Power (MoP) has designated Bureau of Energy Efficiency (BEE) as the Central Nodal Agency (CNA) as per the Guidelines and Standards issued on 14th January 2022. In terms of these guidelines, each state is required to designate a Nodal Agency for coordinating the deployment of public EV-charging infrastructure. Currently, 27 states have designated State Nodal Agencies (SNAs) to oversee the deployment of electric vehicle public charging infrastructure. As on 31st March, 2023, 28 States have announced their EV policies, of which three state policies are in consultation stage and 25 EV policies have been Notified.
- BEE organized the 32nd National Energy Conservation Awards (NECA) function on 14th December, 2022. Hon'ble President of India was the Chief Guest on this occasion. The competition had participation of 448 companies.
- State Designated Agencies (SDAs) are the implementing arms of Bureau of Energy Efficiency (BEE) at State level to facilitate, promote and coordinate efficient use of energy and its conservation. The SDAs implemented 45 nos. of demonstration projects in the areas of street lighting, water pumping, retrofitting of electrical appliances in buildings, and waste heat recovery during FY 2022-23. In addition, the SDAs also implemented demonstration projects on Space Heating in Govt. buildings and on Clean/ Electric cooking in Govt. hospitals and Anganwadis during FY 2022-23.
- BEE is making efforts to create awareness about energy conservation and its energy efficiency. In order to achieve enhanced, outreach, BEE engaged a multimedia agency, who developed awareness campaign for general population. The campaign was executed in print, electronic and outdoor. Further to create awareness among school children, a painting competition on energy conservation was organized with the help of State Designated Agencies. To promote star rating of appliances, a series of radio program titled "Bachat Ke Sitare" is also produced in 20 languages which is broadcasted through 30 stations of All India Radio (Rainbow FM and Vividh Bharati). In addition, Bureau is also undertaking extensive campaigning through Social Media Platforms like facebook, twitter, Instagram, LinkedIn and youTube.



- **Achievements of Energy Efficiency Scheme/Programmes for FY 2021-22**
 - Electricity savings of **249.88 BUs** annually.
 - Thermal energy savings of **23.85 Million Tonnes of oil equivalent**.
 - Total energy savings of **44.43 Million Tonnes of oil equivalent i.e., 6 %** of the total primary energy supply of the country.
 - Total energy savings amounted to monetary savings worth **INR 160,721 crores**.
 - The total equivalent reduction in CO₂ emissions is around **280.77 Million Tonnes annually**.

1.5 Schemes of Bureau of Energy Efficiency

1.5.1 National Mission for Enhanced Energy Efficiency (NMEEE)

National Mission for Enhanced Energy Efficiency (NMEEE) is one of the eight national missions under the National Action Plan on Climate Change (NAPCC) that was released in June 2008 by the Government of India. The primary objective of the mission is to develop regulations and policies that are instrumental in strengthening the market for energy efficiency. The thrust of the NMEEE for promoting energy efficiency is on self-regulation and market principles by putting in place initiatives on enhancing energy efficiency and creating eco-system such as capacity building and financing.

(I) Perform Achieve and Trade Scheme (PAT)

The mission includes Perform, Achieve and Trade (PAT) scheme as a flagship programme which is a mechanism designed to achieve the required energy efficiency in energy intensive sectors. Energy consumption norms and standards are set by BEE for energy intensive industry sectors. Selected energy intensive entities are identified as Designated Consumers (DCs) within certain key sectors, which are required to comply with the notified norms, rules and regulations framed under Energy Conservation (EC) Act, 2001. The norms are primarily based on Specific Energy Consumption (SEC) in the manufacturing sectors such as Cement, Iron & steel etc. and other corresponding metric for energy efficiency in sectors such as Railways and DISCOMs.

It involves assessment of Specific Energy Consumption (SEC) etc. in the baseline year and projected SEC in the target year covering different forms of net energy going into the boundary of the plant and the products leaving it over a particular cycle. PAT is a multi-cycle programme with each cycle of 3 years in which SEC reduction targets are assigned to industrial units called Designated Consumers (DCs).

Since, PAT programme is a market-based mechanism, excess energy savings are converted into a tradable instrument called Energy Savings Certificates (ESCs) that can be traded at the Power Exchanges.



Perform, Achieve and Trade Cycle-I (2012-13 to 2014-15)

Perform Achieve and Trade in its first cycle was designed to reduce the specific energy consumption (SEC) i.e. energy used per unit of production of 478 industrial units in 8 sectors viz. Aluminum, Cement, Chlor-Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Thermal Power Plant and Textile. Energy saving targets were given to these 478 industrial units called Designated Consumers (DCs) based on their current levels of energy efficiency, so that energy efficient units will have low target of percentage reduction, as compared to less energy efficient units which will have higher targets. The overall SEC reduction targets aimed to secure 4.05% reduction in the total energy consumption of these industries totaling to an energy saving of 6.686 Million Tonne of Oil Equivalent (MTOE). Units which were able to achieve SEC level that are lower than their targets could receive energy savings certificates (ESCerts) for their excess savings.

PAT Cycle-I had completed in March, 2015 after which the scrutiny of the Performance Assessment Documents (PADs) submitted by the DCs was carried out by BEE. Implementation of PAT cycle –I resulted in energy saving of 8.67 MTOE translating into avoiding of about 31 million tonne of CO₂ emissions

Trading of ESCerts:

Ministry of Power had issued about 38.25 lakh ESCerts to 306 Designated Consumers (DCs of PAT cycle –I) for excess energy saving and 110 DCs of PAT cycle –I were entitled to purchase about 14.25 lakh ESCerts to meet their shortfall to meet energy saving targets. Trading of ESCerts at Power Exchange had commenced in September, 2017. The total volume of ESCerts traded was about 12.98 lakhs resulting into a business of about INR 100 crores.

Perform, Achieve and Trade Cycle-II

“Deepening” –identification of new DCs in existing sectors and “Widening” –inclusion of new sectors, was carried out by BEE before the commencement of the second cycle of PAT. Deepening study resulted into identification of 89 DCs new from the existing sectors of PAT. Widening study resulted into notification of three new sectors namely Refineries, Railways and DISCOMs under PAT scheme. Energy consumption targets were notified to 621 DCs from 11 energy intensive sectors (eight existing sectors and three new sectors). PAT Cycle II commenced from 1st April, 2016 and was completed on 31st March 2019. Implementation of PAT cycle -II resulted into total energy savings of about 14.08 MTOE translating into avoiding of about 68 million tonne of CO₂ emission.



Trading of ESCerts: Ministry of Power issued about 57.38 lakh ESCerts to 349 DCs and 193 DCs have been directed to purchase 36.68 lakh ESCerts under PAT cycle –II. Trading of ESCerts under PAT cycle –II resumed on 14th February 2023. The total volume of ESCerts traded in 39 trading sessions till October, 2023 is about 18.71 lakhs, worth Rs.300 crore.

Perform, Achieve and Trade Cycle III

The Parliamentary Standing Committee on Energy, Executive Committee on Climate Change under Prime Minister's Office (PMO) and Group of Secretaries recommended notifying DCs under PAT scheme annually for accelerated coverage. Thus, PAT scheme is being implemented on a rolling cycle basis where new DCs/sectors are notified every year. Since a decision was taken to put PAT scheme under the rolling cycle from PAT-II onwards, PAT cycle-III was notified on 31st March, 2017. PAT cycle -III expected to achieve and overall energy consumption reduction of 1.06 MTOE for which targets have been notified to 116 Designated Consumers from six sectors viz. Thermal Power Plant, Cement, Aluminium, Pulp & Paper, Iron & Steel and Textile. PAT Cycle –III was completed on 31st March 2020. From implementation of PAT cycle –III, energy savings of about 1.594 MTOE and corresponding CO₂ reduction of 5.59 million tonne of CO₂ emissions has been realized.

Perform, Achieve and Trade Cycle IV

The fourth cycle of PAT was notified on 28th March-2018. A total of 106 DCs with a total energy consumption reduction target of 0.701 million tonnes of oil equivalent were notified. These DCs were from 8 sectors consisting of 6 existing sectors of PAT cycle -I and two new sectors (Petrochemicals & Buildings). Implementation of PAT cycle -IV has completed in FY22. The energy savings of about 0.751 MTOE is achieved by assessment of 90 numbers of DC.

Perform, Achieve and Trade Cycle V

PAT cycle –V had commenced with effect from 1st April 2019. Under PAT cycle –V, 110 DCs from the existing sectors of PAT i.e. Aluminum, Cement, Chlor-Alkali, Commercial Buildings (Hotels), Iron & Steel, Pulp & Paper, Textile and Thermal Power Plant were notified with a total energy savings target of 0.5130 (MTOE). Implementation of PAT cycle -IV has resulted in energy savings of about 0.681 MTOE.

Perform, Achieve and Trade Cycle VI

PAT Cycle-VI had commenced with effect from 1st April 2020. Under PAT Cycle-VI, 135 DCs from six sectors, i.e. Cement, Commercial buildings (hotels), Iron and Steel,



Petroleum Refinery, Pulp and Paper and Textiles, were been notified. With implementation of PAT cycle –VI, it is expected to achieve a total energy savings of 1.277 MTOE.

Perform, Achieve and Trade Cycle VII

PAT cycle –VII was notified for the period 2022-23 to 2024-25 wherein 707 DCs have been notified with overall energy saving target of 8.485 MTOE in the following nine sectors, i.e. Aluminium, Cement, Chlor-Alkali, Iron and Steel, Pulp & Paper, Textiles, Thermal power plant, DISCOM and Railways.

Perform, Achieve and Trade Cycle VIII

PAT cycle -VIII has been notified vide S.O. 2794 (E) dated 27th June 2023 for the period 2023-24 to 2025-26. Under PAT cycle -VIII, 138 DCs from sectors namely Aluminium, Cement, Chlor-Alkali, Iron & Steel, Pulp & Paper and Textile have been notified with a total energy saving target of 0.3370 MTOE.

11. The details of total number of DCs notified under various PAT Cycles is mentioned in the table below:

Sector / No. of DCs	PAT Cycle I	PAT Cycle II	PAT Cycle-III	PAT Cycle-IV	PAT Cycle-V	PAT Cycle-VI	PAT Cycle-VII	PAT Cycle-VIII	Total Notified DCs
	Apr'12	Apr'16	Apr'17	Apr'18	Apr'19	Apr'20	Apr'22	Apr'23	
Aluminium	10	12	1	-	1	-	12	1	14
Cement	85	111	14	1	12	37	120	25	200
Chlor- Alkali	22	24	-	2	2	-	24	1	29
Fertilizer	29	37	-	-	-	-	0	-	37
Iron & Steel	67	71	29	35	23	5	134	66	270
Paper & Pulp	31	29	1	2	8	2	24	7	55
Textile	90	99	34	7	16	7	120	38	206
Thermal Power Plant	144	154	37	17	17	-	152	-	239
Refinery	-	18	-	-	-	20	0	-	20
Railways	-	22	-	-	-	-	26	-	26
DISCOMs	-	44	-	-	-	-	95	-	96
Petrochemical	-	-	-	8	-	-	0	-	8
Buildings	-	-	-	37	31	64	0	-	133
Total	478	621	116	109	110	135	707	138	1333



Deepening and Widening of PAT Scheme:

The feasibility study of various sectors has been conducted in which the scheme could be expanded with additional coverage to new sectors such as Sugar, Zinc, Copper, Glass, Dairy, Ceramic, Chemicals, Tyre, Automobile assembly unit, forging, Port trust, Foundry and Refractory.

Establishment of Excellence Centre (UTPRERAK):

An Advanced Industrial Technology Demonstration Centre (AITDC) centre called UTPRERAK at NPTI Badarpur is being set up to showcase the non-working models of energy efficient technologies across the sectors such as Cement, Iron & Steel, Pulp & Paper, Textile, Chlor-Alkali. The centre was inaugurated in June 2023.

DEEP (Demonstration of Energy Efficient Project):

Demonstration of Energy Efficient Project (DEEP) is entrusted to EESL regarding demonstration of 8 nos. of energy efficient technologies in about 27 Designated Consumer units. MoUs have been signed between EESL and 5 PAT Designated Consumers (DCs) under DEEP where energy efficient technologies would be demonstrated at the DC's premises.

Research and Development Projects:

BEE has signed MOU with IIT-Roorkee for R&D cum demonstration project in Steel sector. For Pulp & Paper sector, similar R&D cum demonstration project has been initiated. Further, such type of R&D cum demonstration projects would be carried out in Cement and other sectors in collaboration with sectoral research institutions.

Net Zero Commitments:

One of the Panchamrit announced by Hon'ble PM at COP-26 at Glasgow states that India will achieve the target of Net Zero in 2070. The industry plays vital role in becoming India- a Net Zero. In this regard, BEE has written to DCs of energy intensive sectors and other industry/establishments having high energy consumption to share their net-zero commitment timelines and potential activities to be undertaken.

Launch of Indian Carbon Market:

A competitive carbon market mechanism can enable the reduction of Greenhouse Gas (GHG) emissions for a specified target at the least cost, both at the level of each regulated entity, as well as an overall sector, and thus drive faster adoption of clean technologies. While India has market mechanisms for energy efficiency and renewable energy in place, they are unable to realize their full potential and thus, are unable to provide the required support for decarbonisation of the Indian energy sector and industries.

Setting up of effective domestic carbon market mechanism in India to reach viable scale of operations, BEE is in the process of establishing a carbon market mechanism under the guidance of MoEFCC and MoP.

Revision of NMEEE:

To align objectives of the erstwhile NMEEE with the revised goals under the NDCs, it has been revised with the title Roadmap of Sustainable and Holistic Approach to National Energy Efficiency (ROSHANEE). Mission ROSHANEE has a broader vision and takes into account all the potential areas of energy efficiency in key sectors of the economy, covering the macro level and further delineating the respective schemes. The revised mission includes all existing activities of BEE that have contributed significantly towards enhancing energy efficiency and consequent CO₂ mitigation as well as the activities proposed in future, some of which have been identified and others need to be explored. Mission ROSHANEE clearly outlines the strategies for achieving India's Nationally Determined Contribution commitments made under the Paris Agreement. The ROSHANEE mission document was reviewed in the 8th meeting of Executive Committee on Climate Change Chaired by the Principal Secretary to the Hon'ble Prime Minister on 1st September 2021 and was directed that activities under the mission may be made ready for implementation. Subsequently the implementation of various activities on SFC proposal of Rs. 167 crore and EFC proposal of Rs. 600 crore has been approved.

(ii) Financing Energy Efficiency Programme (FEEP):

Under NMEEE programme it has been proposed to create this umbrella programme FEEP for providing overarching support to financing mechanisms for energy efficiency. This umbrella programme will cover 'Energy Efficiency Financing Platform' and 'Framework for Energy Efficient Economic Development'.

(a) BEE has set up an online Facilitation Centre to accelerate EE financing and following outcomes are noted so far:

- Till date approx. 215 EE projects have been identified with **more than Rs. 3000 crore investment potential**
- 25 banks/NBFCs have been registered with Facilitation Centre
- List of **151 EE technologies for financing** has been released by BEE in March 2023



Photo for financing energy efficiency programme



- IT platform for bringing FIs, industries and SDAs on one common platform was launched in November 2022
 - Through BEE's Facilitation Centre 9 projects have been financed by FIs
- (b) Till March 2023, SDAs have organized 23 Investment Bazaar events with identified project cost of more than Rs. 1800 crore.



Photos of Investment bazaar events organized in various states

- c) BEE has signed MoA with **Central Bank of India** in Oct 2022 for establishing EE financing cell and providing manpower support for this cell. Till March 2023 this cell has participated in training workshops and is also in process of sanctioning few projects.
- d) **Training programme for FIs on EE financing:** BEE launched training workshops for financial institutions on Energy Efficiency financing in June 2015 with Phase I (training of trainers). Phase II for individual training workshops was completed during 2017 to 2019. In Phase III, NPTI completed six training workshops (Nov 2022 to March 2023) for FIs on EE financing and more than 140 participants

were trained. Total 826 participants from 76 banks/NBFCs received training on EE financing from different parts of the country.

- e) BEE empaneled **CRISIL and SMERA** for reimbursing grading fee of first 100 graded as well as financed Energy Efficient projects. FIs registered with Facilitation centre are eligible to seek benefit of this reimbursement of grading fee.
- f) MoP has identified PFC as Nodal Agency for EE financing and an EE financing cell has been established by them in July 2022. Till March 2023, one Project has been sanctioned by PFC.
- g) BEE signed MoU with Small Industries Development Bank of India (SIDBI) on 3rd November 2022 to promote energy efficiency financing for MSMEs and exploring IoT based solutions, Greening MSMEs, capacity building of various stakeholders, etc.



Photo of MoU signing ceremony with SIDBI on 3rd November 2022

Under this MoU, BEE and SIDBI launched a tool (<http://sidbieetool.in/>) called UNNATEE in National Conclave on 9th Dec. 2022 along with mobile app which can be downloaded from google play store at free of cost.



1.5.2 Energy Conservation Building Code (ECBC)

Energy Conservation Building Code (ECBC) for commercial buildings.

In India, the Energy Conservation Act, 2001 provides the basic framework for regulating all initiatives relating to the efficient use of energy and this includes Energy Conservation Building code (ECBC). Building energy codes have been adopted as a regulatory measure for ushering energy efficiency in the building sector.

The Energy Conservation Building Code (ECBC) sets minimum energy standards for new commercial buildings having a connected load of 100 kW or more, or contract demand of 120 kVA or more. The effective implementation of code provides comfort to occupants by adopting passive design strategies & day light Integration. It is technologically neutral, promotes renewable energy and also emphasizes on life cycle cost of building. The updated code was launched in 2017, which had additional priorities of renewable energy integration, ease of compliance, inclusion of passive building design strategies and, flexibility for the designers.

One of the major updates to the code is inclusion of incremental, voluntary energy efficiency performance levels. There are three levels of energy performance standards in the Energy Conservation Building Code (ECBC) i.e., ECBC, ECBC Plus, Super ECBC. In ascending order of efficiency, ECBC compliant building has approx. 25% savings, ECBC+ building approx. 35% savings and compliance with Super ECBC building will show energy savings by 50% or more as compared to conventional building.

The major components of the building which are being addressed through the code are: envelope (walls, roofs, windows), lighting systems, HVAC systems, water heating, water pumping and electrical power system.

Building energy codes are hinged on climate responsive buildings that use local natural resources and climatic conditions to their advantage. ECBC 2017 supports many of the Government of India's objectives for achieving energy security, economic growth and environmental sustainability. As a primary policy driver for guiding building construction, it is a forward-looking code and will push the building sector towards near zero energy targets. The Government of India's Smart Cities Mission, India Cooling action plan are linked with sustainable urban infrastructure development with focus on efficient use of energy in buildings. ECBC is the tool to curb the energy requirement in building sector.

In order to facilitate implementation of ECBC, the Bureau of Energy Efficiency (BEE) carried out several enabling measures which, inter alia, included: Creation of building



Cells in all states and Union territories, empanelment of ECBC experts/firms, Creation of ECBC Master Trainer, development of technical reference material, compliance check tool, standard training modules, etc.

Impact of the code: It is estimated that, India will be adding about 1 billion m² of new commercial buildings by 2030 (study conducted by USAID) with increased demands of Air conditioning and artificial lighting in the buildings. Based on the anticipated growth it is projected that if the future building stock is made in compliance with this code, about 300BU electricity will be saved by 2030. It will translate to peak demand reduction of 15 GW and about 250 mtCO₂e GHG abatement. By the construction of efficient building it is estimated that Rs. 35,000 crores will be saved by ECBC compliance.

BEE has published ECBC, whereas the implementation of the code lies with the State/UT governments. The code and rules suitably modified, as per the local requirements and then the process of integration with the present building approval process is undertaken, which subsequently paves way for enforcement and implementation of the code in the said jurisdiction.

In keeping with the global launch of Hon'ble Prime Minister's LiFE (Lifestyle for Environment) movement, the scope of "Energy Conservation Building Code (ECBC)" is proposed to be widened to include renewable energy and sustainable building concept. It will also be renamed as Energy Conservation and Sustainable Building Code (ECSBC). Also, it is proposed that the ECSBC will be implemented through building bye-laws of the respective State Governments.

Regulatory framework for ECBC:

- ▶ 25 No. of Building cells have been working for all States/UTs in 2022-23. The aim is to provide technical assistance to States/UTs for effective implementation and enforcement of building energy efficiency schemes. These cells oversee ECBC and ENS related activities in states/UTs.
- ▶ ECBC Rules and ECBC 2017 was notified by Goa, Puducherry, Tamil Nadu, Jharkhand and Chhattisgarh. Jammu and Kashmir and Bihar ECBC and rules submitted to State Cabinet for approval. Till March, 2023, 22 states and 2 UTs notified ECBC.
- ▶ Inclusion of energy efficient building material/technologies in CPWD Schedule of Rate (SoR): Draft document (Civil, Electrical, Mechanical) prepared and submitted to CPWD. Draft further shared by CPWD with their field survey officials for comments/Inputs.



- **Capacity Building**

- ▶ 3 No. Regional meeting conducted to review the status of building energy efficiency activities in States/UTs and to update state about the updated ECBC, ENS Part-II, residential star rating etc.
- ▶ National Level webinar on the "ECONIWAS Website for Energy Efficient Residential Buildings in India" conducted for SDA officials, Building cell consultants, Architects, Engineers and building stakeholders.

In 2022-23, 309 No. training programmes have been conducted and 13,802 No. of professionals have been trained.

- **ECBC Implementation and Compliance:**

- ▶ Implementation of ECBC has started in Andhra Pradesh, Assam, Andaman & Nicobar Island, Haryana, Karnataka, Kerala, Punjab, Sikkim, Telangana, Uttarakhand, Madhya Pradesh, Uttar Pradesh. About 392 ULBs have covered under these states.
- ▶ In 2022-23, 644 No. of buildings have been approved by ULB/SDA at the design stage and these buildings are at different stages of construction 6 states namely:

S. No.	States/UTs	No. of ECBC Compliant buildings
1	Andhra Pradesh	352
2	Haryana	43
4	Kerala	29
4	Punjab	133
5	Telangana	71
6	Uttar Pradesh	16
	Total	644

- **Pilot demonstration of ECBC compliance in building projects:**

- ▶ Technical assistance has been provided for ECBC demonstration projects. About 107 No. of building projects for different categories of buildings in different climatic zones were supported to showcase ECBC compliance across the Country.
- ▶ Technical assistance has been provided for ENS demonstration projects. About 42 No. of residential building projects in different climatic zones were supported to showcase ENS compliance across the Country.



Energy Efficiency in Residential Buildings

Rapid increase in residential building stock, coupled with increase in electricity use for space conditioning, is resulting in rapid increase in electricity use in residential buildings. Projection done by NITI Aayog indicates that the electricity consumption for the residential sector is expected to increase 6-13 times by 2047. Data collected from a sample of urban middle-income apartments shows that electricity for providing thermal comfort contribute to 30- 60% of the annual electricity consumption. Another important aspect is thermal comfort, which is of utmost importance in all kinds of housing, but more so in case of affordable housing, so as to ensure health and well-being of the occupants. BEE envisaged a phased approach for the development of the residential building energy conservation code.

Eco-NiwasSamhita 2018 (Part-I)

The Eco NiwasSamhita (ENS), Part – I Building Envelope (Energy Conservation Building Code for Residential Sector) was developed and launched in 2018 on the occasion of National Energy Conservation Day by Hon'ble speaker of Lok Sabha and Hon'ble Minister of Power, New & Renewable Energy. It has been developed to set minimum building envelope performance standards to limit heat gains (for cooling dominated climates) and to limit heat loss (for heating dominated climate) while ensuring adequate natural ventilation and day lighting. The code is applicable to all residential use building projects having a connected load of 100 kW or more, or contract demand of 120 kVA or more.

Eco-NiwasSamhita 2021 (Part-II)

The Eco Niwas Samhita 2021 (Code Compliance and Part-II: Electro-Mechanical and Renewable Energy Systems) is a code specifying code compliance approaches and minimum energy performance requirements for building services, indoor electrical end-use and renewable energy system.

With the amendment of Energy Conservation Act in 2022, residential buildings have been brought within the fold of the energy conservation regime and increasing its scope towards sustainable buildings.

Star Rating of the Commercial Buildings and Shunya Labelling for Net zero and Net Positive Energy Buildings:

Star Rating of the Commercial Buildings was launched in 2009 for office buildings and subsequently three more typologies were covered under the scope viz. BPO, Hospitals and shopping malls. Further to widen the scope, Energy Efficiency Label for Residential Buildings was launched in 2019 and “Shunya Labelling for Net zero and Net Positive Energy Buildings” launched in December 2021.



Existing Star Rating Programme for Office buildings and BPO has been revised and was effective from 1st January 2022. After the revision of the scheme, BEE has issued Star Rating to 8 offices and 5 BPOs thus total count of Star Rating Certificate (Fresh and Renewal) issued to buildings has reached to 279 till end of FY 2022-23.

Energy Efficiency in Transport Sector

India's dependence on imported fossil fuels rising continuously due to the limited domestic petroleum resources. India ranked as the fourth-largest petroleum consumer in the world following China, the United States, and Russia. The country's energy demand continues to climb because of its dynamic economic growth and modernization. India's consumption of petroleum products increased by 5.3% to previous year which is more than 200 MMT causing a significant expenditure on oil import.

Keeping in view the growing demand of fossil fuel and rapidly growing motor vehicle fleet in India, Govt. of India set a target to reduce 10% reduction on import by 2022. BEE works on Development of fuel efficiency norms for Vehicles that could moderate the rising demand of fuel.

Fuel Efficiency Programmes of BEE:

Following initiatives have been taken to boost Energy Efficiency in Transport Sector:

- 1) Corporate Average Fuel Efficiency (CAFE) Norms for Passenger Cars notified in April 2015 and phase-I of the norms implemented in 2017-18. The norms were amended in December 2021 in order to revise Average value of Vehicle Mass for second phase of the norms which is implemented from 1st April 2022.
- 2) As per the reporting by International Centre for Automotive Technology (ICAT), Manesar, all the manufacturers have complied to the CAFE norms in all the five reporting periods under phase-I.
- 3) Subsequent to the implementation of second phase of the CAFE norms, efforts have been initiated to formulate the norms for upcoming phases. However, looking towards the market transition and technology penetration in the automobile sector, it felt a need of a study prior to derivation of CAFE norms for next phase. In this regard, BEE has engaged an agency to support BEE in market study and formulation of CAFE norms for next phases.
- 4) In order to ensure effective enforcement of the Fuel Efficiency norms, the penalty provision for non-compliance of fuel efficiency norms were introduced in the Energy Conservation (Amendment) Act, 2022. The penalty for non-compliance may attract penalty ranging between Rs. 25000 and Rs. 50000 per vehicle.



- 5) Also, BEE has constituted a technical committee under chairmanship of DG, BEE for Development of the CAFE norms for next phases and to monitor implementation of second phase norms and to address issues of the vehicle manufacturers regarding CAFÉ norms.
- 6) Constant Speed Fuel Consumption (CSFC) Norms for Heavy Duty Vehicles having Gross Vehicle Weight more than 12 tonnes, notified in August 2017. The same was amended vide S.O. 3215 (E) dated 21st September 2020 because of the revision of Safe Axle Weight limits by Ministry of Road Transport & Highways.
- 7) Constant Speed Fuel Consumption (CSFC) Norms for Light & Medium Commercial Vehicles having Gross Vehicle Weight ranging between 3.5 Tonnes and 12 tonnes were notified in July 2019.

The Heavy-Duty Fuel Economy (HDFE) and Light & Medium duty Fuel Economy (LMDFE) norms were earlier notified for BS-IV complied vehicles. For BS-VI complied vehicles, a correction factor has been derived by a technical Committee constituted by BEE under chairmanship of ED, PCRA comprising members from SIAM, ICAT, ARAI and representatives from key vehicle manufacturers. To get the Fuel Consumption target value for BS-VI complied vehicles, the “correction factor” derived by the committee has to be multiplied with the fuel consumption value obtained from the equations provided for BS-IV complied vehicles in the HDFE and LMDFE norms. In order to notify the aforesaid correction factor the norms have been amended in March 2022 for the BS-VI complied HDVs and L&MCVs. First phase of both the norms has been implemented from 1st April 2022.

- 8) Apart from the Development Fuel Efficiency Standards for Vehicles as a whole, Standards & Labelling Programme for Tyres has been developed also. Since more than 2/3rd of the Tyres market is replacement by Vehicle Owners itself, it is quite useful to create Demand Side Management in this sector to boost fuel savings. Voluntary phase of the Star Labelling of Tyres launched by Hon'ble Minister for Power and NRE on 14th December 2021 in NECA event.

E-Mobility

The Ministry of Power (MoP) has designated Bureau of Energy Efficiency (BEE) as the Central Nodal Agency (CNA) under the Guidelines and Standards issued on 14th January 2022. In terms of the guidelines, each state is required to designate a Nodal Agency for coordinating the deployment of public EV-charging infrastructure. Currently, 27 states have designated State Nodal Agencies (SNAs) to oversee the



deployment of electric vehicle public charging infrastructure. List of SNAs and states are as follows:

1.	Andhra Pradesh: New and Renewable Energy Development Corporation of Andhra Pradesh (NREDCAP)
2.	Gujarat: Gujarat Energy Development Agency (GEDA)
3.	Himachal Pradesh: Himurja (HP Government Energy Development Agency)
4.	Karnataka: Bengaluru Electricity Supply Company Limited (BESCOM)
5.	Meghalaya: Meghalaya Power Distribution Corporation Limited (MePDCL)
6.	Mizoram: Power & Energy Department, Govt of Mizoram
7.	Odisha: E.I.C. (Elect.)-cum-PCEI Odisha, Bhubaneswar
8.	Punjab: Punjab State Power Corporation Limited (PSPCL)
9.	Rajasthan: Jaipur Vidyut Vitran Nigam Limited (JVVNL)
10.	Uttarakhand: Uttarakhand Power Corporation Limited
11.	Telangana: Telangana State Renewable Energy Development Corporation Ltd (TSREDCO)
12.	West Bengal: West Bengal State Electricity Distribution Company Limited (WBSEDCL)
13.	Delhi: Delhi Transco Limited (DTL)
14.	Lakshadweep: Lakshadweep Energy Development Agency (LEDA)
15.	Kerala: Kerala State Electricity Board Ltd (KSEB)
16.	Madhya Pradesh: M.P Power Management Co. Ltd.
17.	Haryana: Haryana Renewable Energy Development Agency (HAREDA)
18.	Andaman & Nicobar: Directorate of Transport
19.	Sikkim: Power Department, Sikkim
20.	Arunachal Pradesh: Central Electrical Zone, Deptt. of Power, Itanagar
21.	Bihar: Transport Department, Patna
22.	Tamil Nadu: Tamil Nadu Generation and Distribution Corporation Limited
23.	Puducherry: Electricity Department
24.	Chhattisgarh: Transport Department
25.	Chandigarh: Chandigarh Renewable Energy and Science & Technology Promotion Society (CREST)
26.	Uttar Pradesh: Invest UP under Department of Infrastructure and Industrial Development
27.	Maharashtra: Maharashtra State Electricity Distribution Company Limited (MSEDCL)

BEE is implementing “GO Electric” campaign in association with State Nodal Agencies and State and Central Government entities including PSUs. BEE is supporting SNAs in implementing this campaign at state level. Details of the campaign is provided in Awareness section of this report.

- BEE has prepared action plans to assist accelerated deployment of EV public charging infrastructure in 9 cities with population of 4 million plus (as per 2011 census) viz. Mumbai, Delhi, Bangalore, Hyderabad, Ahmedabad, Chennai, Kolkata, Surat, and Pune.
- BEE is supporting creation of EV Accelerator Cells in these 9 cities to implement focused activities pertaining to E-mobility by acting as single window entity for respective state. EV Accelerator Cells are currently operational in the state of Telangana and West Bengal.
- Bureau of Energy Efficiency has been tasked to create and maintain a national online database through a Web-Portal/Software/Mobile Application for the database of Public Charging Stations throughout the country Stations in consultation with State Nodal Agencies (SNAs). In this regard, mobile application and web-portal, titled ‘EV Yatra’ was launched by Hon’ble President of India on 14th December 2022. This portal is available at <https://evyatra.beeindia.gov.in/>.



Launch of “EV Yatra App” by Hon’ble President of India Smt. Droupadi Murmu

- BEE is monitoring the deployment of public EV-charging Infrastructure in the country and in terms of the information available, 7017 public EV-charging stations were operational at various locations in the country as on 31st March, 2023.



“GO ELECTRIC” Campaign



Launch of “GO ELECTRIC” Campaign by Shri. Nitin Gadkari, Union Minister for Road Transport & Highways, MSME in the presence of Shri. R. K. Singh, Union Minister of State for Power and NRE

Under GO ELECTRIC Campaign, 53 webinars, 63 EV roadshows and several other awareness activities such as radio jingles, poster / leaflets distribution, awareness through social media platform, street plays, etc. have been conducted by states.

1.5.3 Standards and Labeling Scheme

Standards and Labelling (S&L) program was launched with the key objective of providing consumers an informed choice regarding the energy consumption and the cost saving potential of various energy consuming appliances. As on March, 2023, the S&L program covers the star labelling for 34 appliances, out of which 14 appliances are under mandatory regime and remaining 20 appliances are under voluntary phase. S&L program has led to savings of 70.57 BU and 18789 toe during 2021-22 due to interventions carried out during the FY 2018-22. Achieved a reduction of 57.16 Mn tonne of carbon dioxide emissions.



List of appliances is given below.

A. Appliances under Mandatory Regime	
1.	Room Air Conditioner (Fixed Speed)
2.	Room Air Conditioners (Variable Speed)
3.	Room Air Conditioners (Cassette, Floor Standing Tower, Ceiling, Corner AC)
4.	Frost Free Refrigerators
5.	Direct Cool Refrigerators
6.	Tubular Fluorescent Lamps
7.	Distribution Transformers
8.	Stationary Storage Type Electric Water Heaters
9.	Colour Televisions
10.	LED Lamps
11.	Ceiling Fans
12.	Light Commercial Air Conditioners
13.	Deep Freezers
14.	Ultra High Definition(UHD)Television
B. Appliances under Voluntary Regime	
1.	Washing Machine
2.	General Purpose Industrial Motors
3.	Submersible Pump Sets
4.	Computer (Notebook/Laptops)
5.	Ballast (Electronic/Magnetic)
6.	Office Automation Product (Printer, Copier, Scanner, MFDs)
7.	Diesel Engine Driven Mono-Set Pumps
8.	Solid State Inverter
9.	Diesel Generator Set
10.	Chiller
11.	Microwave Oven
12.	Solar Water Heater
13.	Air Compressor
14.	LPG-Stove



15.	Tyres/Tires
16.	High Energy Li-Battery
17.	Induction Hob
18.	Side by Side/Multi Door Refrigerator
19.	Pedestal Fan
20.	Table/Wall Fan

The key benefits of S&L scheme are:

- (i) Significant impact on consumers while purchasing energy efficient appliances through a structured consumer awareness program.
- (ii) Market Transformation from inefficient appliances to energy efficient ones.

The achievements under S&L Program are as follows

1. Study & Development of Star labelling program for new appliances under voluntary phase:

- Till now, 20 appliances have been covered voluntary phase and 14 appliances have been covered under mandatory phase.
- New S & L program for Side-by-side refrigerators, Table/wall mounted fan, Pedestal Fan and Induction hobs launched in March, 2023.



Launched of Appliances under S&L Program

2. Ratcheting up of energy performance standards for appliances already under S&L program from time to time

- Performance standards for Room Air Conditioners, Color television and Storage water heater have been upgraded.
- Star rating table for Distribution Transformer has been extended.
- New standards have been notified for Refrigerators based on BIS new standard.

3. Transition from voluntary to mandatory star labelling program for various appliances

- Ceiling Fan, LCAC, Deep Freezers and UHD have been made mandatory w.e.f 1st July, 2022.
- Proposal has been submitted to MoP for transition from voluntary to mandatory regime for Chillers and Washing Machine.

4. Brand and Model Registration

Till March, 2023, 1431 brands and 20013 models were registered under S & L program.

5. Retailer Training Program and Awareness activities

- Fund has been released to 25 SDAs for organizing retailer training programs in their states.
- About 5000 retailers have been trained by 25 SDAs during April 2022 to March 2023.



Session of Retailer Training and Awareness Program



6. Lab Capacity Building

- Rs. 48.94 Crore have been sanctioned for setting up of test labs at NPL (Delhi), CPRI (Bengaluru, Noida, Bhopal, Hyderabad), EMC Kerala, IIT Madras, NSIC Technical Service Centre, Chennai.

7. Label verification through QR code

- The implementation of QR code for Refrigerators (DCR, FFR) under mandatory phase has been made effective from 1st January, 2023.
- The implementation of QR code for 28 appliances except Refrigerators has been made effective from 14th December, 2022 under voluntary phase.

8. Website upgradation and grievance redressal system

- New version of website and Mobile App is deployed and has been made live.
- Implementation of Ticket raising system has been made live and tickets submitted are being addressed from time to time.

9. Round Table Conference on Market Surveillance

- BEE organized a roundtable discussion with 5 State Designated Agencies (SDAs) of Odisha, Maharashtra, Assam, Haryana and Karnataka, on 10 February 2023 to present the finding of the pilot study on market surveillance and seek inputs on draft guidelines for conducting market surveillance under S&L programme.



Snapshot of Round Table Conference

BEE has done extensive work in creating awareness about the Standards & Labeling Programme among the consumers via different media platforms. The awareness activities include the following:

- (i) TV commercials & Radio Jingles to encourage consumers to purchase BEE star rated appliances.
- (ii) Awareness related information regarding the proper usage of energy efficient appliances via social media handles of BEE.
- (iii) Disseminating information about failures of appliances in meeting BEE's Performance Standards.

1.5.4 Municipal Demand Side Management (MuDSM)

India's municipal sector consumes around 4% of total electricity consumed in the country and is deemed to be the second largest opportunity for energy conservation, accounting for 23% of end use inefficiency in the country. Mu DSM intervention is expected to reduce the burden of utilities during the peak hours and enable them to contain financial losses from high electricity consumption in the municipal sector. To promote the Energy Efficiency in Municipality sector following interventions are being taken:

- a) **Capacity building workshops for the officials of Urban Local Bodies(ULBs), Public Water Bodies, Urban Development Departments (UDDs) and other implementing agencies**

BEE in coordination with SDAs is organizing various capacity buildings workshops for the officials of Urban Local Bodies, Public Water Bodies and Urban Development Departments. In 2022-23, around 78 no. of capacity building programmes for the officials of ULBs, UDDs and Municipalities on Energy Efficiency measures in Municipality sector have been conducted.

- b) **Preparation of training content / training module /tutorials for pump technicians/ ULB/UDD/MC officials**

In order to make the training program more interesting and interactive, BEE in coordination with SDAs is developing tutorial videos on MuDSM (especially on Energy Efficient pump sets and its benefits).



Session on "Energy Efficiency Opportunities in municipality sector" held in –Chandigarh under MuDSM program



Energy Service Companies (ESCOs)

An ESCO is an energy service company that offers energy services, usually design, retrofitting and implementation of energy efficiency projects after identifying energy saving opportunities through energy audit of existing facilities. It also includes energy infrastructure outsourcing, power generation and energy supply, financing or assist Facility's Owners in arranging finances for energy efficiency projects. ESCOs operates by providing a savings guarantee, risk management in the implementation of the energy efficiency projects and also perform measurement & verification (M&V) activities to quantify actual energy savings post implementation of energy efficiency projects etc.

Existing initiatives of BEE for promoting ESCO Model:

- BEE has been carrying out empanelment of ESCOs since 2008 with the support of SEBI Accredited grading agencies and currently, 127 ESCOs are empanelled with BEE.
- Over the years, ESCO market profile has varied from country to country. The Energy Efficiency market in India is estimated to be worth INR 160,000 Crore, out of which only 5% potential has been tapped by ESCOs so far.
- The announcement in the 2022-23 Union Budget speech talks about retrofitting of the commercial buildings with energy efficient technologies across commercial buildings with the help of ESCOs through Energy Saving Performance Contracting Mode to accelerate the uptake of energy efficiency projects across commercial buildings in India.
- Subsequent to the budget announcement, BEE has identified 109 buildings for conducting Investment grade Energy Audit (IGEA) and implementation of Energy Efficiency projects through ESCO model.

1.5.5 Agricultural Demand Side Management (AgDSM)

This sub-component promises Energy Efficiency through Agriculture Demand Side Management by reduction in overall power consumption, improving efficiencies of ground water extraction and reducing subsidy burden on state utilities. The studies undertaken by BEE reveals that the current efficiency level of pump sets are in range of 20-25% and efficiency improvements can reach up to 40-50% for existing pump sets. To promote the Energy Efficiency in Agriculture sector following interventions are being taken:

a) Driving nationwide awareness programs for farmers to promote the adoption of Energy Efficient (EE) pumps

BEE in coordination with State Designated Agencies (SDAs) is conducting various training and awareness programmes for farmers and equipment technicians. In 2022-23 around 280 numbers of training and awareness programmes for farmers/

Stakeholders have been conducted for promoting EE pumpsets in agriculture sector.



*Session on "Energy Efficiency Opportunities in agriculture sector" held in KVKS
– Rajasthan, Assam under AgDSM program*

b) Organizing technical training programs for pump technicians

In AgDSM space particularly, BEE in coordination with SDAs is organizing training programs for equipment technicians who have a major role to play in replacing old inefficient pumps with BEE star rated pump sets. In 2022-23 around 21 numbers of capacity building programs for equipment technicians have been conducted.

c) Demonstration project on "IoT and sensor based Climate Smart Agriculture Initiatives".

The pilot intervention is intended to showcase and mainstream the business model of climate smart sustainable agriculture practice. With the main objective of judicious water usage, the operation of solar driven agriculture pump is guided by automatic soil moisture sensors regulating the operation of drip, sprinkler or generic water flow to the irrigation network.

1.5.6 Small and Medium Enterprises (SMEs)

Introduction to Sector

The MSME sector makes a significant contribution to economic expansion, job creation, poverty reduction, and inequality reduction. The MSME sector acquires even more significance for emerging countries like India because of its tight ties to socio-economic factors, contribution to boosting entrepreneurship, and ability to create employment possibilities at relatively lower capital costs.

The MSMEs in the nation have advanced up the value chain from producing basic commodities to more complex ones throughout the years. In India, there are 64 million MSME businesses, which employ more than 113 million people and make up nearly 30% of the country's GDP. The presence of industrial clusters representing several energy-



intensive industries, such as ceramics, brick, glass, textile, and metallurgy, is a distinguishing feature of the MSME sector in India.

The key to increasing the MSME sector's competitiveness and lowering carbon emissions is energy efficiency (EE). To reduce greenhouse gas (GHG) emissions and combat climate change, industrial processes must adopt Energy Efficient Technologies (EET) and best operating practises. The industry has enormous potential for promoting technology advancement and energy efficiency.

National Programme on Energy Efficiency and Technology Upgradation of MSMEs

The Bureau has undertaken a number of initiatives to improve the energy efficiency of this sector and to bring together the many MSME stakeholders and enable them to revisit the achievements, what needs to be done, and to map the road ahead.

- A widening of Energy and Resource Mapping activities have been initiated in fifteen (15) SME clusters of three (3) sectors i.e. namely Textile, Food Processing and Leather to conduct the detailed survey on the consumption of energy and its flow within the MSME facilities, technological status, operating practices, knowledge perception etc.
- To conduct detail energy audit and develop sectoral benchmarks with roadmap for sustainable growth, a networking-cum-pre audit workshop were organized at cluster level in different 5 locations for Textile sector where different stakeholders including owners of textile industries, service providers, members from Associations were attended.
- Networking workshops for leather sector were organized at cluster level in different 5 locations where different stakeholders including owners of SME units, members from Associations and Council for Leather Exports (CLE) were attended. The aim of workshop is to conduct survey on the energy consumption with production profile to establish the roadmap and policy recommendation.

Global Environment Facility (GEF) supported programmes in MSME Sector –

Bureau of Energy Efficiency is also implementing EE technologies in many energy intensive clusters of India with the support from Global Environment Facility through UNIDO and World Bank towards common goal of facilitating the development of the SME sector in India through the promotion and adoption of clean, energy efficient technologies and practices.

1. GEF – UNIDO – BEE Project (2011-2023)

The United Nations Industrial Development Organization (UNIDO), in collaboration with the Bureau of Energy Efficiency (BEE) is executing a Global Environment Facility (GEF) funded national project titled 'Promoting energy efficiency and renewable



Key achievements of this programme during FY 2022-23 are as below:

- Project has up scaled 3 more clusters Foundry (Faridabad), Dairy (Rajasthan) & Hand tool (Ludhiana). The project was able to implement around 33 EE/ RE projects with energy savings of 213 toe and reduced CO2 emissions of 1390 tones and achieved co-financing investment from MSME's INR 8.73 crores.
- Developed report on policy and regulatory framework for MSME sector in India, with recommendations on improving profitability, competitiveness along with wider policy objectives including market transformation, employment generation, energy security and GHG emissions reductions.
- Developed 15 technology-based multimedia tutorial videos and 10 impact story videos for the knowledge dissemination in the clusters.
- 20 B2B Exhibition and vendor interfacing events were organized at cluster level where service providers were showing their technology and demonstrated.
- 25 banker training programs were organized in selected clusters for providing awareness on the EE/RE technologies and to provide a platform for interactive sessions between bankers and MSMEs. This is help to create the financing opportunities for implementation of Energy Conservation measures.
- Additional 17 new Energy Management Centre has been set-up at cluster level in various states.
- Project has trained 42 clusters for capacity building on implementation process of ISO50001 to 1000+ industry professionals and Pilot demonstrated of Applicability & Effectiveness of ISO50001 Energy Management System in SME Sectors (Ceramic, Dairy & Hand tool) covering 15 units.
- Project has developed a portal in the name of SIDHEE for Project activities for all sectors and clusters, developed case studies, DPRs, DEA reports, and information on vendor's information. SIDHIEE is an effort to benefit stakeholders allied to MSMEs. This portal showcases,
 - i. End to end supports
 - ii. Technology Demonstrations
 - iii. Awareness of Energy Efficiency and Key Performance Indicators (KPIs)
 - iv. Energy Management System in SME Sector
 - v. Guidance to Access to Finance
 - vi. Research and Tools
 - vii. Case studies on energy efficient practices

viii. Details of Stakeholders (Manufacturing units, Technology Service Providers, Cluster Development Centres, and many more.

- Cloud based data analytics and a benchmarking tool has been developed. The web-based tool has been hosted in Government's server at the National Informatics Centre to encourage MSME units to utilize the tool and to conduct energy monitoring of their units with inter and intra-cluster comparisons. MSME units in the clusters have shown keen interest to use the tool.
- A National Conclave on Accelerating Energy Efficiency in Micro, Small and Medium Enterprises was organized on 9th December, 2022, at New Delhi.
- 2-days Sectoral Workshop for the Dairy sector in India, under the project "Promoting energy efficiency and renewable energy in selected MSME clusters in India" was organized on 16-17th December, 2022 at Ahmedabad.
- 2-days Sectoral Workshop for the Foundry sector in India, under the project "Promoting energy efficiency and renewable energy in selected MSME clusters in India" was organized on 22-23rd December, 2022 at Coimbatore.

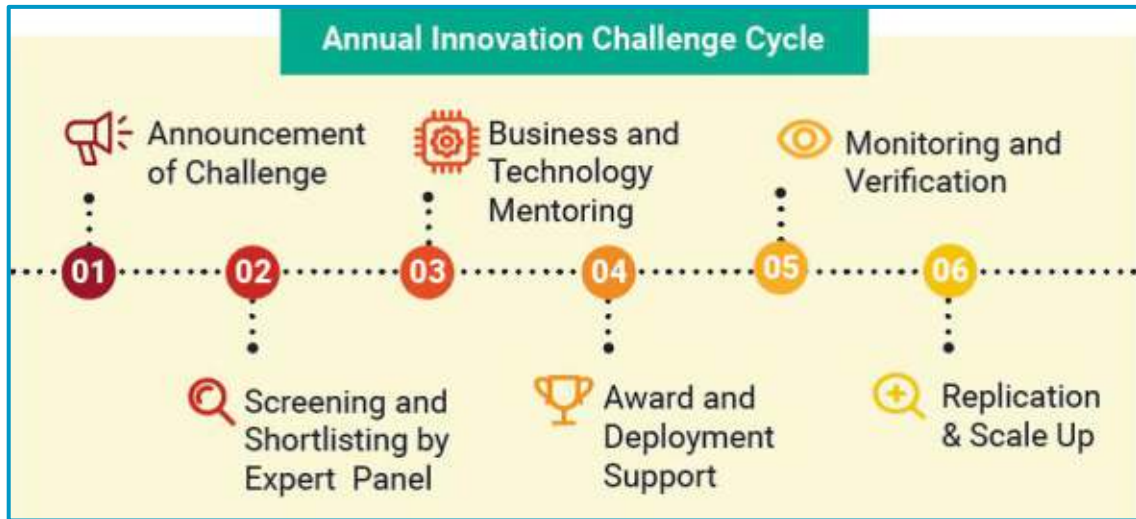
Facility for Low Carbon Technology Deployment (FLCTD)

FLCTD is an 8-year project implemented by the United Nations Industrial Development Organization (UNIDO) in collaboration with the Bureau of Energy Efficiency and is funded by the Global Environment Facility (GEF). The main objective of the project is to facilitate the validation of innovative low-carbon technologies thereby assisting the deployment and scaling up of low-carbon technologies in India to promote the use of innovative clean and low-carbon technologies.

The project objective is being accomplished through two main components, described below:

Component I – Innovation Ecosystem for selecting technology innovators and instituting competitive awards and policy incentives.

- Under this component the project has developed and evolved a mechanism to identify early-stage innovations that address the technology gap, and have the potential for energy savings as well as replication. This is being achieved through a series of annual "Innovation Challenges" an open award competition calling for innovative solutions in 6 technology verticals of (i) Waste Heat Recovery, (ii) Pumps, Pumping Systems and Motors, (iii) Space Conditioning, (iv) Industrial Resource Efficiency, (v) Industrial IoT and (vi) Electrical Energy Storage Systems.



- The project provides financial assistance up to US \$50,000 to the winners to validate the innovation and demonstrate its efficacy in the field conditions – a necessary pre-condition for commercialization.
- The FLCTD project also runs a Low-carbon Accelerator, that provides guidance to start-ups to develop business and marketing plans.

Component II – Technical assistance for Technology Transfer Support Facility.

- The objective of component II is to establish a deployment support ecosystem for clean, low carbon, and energy-efficient technologies. This component is expected to support the creation of an innovation ecosystem for low-carbon and sustainable energy solution providers in India.

Low Carbon Technology Accelerator

Partners: gef, UNIDO, FLCTD, startupindia, Sangam

Focus Areas

- Industrial Low GHG Tech**
 - Energy Efficiency
 - Sustainable Energy Retrofits
 - Adaptation Low GHG Manufacturing
 - Transformative recycling solutions for energy intensive products
 - Capture, reduce & reuse of fugitive GHG emissions
- Commercial & Residential Low GHG Tech**
 - Efficient HVACs with low GHG emissions, Non HFC refrigerant
 - Sustainable envelopes & reduced building heat loss
 - Energy efficient appliances for domestic use
- Storage Technologies**
 - Energy storage solutions
 - Improve RE & ESG grid integration
 - Grid demand - response management
 - Extension of Batteries useful life
 - Fuel cells and Hydrogen generation and storage
- AI, ML, IoT, Deep Tech**
 - Adoption of ICT, IoT and AI to enhance reliability and efficiency of manufacturing processes and energy utilities
 - ICT to enhance reliability of grids and reduce distribution losses
- Resource Efficiency**
 - Convert waste to energy
 - Tackle single-use plastic waste
 - Conserve water in manufacturing
 - Minimize wastage during manufacturing
 - Reduction of use of chemicals & consumables (lubricating oils, hydraulic oils, cleaning agents etc)
- Food & Agriculture**
 - Technologies that reduce GHG emissions in agriculture
 - Eliminating wastage in the Agricultural value chain



Key achievements of this program during FY 2022-2023 are as below:

Project Component 1: Innovation Ecosystem for selecting technology innovators

- Three winners of FLCTD innovation challenge – M/s ENCON Thermal Engineers, M/s CEEP, and M/s AFECO Heating Systems were received the Energy Efficiency Innovation Awards on 14th December, 2022 during the function of National Energy Conservation Awards 2022.
- **5th innovation challenge in all the six technology verticals were launched on 1st April, 2022 and closed on 30th June 2022**, where 205 valid applications from all six technology verticals were received. Based on recommendation of expert panel and after the due diligence of applicants, 18 innovations has been identified for conducting field demonstration. The details as per different technology verticals is listed below:

SL. No.	Name of the Vertical	Applications	Shortlisted	Final Presentation	Winners
1	Waste Heat Recovery & Thermal Efficiency	24	8	6	2
2	Space Conditioning	17	7	6	2
3	Pumps, Pumping Systems and motors	19	9	5	1
4	Industrial Resource Efficiency & Circular Economy	48	13	10	4
5	Industrial IOT	24	12	8	2
6	Electrical Energy Storage	73	16	15	7
	Total	205	65	50	18

- Under FLCTD Accelerator program, training to 23 early-stage startup was provided. Launched in partnership with Startup India on 14th July 2022, the call for application received 246 response from startups. Starting 13th September 2022, the startups underwent rigorous training for the next 4 months. The accelerator concluded on 10th March 2023 with winner selection by an independent panel of investors. Certificates were distributed to 20 startups who graduated from the accelerator program.
- **Component 2:** Contract issued to the DST – Centre for Policy Research (DST-CPR), Punjab University, Chandigarh for doing the study of technology transfer centre in the country in August 2022. Key tasks include -
 - Study design and research instruments in the form of an interview questionnaire, characterization matrix and best practice framework have been designed to include reference of innovation ecosystems of 5 developed countries.



- A long list of more than 500 technology commercialization centers in academic R&D institutions has been compiled and 25 of these institutes have been shortlisted for in-person visits and interviews by DST-CPR. As on 31st March 2023, 21 visits have been completed.
- Innovation ecosystem profiles of each of the 5 countries - Switzerland, USA, South Korea, Germany and Israel- is being prepared and will be used to compile the best practices for further analysis.

1.5.7 Capacity Building of DISCOMs

Demand Side Management is a vital step in cutting down on electricity consumption, especially when demand is at its peak. A high demand for electricity not only drives up the price of electricity but also stresses the electrical grid, resulting in power disruptions.

Therefore, capacity building and other support is essential for the DISCOMs to implement Demand Side Management programs in their respective areas. In this regard, the Bureau of Energy Efficiency started a programme in 2014 to assist DISCOMs strengthen their capabilities.

This has prompted the creation of many DSM promotion mechanisms in 62 DISCOMs as well as the capacity building of their officials.

This aided in the establishment of various procedures to promote DSM in each area and the capacity building of DISCOM personnel. The creation of a DSM cell, load research, the creation of DSM action plans for each of the 62 electrical distribution companies as well as the provision of manpower and consulting services, and the development of DISCOM officials' capacity, have all been completed.

Identified major sectoral DSM measures:

Sector	DSM measures
Domestic	Replacement of Conventional bulbs with LED
	Replacement of Conventional tube lights with LED Tube lights
	Installation of BLDC Fans
	Installation of Energy Efficient ACs
	Installation of Solar Water Heater
Commercial	Replacement of Conventional bulbs with LED
	Replacement of Conventional tube lights with LED Tube lights
	Installation of BLDC Fans
	Installation of Energy Efficient ACs
Industrial	Installation of Energy Efficient Motors
Agriculture	Installation of Energy Efficient Pumps



1.5.8 Strengthening of State Designated Agencies (SDAs)

The Energy Conservation Act (EC Act) mandates creation of a two-tier organization structure to promote the efficient use of energy and its conservation in the country with BEE as the nodal agency at central level and SDAs as nodal agencies at State / Union Territory (UT) level. Section 15(d) of the EC Act stipulates that the State Government / UT Administration may designate any agency at the State level to co-ordinate, regulate and enforce the provisions of the Act within the State/UT. Till date, 36 States/UTs have nominated a SDA in their respective State/UT. These agencies differ from State to State with 16 Nos. Renewable Energy Development Agency, 7 Nos. Power Department, 7 Nos. Electrical Inspectorate, 4 Nos. Distribution Companies, and 2 Nos. Standalone SDA.

In order to stimulate EE & EC activities at State level with emphasis on building institutional, technical and financial capacities of the SDAs, the MoP had approved the scheme for “Providing financial assistance to the SDAs to coordinate, regulate and enforce efficient use of energy and its conservation at State level”. This scheme has been supplemented by “Contribution to State Energy Conservation Fund (SECF)” scheme. To continue with the efforts and future endeavors on EE & EC and to realize substantial energy savings in each State, the scheme for “Strengthening of SDAs to promote efficient use of energy and its conservation at State level” has been continued for the period from FY 2021-22 to FY 2025-26.

A) Providing financial assistance to the SDAs to coordinate, regulate and enforce efficient use of energy and its conservation at the state level

During FY 2022-23, an amount of Rs. 43 crore was disbursed to SDAs for implementation of EE & EC activities under the following sub-components.

- **State Partnership for Energy Efficiency Demonstrations (SPEED):** This sub-component involves implementation of demonstration projects in the areas of street lighting, water pumping (drinking water supply systems, agricultural water pumping systems, etc.), retrofitting of electrical equipment/appliances in buildings, installation of smart-meters in municipalities, Government buildings, etc., waste heat recovery, heating, ventilation and air conditioning, etc. Following are the main objectives of these demonstration projects.
 - To showcase the effectiveness of energy efficient devices/technologies through practical demonstrations.
 - To facilitate the State Governments in replicating these demonstration projects through various departments/agencies.

The SDAs implemented 45 nos. of demonstration projects in the areas of street lighting, water pumping, retrofitting of electrical appliances in buildings, and waste



heat recovery during FY 2022-23. In addition, the SDAs also implemented demonstration projects on Space Heating in Govt. buildings and on Clean/ Electric cooking in Govt. hospitals and Anganwadis during FY 2022-23.

- **Model Energy Efficient Village Campaign:** This sub-component is undertaken by the SDAs wherein villages comprising of 200 – 250 households (relaxed for North Eastern States, UTs and other special category States) are converted to energy efficient villages by replacing existing inefficient equipment/appliances with star labeled appliances which may include water pumps, fans, induction cook stoves, diesel generators, water heaters, street lights and household lighting. While two to three villages in each state are likely to be covered under this campaign, more villages are likely to be benefitted with legislators' push for similar interventions through other resources to showcase the effectiveness of energy efficient devices/technologies in villages falling under their jurisdiction.

During FY 2022-23, total 138 nos. of villages were taken up by SDAs under this endeavor for converting them into model energy efficient villages by replacing existing inefficient electrical appliances with BEE star rated appliances including household bulbs, street lights, fans, water pumps, etc.

- **Manpower support to SDAs:** This constituent of the programme for Strengthening of SDAs enables SDAs to engage experienced professionals at their offices who assist them in executing their functions smoothly and effectively.
- **Workshops / capacity building of energy professionals:** Main objective of this sub-component is to enable SDAs take all measures necessary to disseminate information for efficient use of energy and its conservation to all concerned stakeholders at State level.
- During 2022-23, more than 500 nos. of physical and virtual workshops cum training programmes were organized by the SDAs.
- **Maintenance and updation of internet platform and other database created:** Primary objective of this part of the scheme is to enable SDAs to regularly update contents of their established website and various databases available on it. Information availed through websites of SDAs is beneficial and valuable for various stakeholders and all sections of the society.
- **Student Awareness / Student Capacity Building Programme (SCBP):** Following are the major activities being undertaken by SDAs under this component:
 - Development and incorporation of chapters on EC for School/ State Boards/ ITI/ Dip. Engg. College Curriculum.



- Training of School Teachers/ Lecturers on new modules/chapters.
- Debate and Quiz competitions in Schools and at Degree College level, ITI, Diploma Engineering Colleges (polytechnic), Engineering Colleges upon creation of energy clubs.

B) Contribution to State Energy Conservation Fund

Section 16(1) of the EC Act 2001 requires State Governments/UT Administrations to constitute a fund called State Energy Conservation Fund (SECF) for the purposes of promotion of efficient use of energy and its conservation within the state. In this context, a scheme titled “Contribution to SECF” was approved by the MoP, during the XI plan which is being continued then onwards.

The SECF can facilitate to overcome major barriers in implementation of EE projects. For undertaking EE projects from SECF, major part of the funds disbursed under SECF is to be earmarked separately as Revolving Investment Fund (RIF). This RIF may be used to finance implementation of EE projects in public buildings including Central Government, State Government and Central or State Government undertakings’ / agencies’ buildings, EE street-lighting or common area lighting projects, EE projects in public drinking water pumping stations and water pumping in agricultural fields, EE projects in MSME industrial units in different clusters, etc.

The contribution under SECF is made to those State Governments/UT Administrations who have created their SECF and finalized the rules and regulations to operationalize the same. The scheme is for contribution by BEE to all the State/UTs with a maximum ceiling of Rs.4.0 crore for any State/UT provided in two installments of Rs.2.0 crore each. The second installment under contribution to SECF is released only after the states have provided a matching contribution to the BEE’s first installment. The matching contribution by State Government for North Eastern States and UT Administrations is relaxed to Rs.25.0 lakh instead of Rs.2.0 crore. As on date, 32 States have notified their SECF and 27 States have provided their matching contribution towards BEE’s first installment.

1.5.9 Miscellaneous

1.5.9.1 National Certification Examination for Energy Managers and Energy Auditors

As per the Energy Conservation Act 2001, it is mandatory for all the designated energy consumers to get energy audit conducted by an Accredited Energy Auditor and to designate or appoint an Energy Manager.



BEE has regularly conducted the National Certification Examination, nation-wide, for Energy Managers and Energy Auditors since May 2004 and has created a cadre of professionally qualified energy managers and auditors with expertise in energy management, project management, financing and implementation of energy efficiency projects.

As on September, 2022, the **country has total 18742 Energy Auditors and Energy Managers, out of which 10871 are qualified as Certified Energy Auditors**, from the previous 22 examinations conducted during 2004-2022.

The capacity building of energy managers and energy auditors through National Certification Examination route will have a long-term impact on the Indian economy by making it less energy intensive.

i) Accreditation of Certified Energy Auditors

The Energy Conservation Act, 2001 provides powers to the Central Government to designate energy intensive industrial units and other establishments as “Designated Consumers”, who inter-alia, periodically have to get the energy audit carried out by Accredited Energy Auditors. The Act also mandates the Bureau of Energy Efficiency to accredit energy auditors for this purpose.

The certified energy auditors are assessed and recommended for accreditation by the Accreditation Advisory Committee, which is chaired by the Director General, BEE and members drawn from Central Electricity Authority, Ministry of Petroleum and Natural Gas and Ministry of Coal. These recommended names are then approved by the Management Advisory Committee of the Bureau.

As on March, 2023 there are **289 Accredited Energy Auditors in the country**.

ii) Empanelment of Accredited Energy Auditor Firms under PAT

It is mandatory for all Designated Consumers (DCs) to get Measurement & Verification (M&V) work from Accredited Energy Auditor empaneled firms. At present total no. of **85 empaneled Accredited Energy Auditor firms** are operating to undertake the function of verification and check verification including Measurement & Verification (M&V), regarding compliance with the energy consumption norms and standards and issue or purchase of energy saving certificates, under Perform Achieve and Trade (PAT) scheme.

iii) Refresher Course for the renewal of Energy Manager Certificate

As per the Energy Conservation Act, 2001, an Energy Manager is one who has passed three papers (General Aspects of Energy Management & Energy Audit; Energy Efficiency in Electrical Utilities; Energy Efficiency in Thermal Utilities) of the National Level Certification Examination conducted by Bureau of Energy Efficiency (BEE) annually.



Bureau of Energy Efficiency (BEE) issues certificate to the qualified Energy Managers/ Energy Auditors. Under Regulation 8 of the Bureau of Energy Efficiency (Certification Procedures for Energy Managers), 2010, this certificate has to be renewed after every five years, by attending a refresher training course conducted by the Bureau or approved institute or organization. The main objective of this course is to update these energy managers about the latest technologies for energy management while implementing energy norms and standards and also to boost their confidence and motivate them to take up challenging assignments.

BEE has conducted 114 workshops and the activity is ongoing.

1.5.9.2 Promotion and Implementation of District Cooling System in India

One of India Cooling Action Plan's (ICAP) recommendation for the buildings sector is to promote the use of not-in-kind technologies such as trigeneration system, district cooling, thermal energy storage, etc. The district cooling system (DCS) is a modern and efficient way to air-condition clusters of buildings in cities and on campuses. It avoids the capital costs of installing chillers and cooling towers at the building level and frees up valuable rooftop and building space. By aggregating the cooling needs of multiple buildings, district cooling creates economies of scale. Traditional air conditioning systems, generate more than 50% of the peak electricity demand in a building, usually at peak cost. With district cooling, peak demands on the grid are avoided, and the operating energy consumption is reduced by up to 30%. In addition to this, DCS can use refrigerants with low or zero global warming potential.

In this context, the Bureau of Energy Efficiency and the German Federal Ministry for Economic Cooperation and Development (BMZ); has started an initiative on advancing the agenda of energy-efficient & environment-friendly DCS. One of the significant activities envisaged under the project is to demonstrate DCS in a few pilot projects to provide data-backed evidence for formulation of policies and viable business models for the uptake of DCS in India. A technical committee has been constituted and draft District Cooling guidelines are being finalized in consultation with Committee Members. Meeting held under the chairmanship of HMOP on 9th January, 2023 to discuss the key projects for District Cooling Systems (DCS) in India. Benefit Cost analysis of District Cooling System is under approval of competent authority for onward submission to Ministry of Power.

1.5.9.3 Cold Chain Energy Efficiency in India

Food waste represents a loss of value, avoidable greenhouse gas (GHG) emissions, and a challenge to food security. India is the second largest producer of fruits and vegetables in the world. The country's horticultural produce output stood at ~341.63 million tonnes from an area of ~25 million hectares in 2021-22, of which 1% was exported. There are



varying estimates of post-harvest food losses for fruits and vegetables across India. A comprehensive study conducted by the Indian Council of Agricultural Research (ICAR) estimates that in the case of fruits, overall losses range from 5.8% to 18% while in the case of vegetables this range is between 6.8% to 12.98%. The food loss that occurs post-harvest and before connecting to markets, due to the inadequate and inefficient cold chain infrastructure, is effectively a loss of saleable volume and value. It is therefore an economic burden on the food supply system, in addition to leading to avoidable energy use and direct as well as indirect GHG emissions for the country. Cold chain infrastructure can reduce food waste, preserve quality and increase shelf life of perishable goods.

With the anticipated capacity addition in the coming years to anchor the economic growth, there would be a substantial additional energy upsurge which also presents a valuable opportunity to build energy efficient and climate friendly cold-chain infrastructure, thus potential reduction in both direct and indirect emissions.

There is a huge gap in infrastructure requirement in pack-house (99%) followed by ripening chamber (91%), reefer transport (85%) and 9% in cold storages as per India Cooling Action Plan (ICAP).

The growth projections as per Indian Cooling Action Plan (ICAP) in various components of cold-chain are depicted in the table below:

	2027-28	2037-38
Pack House (units)	50,000-60,000	1,00,000-150,000
Reefer Vehicles (units)	120,000-150,000	300,000-500,000
Cold Storage (million MT)	42-44	45-50
Ripening Chamber (units)	8,000-9,500	12,000-15,000

Recent initiatives:

To strengthen the energy efficiency in Integrated Cold-chain sector across states, BEE aims to provide financial assistance to SDAs under the scheme of Cold Chain.

BEE is exploring the feasibility of signing MoU with National Center for Cold Chain Development (NCCD). The proposed MoU will focus on following key areas:

- (i) Conducting comprehensive energy mapping of cold chain sector at National level to understand energy consumption pattern and energy intensity of the sector.
- (ii) Identifying opportunities for promoting energy efficiency, clean energy & technology in the cold chain sector.
- (iii) Developing energy efficiency policies/guidelines for cold chain sector.

BEE is exploring the feasibility of including cold storages under PAT sector and establishing S&L program for Refrigerant compressors and Walk-in Cold Room (WICR).



1.5.9.4 Energy Data Management Unit (EDMU)

India in its updated Nationally Determined Contributions (NDCs) has committed that it will reduce the emission intensity of its GDP by 45% by 2030 from 2005 level. Further, it has proposed to install 50% of the power capacity from non-fossil energy sources and aim to achieve net zero emissions by 2070.

With a population of 1.4 billion, India has a massive demand for energy to fuel its rapidly growing economy. From a power deficit nation at the time of Independence, the efforts to make India energy-independent have continued for over many decades. Industrial investments in clean energy sources and enhancing energy efficiency are hailed as two of the most viable options for any country's decarbonization efforts, at any level of development.

Given the importance of energy access, energy security and energy transition at the global and national level, a robust, consistent and reliable energy data can help understand the energy profile of a country. It also helps in assessing the impact of various policies and programmes. In contemporary times where energy transition holds high priority, robust energy data can help policy makers formulate data backed policies which would support countries to achieve its environmental and developmental commitment in the coming years.

With these objectives, the Government of India decided to set up a dedicated Energy Data Management Unit (EDMU) in Bureau of Energy Efficiency, under the aegis of Ministry of Power which will be discharging aforementioned functions of compiling and publishing credible data regarding the supply and consumption of energy across sectors.

The work carried out under the EDMU is a collaborative effort of different line Ministries/Departments, Think Tanks, NITI Aayog, and other stakeholders. To guide and oversee the activities of EDMU, a steering committee was formed under the chairmanship of Secretary (Power). Till April, 2023, six meetings of the Steering Committee were held to finalize the work carried out under EDMU along with the concerned ministries and departments.

It resulted in the finalization of a comprehensive report named 'National Energy Data: Survey and Analysis' for last six years i.e. from FY 2016-17 to FY 2021-22 where detailed energy supply and consumption data across sectors have been compiled and presented. The report has been peer reviewed by Line Ministries, ADEME, EIA. It provides detailed fuel-wise energy consumption data for various sectors. This has also enabled a better understanding of the energy profile of various sectors, subsectors and consumption pattern.

The report has following valuable insights:

- (a) A decrease in energy supply by 18% from earlier approach in the year 2021-22.
- (b) A decrease in energy consumption by 8% in the year 2021-22.
- (c) An increase in electrification share on consumption side to 20.9%.



1.5.9.5 Awareness and Outreach (2022-23)

Bureau of Energy Efficiency (BEE) is expected to create awareness about energy conservation and efficiency among general public. In order to create awareness, BEE undertakes various campaigns. According to the guidelines laid down by the Ministry of Information and Broadcasting, media campaigns through electronic, outdoor and print media are carried out through the Directorate of Advertising & Visual Publicity (DAVP) and the National Film Development Corporation of India (NFDC) of Ministry of Information and Broadcasting. BEE has undertaken several activities in Print, Electronic, Social, and Outdoor Media, which are listed as given below:

A. Print Media:

BEE has been releasing advertisements in Newspapers to spread awareness and educate people about star rating of electric appliances. This helps in educating people more about the labels and their use. In addition to this, advertisements were also released pan India for announcing National level Painting competition for school children and National Energy Conservation Awards (NECA) under the categories of Industry, Institution, Appliance, Building, Transport etc.

B. Electronic Media:

To encourage people participation, BEE has been running “Bachat Ke Sitare - Dost Humare” sponsored radio programme of 15 mins each in 19 languages. In the recent past, BEE has broadcasted its radio programme on All India Radio (FM GOLD and FM RAINBOW) in the morning time band between 10:30 – 10:45 AM from Monday to Saturday till March, 2023.

By integrating messages on energy conservation in an entertaining way, the programme captured the attention and interest of a wider audience, making the information more engaging and memorable.

C. Social Media :

Bureau of Energy Efficiency currently maintains an active presence on the following social media platforms:

- Facebook: <https://www.facebook.com/beeindiadigital/>
- Twitter: <https://twitter.com/beeindiadigital>
- LinkedIn: <https://www.linkedin.com/company/beeindiadigital/>
- Instagram: <https://www.instagram.com/beeindiadigital/>
- YouTube: <https://www.youtube.com/bureauofenergyefficiency>

BEE has been posting a wide range of creatives and videos on its social media



platforms. Offering diverse content helped attract and engage a broader audience. Top performing posts (based on likes, comments, and shares) and their content/themes are as follows:

Campaigns and Initiatives:

Overview of some of the media campaigns run by BEE on social media:

- Humara Pran, Urja Sanrakshan
- #GoElectric, #GoGreen
- Har Ghar Tiranga
- International Day of Yoga (#YogaForHumanity)
- हिन्दी पखवाड़ा
- #RaiseItBy1Degree
- Har Din, Har Ghar Ayurveda
- World Environment Day (#OnlyOneEarth)
- Lifestyle for Environment (LiFE) - #ChooseLiFE, #MissionLiFE
- स्वच्छता पखवाड़ा



D. Publication

Bureau published many documents and reports during this year. The copies were distributed to concerned stakeholders and were also uploaded on the BEE's website for wider dissemination. List of the documents and reports are given below:

- National Energy Data: Survey and Analysis for Year 2021-22
- Bachat ke Sitare
- Disha Booklet
- Annual Report (2021-22)
- Raj Bhasha Sahayika
- 16th & 17th issue of BEE Line Newsletter





E. Outdoor Media:

Exhibition:

(i) 3rd Edition of World Environment Expo, 2022

BEE participated in the 3rd Edition of World Environment Expo, 2022 held at Pragati Maidan, New Delhi from 4th June to 6th June, 2022. At the expo, BEE exhibited information about BEE's schemes such as ECBC, Shunya labelling, PAT (Perform, Achieve & Trade), Eco Niwas Samhita & E-mobility through creatively designed panels. Quiz contests were also organised.



Bureau Stall at World Environment Expo, 2022

(ii) Government Achievements & Schemes Expo, 2022



Visitors at Government Achievements & Schemes Expo, 2022

BEE participated in the Government Achievements & Schemes Expo, 2022 at Pragati Maidan, New Delhi from 17th-19th June and showcased their achievements pertaining to Energy Conservation.

(iii) 2nd International Conference and Exhibition on Building Energy Efficiency – ANGAN (Augmenting Nature by Green Affordable New-Habitat)

The 3-day event was organised at Ashoka Hotel Chanakyapuri, New Delhi from 14th to 16th September 2022. At the expo, BEE exhibited information about BEE's schemes such as ECBC, Shunya labelling, PAT (Perform, Achieve & Trade), Eco Niwas Samhita & E-mobility through creatively designed panels.

(iv) 7th Vibrant India Expo, 2022



BEE's Stall at 7th Vibrant India Expo, 2022

BEE participated in the 7TH Vibrant India Expo, 2022 to highlight its achievements, schemes, and awareness programmes organised pertaining to energy conservation at Dilli Haat, Pitampura, New Delhi from 14th to 16th October 2022. At the expo, BEE exhibited information about BEE's schemes such as ECBC, Shunya labelling, PAT (Perform, Achieve & Trade), Eco Niwas Samhita & E-mobility through creatively designed panels.

(v) India International Trade Fair (IITF) from 14th to 27th November, 2022, Pragati Maidan, New Delhi



Power Pavilion of MOP at IITF

BEE participated as part of Power Pavilion of MoP in the India International Trade Fair (IITF) from 14th to 27th November, 2022 at Pragati Maidan, New Delhi. The theme for the above expo was 'Vocal for Local, Local to Global' envisioned by Hon'ble Prime Minister to achieve the goal of "Aatamnirbhar Bharat". Information on Lifestyle for Environment (LiFE), Highlights of India's Commitments @CoP26, Electric Vehicles, Star Rating of Appliances (S&L), ECBC Energy Conservation Building Code (ECBC),



and Eco Niwas Samhita (ENS) were displayed through its creatively designed panels. Quiz contests were conducted along with the activities such as 360-degree selfie video booth, video game on energy conservation.

(vi) India Energy Week, 2023, Bengaluru

BEE participated in the India Energy Week, 2023 event at Bengaluru held during 6th - 8th Feb, 2023 in which panels related to information about BEE's schemes were displayed.



Ministry of Power Pavilion at India Energy Wee, 2023 at Bengaluru

(vii) Nurture Nature 2023, Bengaluru

BEE participated in the Nurture Nature event at Bengaluru during 29th - 31st January 2023 where smart home along with informative panels about BEE's schemes were displayed. Secretary, Ministry of Power visited the stall and was explained the key features of the smart home.



Secretary Power visited the Smart Home at BEE's Stall



The concept of Smart Home was explained to School Children

Key Highlights:

- 15 MSME units are shortlisted for pilot demonstration & applicability of ISO 50001 from 3 Clusters (Ceramic, Dairy & Hand tool) & 22 Training program conducted
- More than 50 Energy Saving Proposals were identified with an estimated monetary saving potential of Rs. 300 Lakhs
- Estimated reduction of 3500 tons of CO₂ emissions from identified energy saving proposals
- Capacity building of more than 1150 industry professionals
- More than 20 clusters covered for training including Ceramic, Dairy, Hand Tool, Foundry & Mixed Cluster
- More than 100 industry professionals from selected 15 units (Ceramic, Dairy & Hand tool) were trained for Energy Efficiency and ISO 50001 EnMS during the implementation process

(ii) B2B Vendor interfacing events in SME Clusters

Bureau of Energy Efficiency, under GEF-UNIDO-BEE project, organized events on technology exhibition and vendor interfacing at various states across the country. The events acted as platform for knowledge exchange for energy efficient technologies, which could drive the future of industries towards energy efficiency.



Inauguration of B2B Vendor interfacing events in SME Clusters

The project was operational in 12 MSME clusters across India in five sectors namely Brass (Jamnagar); Ceramics (Khurja, Thangadh and Morbi); Dairy (Gujarat, Sikkim and Kerala); Foundry (Belgaum, Coimbatore and Indore); Hand Tools (Jalandhar and Nagaur) in its first phase. The Project has now scaled-up and expanded its activities to additional 11 new clusters, namely in Dairy (Tamil Nadu, Odisha, Madhya Pradesh,



Andhra Pradesh & Telangana, Haryana, Maharashtra & Punjab), Foundry (Ahmedabad & Howrah), Ceramic (Himmatnagar), Mixed Cluster (Indore & Sikkim) to reach out to MSME"s at national level.

1.6 National Energy Conservation Awards

The National Energy Conservation Awards is an initiative by the Bureau of Energy Efficiency (BEE) under the Ministry of Power, Government of India. The award ceremony is held annually to recognize and honour organizations and individuals who have made significant contributions to energy conservation and management in India.

The National Energy Conservation Awards aim to encourage and promote energy efficiency and conservation practices across the country. By recognizing and rewarding organizations and individuals who prioritize energy conservation, the BEE hopes to encourage others to follow suit and contribute to India's efforts towards sustainable development.

The award ceremony is typically held on 14th December each year (also celebrated as National Energy Conservation Day), and the winners are presented with a trophy and a certificate. For NECA 2022, Hon'ble President of India presented the awards to the winners.



NECA Award Winners with Hon'ble President of India



The list of Award-winning organizations for various categories are as follows:

Category	Sector	1 st Prize	2 nd Prize	Certificate of Merit (COM)
Industry	Chemical	UPL Ltd. Unit-02 Ankleshwar (Gujarat)	Transpek Industry Ltd. Vadodara (Gujarat)	Indorama Ventures Oxides Ankleshwar Pvt. Ltd. Ankleshwar (Gujarat)
	Consumer Goods	Tata Consumer Products Ltd. Jalpaiguri (West Bengal)	--	Godrej & Boyce Manufacturing Co. Ltd Satara (Maharashtra)
	Manufacturing	Kirloskar Oil Engines Ltd Nashik (Maharashtra)	TK Elevator India Pvt. Ltd. Pune (Maharashtra)	Marelli Motherson Automotive Lighting India Pvt. Ltd. Pune (Maharashtra)
	Edible Oil / Vanaspati	Marico Ltd. (Puducherry)	--	Jugal Kishore Vanaspati Products Pvt. Ltd. Bikaner (Rajasthan)
	Integrated Steel Plant	SAIL Rourkela Steel Plant Rourkela (Odisha)	SAIL- IISCO Steel Plant Asansol (West Bengal)	Nalwa Steel & Power Ltd. Raigarh (Chhattisgarh)
	Textiles	Zenitex Surat (Gujarat)	Arvind Ltd. - Denim Business Ahmedabad (Gujarat)	(1) GBTL Ltd. Bhiwani (Haryana) (2) Orient Syntex Alwar (Rajasthan) (3) Welspun India Ltd. Vapi (Gujarat)
	Ordnance Factory	--	--	Ordnance Factory- Ambajhari Nagpur, (Maharashtra)
	Petrochemical	Kothari Petrochemicals Ltd. Chennai (Tamil Nadu)	--	GAIL (India) Ltd. Pata (Uttar Pradesh)
	Refractory	--	--	Calderys India Refractories Ltd. Nagpur (Maharashtra)
	Sugar	Ponni Sugars Erode Ltd. Erode (Tamil Nadu)	Kothari Sugars & Chemicals Ltd. Sathamangalam (Tamil Nadu)	--



Category	Sector	1 st Prize	2 nd Prize	Certificate of Merit (COM)
Transport	Railway Stations	Kacheguda Railway Station (South Central Railway)	Guntakal Railway Station (South Central Railway)	(1) Kanpur Central Railway Station (North Central Railway) (2) Rajahmundry Railway Station (South Central Railway) (3) Tenali Railway Station (South Central Railway)
	Metro Stations	--	--	Khan Market Metro Station (Delhi Metro)
Buildings	Government Buildings	Ajmer Group of Workshop (Admin Building) Ajmer (Rajasthan)	BSNL Uttarakhand Telecom Circle Indira Nagar Dehradun (Uttarakhand)	(1) Railway Hospital (Guntakal Division) South Central Railway (Andhra Pradesh) (2) Electric Traction Training Centre, Vijayawada South Central Railway (Andhra Pradesh) (3) Divisional Railway Hospital Pratapnagar Western Railway, (Gujarat)
	College & University	Dayanand Science College Latur (Maharashtra)	Lokpanchayat Rural Technical Training Institute Ahmednagar (Maharashtra)	--
	Schools	--	--	Amity International School Sector 46, Gurugram (Haryana)
Institutions	State Designated Agency (SDA)	Group 1 Karnataka Renewable Energy Development Ltd. Group 2: Andhra Pradesh State Energy Conservation Mission Group 3: O/o Chief Electrical Inspector-cum-Adviser Govt. of Assam	-- --	Group 1: Rajasthan Renewable Energy Corporation Ltd. Group 2: Telangana State Renewable Energy Development Corporation Ltd.



Category	Appliance Name	Model Number
Appliances	Air Conditioners	Model No: FTKM50UV16U+RKM50UV16U Daikin Airconditioning India Pvt. Ltd.
	Ceiling Fans	Model No: Renesa 1200 Atomberg Technologies Pvt. Ltd.
	Refrigerator	Model No: HRD-1955 Haier India Appliances Pvt. Ltd.
	Distribution Transformer	Model No: SSEL 25 5S Shirdi Sai Electricals Ltd.
	Pumps	Model No. PLANO 104 C.R.I. Pumps Pvt. Ltd.

The National Energy Conservation Awards have following benefits for consumers. Some of the key benefits include:

- 1. Reduced Energy Bills:** When organizations implement energy conservation measures, they can reduce their energy consumption and, as a result, lower their energy bills. This can translate into lower costs for the consumer if the organization passes on the savings to their customers.
- 2. Improved Energy Efficiency:** The National Energy Conservation Awards encourage organizations to adopt energy-efficient technologies and practices. This can lead to improved energy efficiency and reduced greenhouse gas emissions, which benefits consumers by contributing to a more sustainable future.
- 3. Increased Awareness:** The award ceremony is a platform for showcasing successful energy conservation initiatives, which can help to raise awareness about the importance of energy conservation among consumers.
- 4. Better Quality of Life:** Energy conservation measures can have a positive impact on the environment and contribute to a better quality of life for consumers.

The list of Award-winning organizations for various categories are as follows:

National Energy Efficiency Innovation Awards (NEEIA)

The National Energy Efficiency Innovation Awards are a prestigious recognition given to individuals, organizations, or projects that have made significant contributions to energy efficiency innovation in a country. These awards aim to promote and celebrate outstanding achievements in the field of energy efficiency, acknowledging those who have developed innovative solutions to reduce energy consumption, improve sustainability, and drive positive change.

The specific criteria and categories for the National Energy Efficiency Innovation Awards may vary depending on the organizing body or institution responsible for the event. However, common categories often include:



1. **Energy Efficient Technology:** Recognizes advancements in the development or application of energy-efficient technologies, such as renewable energy systems, smart grids, energy storage solutions, or energy-efficient appliances.
2. **Building Efficiency:** Highlights projects or initiatives that have demonstrated exceptional energy efficiency in buildings, including commercial, residential, or public structures. This category may include innovative design strategies, efficient HVAC systems, insulation solutions, or sustainable building materials.
3. **Industrial Efficiency:** Acknowledges outstanding efforts in improving energy efficiency within industrial processes, manufacturing, or production facilities. This category often focuses on innovative practices, technologies, or systems that reduce energy waste and optimize energy use in industrial settings.
4. **Transportation Efficiency:** Recognizes initiatives that have made significant strides in improving energy efficiency in transportation, such as the development of electric vehicles, efficient public transportation systems, alternative fuel technologies, or smart mobility solutions.
5. **Energy Management and Policy:** Honors organizations or programs that have implemented effective energy management strategies or policy measures to promote energy efficiency on a larger scale. This category may include energy conservation campaigns, policy advocacy, energy auditing programs, or innovative financing models.

The National Energy Efficiency Innovation Awards provide a platform to showcase success stories and best practices, inspiring others to adopt similar strategies and contribute to a more sustainable and energy-efficient future. The list of Award winning organizations for various categories are as follows:

Category	Sector	1st Prize	2nd Prize	Certificate of Recognition (COR)
Group A	Industry	Encon Thermal Engineers Pvt. Ltd. (Project: Regenerative Burner)	Centre For Energy, Environment And Productivity (Project: Heat Recovery from Hot Dye Effluents in Textile Wet Processing Industries)	Afeco Heating Systems (Project: Aluminium Holding Furnace "AL-THERMOS")
	Transport	Vikram Sarabhai Space Centre, ISRO (Project: Supercapattery (Hybrid Capacitor-Battery) for Space Transportation)	Indian Oil Corporation Limited (Project: Green Combo Solution (Green Diesel & Green Lubricants) for Energy Efficiency in Heavy Duty Commercial Vehicle Fleet)	Vikram Sarabhai Space Centre, ISRO (Project: Supercapacitor for Space Transportations)
	Buildings	--	--	---
Group B	Students & Research Scholars	--	--	--

National Painting Competition on Energy Conservation

The National Painting Competition on Energy Conservation is an initiative aimed at promoting awareness and understanding of energy conservation among students and encouraging them to express their creativity through art. This competition provides a platform for young artists to showcase their talent while addressing the important issue of energy conservation.

The competition is open to students of Classed 5th, 6th & 7th (Group-A) and Classes 8th, 9th & 10th (Group-B). Participants are invited to create paintings or artworks that convey the message of energy conservation, highlighting the importance of using energy wisely and adopting sustainable practices.

The themes for the paintings may vary each year, but they usually revolve around concepts such as renewable energy, energy-efficient technologies, reducing carbon footprint, mission LIFE, preserving natural resources, or promoting sustainable lifestyles. These themes encourage participants to think creatively and explore different aspects of energy conservation.

The Competition is organized by Bureau of Energy Efficiency (BEE) under guidance of Ministry of Power. Winners and finalists are selected based on the originality, creativity, and relevance of their artworks to the theme of energy conservation. The winning paintings often serve as ambassadors for energy conservation campaigns, spreading the message to a wider audience.



Hon'ble President of India with The Winners of National Painting Competition - 2022



The National Painting Competition on Energy Conservation not only nurtures artistic talent but also plays a crucial role in educating and engaging young minds in the importance of energy conservation. It helps to create a generation of environmentally conscious individuals who can contribute to a sustainable future through their artistic expressions and actions.

In the year 2022, Hon'ble President of India presented the prizes (cash prizes) to the winners and Hon'ble Cabinet Minister of Power and Renewable Energy and Hon'ble Minister of State for Power also graced the event.

The list of students who received the prizes under different group is as follows:

GROUP A

S.No.	Prizes	Name	School Name	Class	State/UT
1.	1st Prize	Bhawna Singh	Acharyakulam, Haridwar	VII	Uttarakhand
2.	2nd Prize	Kazi Tasnim Begam	Shishu Bihar Higher Secondary School, Agartala	VII	Tripura
3.	3rd Prize	Rajanya Saha	Shishu Bihar Higher Secondary School, Agartala	V	Tripura
4.	Appreciation Prize	Ipsa Santra	Salwan Girls Sr. Sec. School	VII	Delhi
5.	Appreciation Prize	Arpita Bepari	Vivekananda Kendra Vidyalaya	VII	Andaman & Nicobar Islands
6.	Appreciation Prize	Kuvam Piplani	Somerville School, Noida	VII	Delhi NCR
7.	Appreciation Prize	Aditi Bardiya	Delhi Public School, Haridwar	VII	Uttarakhand
8.	Appreciation Prize	Sadhika P.M.	St Mary's Girls High School, Payyanur	VII	Kerala
9.	Appreciation Prize	Anshuman Bhowmik	Ananda Marga School Bishalgarh	VI	Tripura
10.	Appreciation Prize	Aaradhya Arvind Soni	Broadway International School, Surat	VII	Gujarat
11.	Appreciation Prize	Akashi Jha	BAPS Swaminarayan Vidyamandir, Athal	VII	Dadra & Nagar Haveli
12.	Appreciation Prize	Ashwini Jadhav	Kendriya Vidyalaya No.2, Vasco Da Gama	VII	Goa
13.	Appreciation Prize	Nidhi Rani	Acharyakulam, Ranchi	VII	Jharkhand



GROUP B					
S.No.	Prizes	Name	School Name	Class	State/UT
1.	1st Prize	Banasmitha Kashyap	Guwahati Public School, Guwahati	X	Assam
2.	2nd Prize	Vidisha Lenka	DAV Public School, Bhubaneswar	IX	Odisha
3.	3rd Prize	Saundarya Pandurang Patil	Hira-Ram Girls High School, Kolhapur	IX	Maharashtra
4.	Appreciation Prize	Sameer Verma	The Aditya Birla Public School Baloda Bazar	X	Chhatisgarh
5.	Appreciation Prize	Dattaguru S. Dhuri	M V Herwadkar English Medium School, Tilakwadi	X	Karnataka
6.	Appreciation Prize	Soham Samanta	Raisina Bengali School	VIII	Delhi
7.	Appreciation Prize	Prachi Gujarati	Naimisharanya School, Bhavnagar	IX	Gujrat
8.	Appreciation Prize	Prajukta Acharya	Sri Krishna Mission School Agartala	VIII	Tripura
9.	Appreciation Prize	Sanya Sejal	Acharyakulam, Haridwar	VIII	Uttarakhand
10.	Appreciation Prize	M. Sathwik	Sri Chaitany Techno School, Vijayawada	IX	Andhra Pradesh
11.	Appreciation Prize	Baibhav Datta	Holy Cross School, Agartala	IX	Tripura
12.	Appreciation Prize	Ramashish Vishwa Karma	Acharyakulam, Haridwar	IX	Uttarakhand
13.	Appreciation Prize	Sreelakshmi Jayaram	Sacred Heart Girls' High School, Bharanaganam	VIII	Jharkhand

International Prize Winner Students

GROUP A				
Prize	Name	Class	School	Country
Appreciation Prize	Navya Suhail	6th	Olive International School	Doha Qatar
Appreciation Prize	Anugraha. B	7th	Indian School Ibra	Oman
Appreciation Prize	Mohammed Rafi	5th	Olive International School	Doha Qatar
GROUP B				
Prize	Name	Class	School	Country
Appreciation Prize	Sainath Manikandan	10th	Gems United Indian School	Abu Dhabi
Appreciation Prize	Aqeedath khanum	9th	Indian School Al Ghubra	Muscat
Appreciation Prize	Blessy Stepher	9th	New Millennium	Bahrain



BUREAU OF ENERGY EFFICIENCY
(Ministry of Power, Government of India)

2. INTERNATIONAL CO-OPERATIONS



- 2.1 International Bilateral Programmes
- 2.2 International Multilateral Programme



2.1 International Bilateral Programmes

A. Countries with Active Participation

1. India and the European Union

Cooperation between India and the European Union (EU) in the energy sector is guided by the India – EU Energy Panel. The Energy Panel is led by MEA from the Indian side. The last meeting of the Panel was held on 26/10/2016, to discuss cooperation in the field of energy.

The Panel broadly agreed to achieve the target outlined through a work plan 2016-18. It was also decided to add clean energy and climate partnership in addition to exploring possible cooperation on energy efficiency in industry, exchanges on storage, battery technology and electric vehicles, enhancing the flexibility of thermal power plants and finally support the financing of investments in RE's Projects. The work plan was proposed to be executed through joint working groups:

- i. JWG on Energy Security (co-chairs: DG ENER and MEA/ MoPNG).
- ii. JWG on Renewable Energy (co-chairs: DG ENER and MNRE).
- iii. JWG on Energy Efficiency, Smart Grids and Electricity Markets (co-chairs: DG ENER and MoP).
- iv. JWG on Clean Coal (co-chairs: DG ENER and MoP + MoC).

In the area of electrification, one strategy study was delivered, which subsequently was discussed with relevant stakeholders in a stakeholder consultation/webinar. The strategy titled 'Elements of Electrification Strategy for India' explores the current status, relevant policies and potential for economy-wide electrification in India and presents recommendations for deep electrification based on learnings from relevant technological, market- and policy-level advances in Europe to achieve the same. The study report was released in May, 2022. The document presents a deep dive into sector-specific strategies and interventions which will help drive deep electrification in the country. This guiding document has been made to provide an impetus for policymakers to take the best practices from the EU and apply them to the Indian context, to firmly set India's path towards a successful green transformation that does not disrupt its development aspirations.

Feasibility studies for Net zero tourist locations in Mahabaleshwar, Shirdi, Tirumala, Leh and Fort Kochi is prepared.

2. India - France

A MoU was signed on 17th October 2018 between BEE and ADEME. Following are the scope of cooperation between BEE and ADEME:

- Development of sustainable mobility, with specific focus on electric transport (charging infrastructure, smart chargers, smart grid interaction, etc.);



- Development of tools for collection, use and analysis of energy efficiency related data across sectors leading to energy efficiency indicators;
- Development of tools for collection, use and analysis of CO2 emissions and GHG data for tracking global emissions for INDCs.

The project 'Monitoring Energy Efficiency in India through Energy Efficiency Indicators' is a collaborative work between Bureau of Energy Efficiency (BEE), India and French Environment and Energy Management Agency (ADEME), France for the development of Energy Efficiency Indicators in India. Energy efficiency indicators assist in monitoring the energy consumption trends and the status of energy efficiency in a country.

ADEME team along with representative of ENERDATA undertook a 2 training programme on energy efficiency indicators in FY 2022-23. The training was attended by line ministries, NITI Aayog. The training discussed the current progress in filling the data template and the future course of action in accumulating and filling data in the template. The first training programme was organized in the month of May, 2022, second in the month of October, 2022.

Under the project, template on Energy Efficiency Indicators have been prepared which focusses on the demand sectors like households, Industries, Railways etc.

3. Indo-German Energy Programme- Indo German Energy Forum (IGEF)

The Indo-German Energy Forum (IGEF) was established in April, 2006 between Government of the Federal Republic of Germany and Republic of India to intensify the Indo-German Co-operation to promote dialogue and cooperation with involvement of public and private sector in the areas of energy security, energy efficiency, renewable energy, investment in energy projects and collaborative R&D. While the IGEF is a high-level policy dialogue between India and Germany, the IGEF Support Office is incorporated in the structure of the Indo-German Energy Programme (IGEN).

Under the Indo-German Energy Forum there are 4 sub-groups.

Sub-group 1 is efficiency enhancement in fossil fuel-based power plants,

Sub-group 2 is renewable energy,

Sub-group 3 is demand side energy efficiency and low carbon growth strategies

Sub-group 4 is green Energy Corridors.

In the sub-group 3, the Indian Ministry of Power (MOP) and the German Federal Ministry of Economic Affairs and Energy (BMWi), together with the Federal Ministry for the Environment, Nature Conservation, Buildings and Nuclear Safety (BMUB) are working together to put in place a positive environment for enhancing energy efficiency in their respective countries. This is achieved by facilitating a constructive dialogue between decision-makers in Government and the private sector in both countries.



Activities and current progress in area of Cooperation between BEE and IGEF under subgroup 3

- Bureau in collaboration working on energy efficiency in industry, cooling and shifting electricity demand peaks at night when solar power is not available.
- Decarbonising India – Study on the potential for electrification across India's Economy & Assessment of electricity needs is being prepared
- Exploring opportunities to support BEE with studies under followings topics i.e. Study on Energy Efficiency and Demand Shift in Steel, Overview un successful Green Hydrogen Pilots in Germany, Study on Demand Shift potential in Cooling, Study on Demand Shift in general under finalization).

Indo German Energy Programme (IGEN)

With the enactment of the Energy Conservation Act 2001 and establishment of Bureau of Energy Efficiency with effect from 1st March 2002, the cooperation in the field of energy conservation continued under the project "Indo-German Energy Programme (IGEN) with the objective to support policies and programmes of the Energy Conservation Act.

Energy Efficiency in Industry and Data

The Indian and German Government, in their government-to-Government negotiations in 2019, agreed to provide technical assistance up to EUR 4.9 million for promoting energy efficiency in steel, pulp and paper or any other similar industry sector. In line with this commitment, a new project "Energy Efficiency in Industry and Data" has been commissioned by BMZ Germany, with a planned duration of 3 Years i.e (2020-23). The project focusses to strengthen the secondary steel and the paper sectors through various technical and policy level aspects at state and national level. The main objectives of the project are:

- Capacity building of selected SDA's to promote energy efficiency in Non-PAT industries
- Providing Non-PAT secondary steel and pulp and paper industries with access to information on key energy efficiency processes and technologies
- Institutionalization of peer-to-peer learning among SDAs and Non-PAT secondary steel and pulp and paper industry clusters
- National Energy Efficiency dialogue for secondary steel and pulp and paper sector between policy makers, research institutions and business associations.

Progress so far-

- Detailed energy studies completed in 300 secondary Steel plants and around 90 Pulp and Paper plants.



- Stakeholder's consultation was organized in several states which includes Uttar Pradesh, Telengana, Gujarat, Tamil Nadu, Uttrakhand, Chennai, Punjab, Rajasthan, Chattisgarh, Maharashtra, Karanataka. The main objective of these consultation was to disseminate information about energy efficiency & project details to industry associations & units.



Representatives from BEE, 35 SDAs, EESL, consultants & GIZ Experts

BEE-IGEN SDA Partnership Summit 2022 was held on 11th & 12th October 2022 in Goa with the aim to establish continuous dialogue and interactions with SDAs. During the summit, all the SDAs were made aware of recent developments, amendments, vision and action plans, towards India's goal to energy transition.

GIZ in association with National Institute of Secondary Steel Technology (NISST) organised 15 process specific webinars for steel re-rolling mills. More than 520 participants from industries & association attended these online webinars.

4. India — US Collaboration

The Indo- US Energy Dialogue has the following objectives:

- To enhance mutual energy security,
- Promote increased energy trade and investment,
- Facilitate the deployment of clean energy technologies.

The Dialogue has been renamed as US – India Strategic Clean Energy Partnership (SCEP). The Ministerial meeting of the US – India SCEP is co-chaired by Hon'ble Minister of Petroleum and Natural Gas and the US Secretary of Energy.

U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) and India's Bureau of Energy Efficiency (BEE) collaborate under the aegis of the Power



and Energy Efficiency Working Group. The main goal of the collaborations was to support development and implementations of energy efficient policies and best practices that can help achieve national energy efficiency goals and significant reductions in greenhouse gas emissions. For implementation of projects identified in the Working Group (Power and Energy Efficiency).

Current Progress

US Dept. of Energy (DOE), and BEE are exploring to develop an India Building Sector Outlook with projected baseline and mitigation models. This will entail low carbon-pathway scenarios for India's commercial and residential building sectors. This will include embodied carbon mitigation for steel and cement as pervasive regional building materials that are hard to decarbonize, as well as operational carbon mitigation.

Two webinars was organized by US DOE in association with Oak Ridge National Laboratory (ORNL), to provide an overview of MEASUR and the process heating tool. Advance Manufacturing Office (AMO) under DOE has developed several software tools over the years to help manufacturers identify opportunities and calculate potential energy savings. MEASUR tool suite can analyse most major support systems found within manufacturing facilities, including pumps, fans, process heat, steam, and compressed air.

5. India - UK

The Memorandum of Understanding (MoU) between India and the United Kingdom on cooperation in the energy sector was signed during the visit of Hon'ble Prime Minister of India to UK during November, 2015.

The MoU provides framework for technical assistance, including in-kind grant, and other support, as mutually agreed, through relevant projects initiated by the United Kingdom. The MoU also encourage development of project specific agreements on time-to-time basis.

The project will focus on the following themes outlined below. All the themes will aid India's efforts to transition towards a low carbon economy as well as deepening UK-India collaboration in advance of COP26 in Glasgow 2021.

Theme 1: Electricity distribution sector

Theme 2: Energy Efficiency includes 2 sub-themes:

- Rejuvenation of Knowledge Exchange Platform (IDEEKSHA)
- Industrial EE and Decarbonisation Knowledge and Technology Partnerships

3rd India – UK Energy for Growth Partnership Ministerial Energy Dialogue held on 8th October 2021 to strengthen collaboration on accelerating the move to global clean energy



in the decade ahead. Government of India endorsed Roadmap 2030 for India-UK forward Action Plan on clean energy, improving energy efficiency measures, enabling use of green hydrogen, and increasing the switch to electric mobility.

Rejuvenation of Knowledge Exchange Platform (IDEEKSHA)

An online knowledge exchange platform is developed and launched Shri R.K. Singh, Hon'ble Cabinet Minister for Power and New & Renewable Energy, Government of India which will enable access to global innovative EE technologies & supplier ecosystem, best practices and cross sectoral learnings in key hard to abate sectors like cement, aluminium, textile, iron and Steel etc. IDEEKSHA platform hosts database of IEED technologies and 34 international suppliers including dedicated tab on gender and social inclusion practices adopted by industries to enable peer to peer learning. Conducted capacity building workshops and study tours for 500+ senior officials from Bureau of Energy Efficiency, industry representatives from Aluminium, Iron & Steel, Cement and Textile sectors and technology suppliers from India and the UK. It enables B2B partnerships between Indian industries and international technology/ solution suppliers.



Launch of IDEEKSHA Platform and Newsletter by Shri. R.K. Singh, Hon'ble Cabinet Minister on 1st March' 23 during BEE's 21st Foundation Day

Industrial Energy Efficiency and Decarbonisation Knowledge and Technology Partnerships

Under this theme a summary report on 4 focus sectors highlighting the key developmental opportunities for UK/international technology and solutions providers. Deployment toolkit for UK/international technology and solution providers interested in the Indian market. More than 50 + technology list is prepared with deployment potential in India.



Group Photograph from Textile Workshop



6. Indo-Switzerland

The Indo-Swiss Building Energy Efficiency Project (BEEP) is a bilateral cooperation between the Ministry of Power (MoP), Government of India and the Federal Department of Foreign Affairs (FDFA) of the Swiss Confederation. The Bureau of Energy Efficiency (BEE) is the Implementing agency on behalf of the MoP while the Swiss Agency for Development and Cooperation (SDC) is the agency on behalf of the FDFA.

Activities completed under the bilateral (FY 2022-23):

BEEP Camp:

The 5th edition of the annually held event conducted under the Indo-Swiss BEEP project along with CARBSE, CEPT University- BEEP Camp was organised from December 15th-22nd 2022 at CEPT University, Ahmedabad. This was the first physical camp organised after the COVID-19 pandemic.

47 students participated in this year's camp from over 40 academic institutions and organization spread over 16 Indian States.

NEERMAN Awards:

BEEP supported BEE in the development and implementation of the 1st cycle of a national award scheme, NEERMAN Awards to acknowledge and encourage exemplary building designs complying with BEE's Energy Conservation Building Codes. Environmental Design Solutions was the implementation partner for the activity.

Over forty-five entries were received for the awards (Commercial – 35, Residential – 10) out of which 15 entries were awarded during the ANGAN conference (14-16th September 2022) on 15th September 2022 by Shri Ajay Tewari, additional secretary, MOP. A compendium of the 15 NEERMAN Awarded projects in cycle 1 have also been developed.

Training on Vayu Pravah and development of Vayu Pravah Version 2.0:

Vayu Pravah, an OpenFoam based CFD tool was developed under BEEP and launched by Sri. R.K. Singh, the Union Minister of Power, New and Renewable Energy in July 2021 during Azadi ka Amrit Mahotsav. Following the launch of the first version of Vayu Pravah, two training sessions were conducted for professionals and students through 2021 and 2022, which were attended by 290 participants.

An updated Vayu Pravah v2.0 was launched on 29 March 2023. The new version of Vayu Pravah comes with several new features, which significantly improves in ease of preparing the simulation model, has improved computational capabilities and adds improved ways to analyse and showcase the results.



Engagement with the industry on External Movable Shading System (EMSyS):

BEEP organised two round table meetings in 2022 on “Market development of External Movable Shading Systems (EMSyS) to improve thermal comfort and Save Energy in Indian Homes”. These were attended representatives from EMSyS industry, Glazing industry, Architects, policy think-tanks, BEE officials and BEEP team. The EMSyS industry shared useful insights on the current market status and key barriers, which were incorporated in the EMSYS Policy Paper.

7. India -Russia

A Memorandum of Understanding (MoU) was signed between BEE and Russian Energy Agency (REA) in February, 2020 at Moscow to promote cooperation in the area of Energy Efficiency.

A meeting was held between BEE and Russian Energy Agency (REA) on February, 2022 to discuss the way forward for implementing the activities as planned in the MoU. The following actions were taken:

- i. BEE has sent REA, reports outlining the results of BEE`s work in recent years for REA to study the projects and to decide on the potential topics of the upcoming events;
- ii. REA has provided BEE with a link to the English version of the public business science magazine “Energy Policy” for BEE to study the content in order to explore the opportunity for Indian experts to be published in the magazine.

8. Indo —Japan Energy Dialogue

As an outcome of the visit of Hon'ble Prime Minister of India to Japan in December 2006, Indo-Japan Energy Dialogue co-chaired by Deputy Chairman Planning Commission and Minister of Ministry of Economy Trade and Industry METI was initiated to promote cooperation in energy sector.

Activities Undertaken:

- Development of Energy Conservation Guidelines and Energy Management Manual
The benefits of the Energy Conservation Guidelines and Energy Management Manuals that are being used by the industries in Japan were highlighted. These guidelines and manuals would help Indian Industries in achieving energy efficiency.
Further, for implementation of Energy conservation guidelines and development of Energy Management Manuals, 9 model factories and Designated Consumers from various PAT sectors were selected.

Plan A: Dissemination of EC Guidelines and EM Manuals

The Plan A was to disseminate the EC Guidelines and EM Manuals to more Designated Consumers from all PAT sectors.



Plan B: Improvement in the EM Manuals by Model Factories

For Plan B, webinars were conducted for Model Factories for improvement in EM manuals.

Plan C: Development of verification system for EC Guideline compliance

For development of Verification system for EC Guidelines, the webinar were conducted with officials from BEE and SDAs.

2.2 International Multilateral Programme

1. Clean Energy Ministerial (CEM)

The Clean Energy Ministerial (CEM) was established in 2009 as a high-level global forum to promote the advancement of clean energy. Its intention is to encourage the development of policies and programmes which advance clean energy technology and solutions, share lessons learned and best practices, and to facilitate the transition to a global clean energy economy. It does so through a combination of its Annual Ministerial meeting for Energy Ministers, and year-round technical work in the form of initiatives and campaigns, led and participated in by the member governments. The coordination support for the CEM is provided to by a multilateral Clean Energy Ministerial Secretariat (CEM Secretariat).

- As of March, 2023 the CEM has twenty-nine (29) members: twenty-eight (28) governments (largely aligned with the G20 membership) including Australia, Brazil, Canada, Chile, China, Denmark, Finland, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, South Africa, Spain, Sweden, the United Arab Emirates, the United Kingdom and the United States and the European Commission.
- The Clean Energy Ministerial (CEM) work programme is defined across 6 themes cross cutting across the clean energy spectrum i.e., Power, Transport, Industry, Buildings, Cross-Sectoral and Enabling Environment. India currently co-leads six initiatives and is a member of five initiatives and one campaign. Presently, India actively participates in 12 out of 21 initiatives and campaigns under CEM's ongoing technical workstreams.
- As of March 2023, India is part of following initiatives and campaigns of CEM
 - 21st Century Power Partnership (21CPP) Initiative: Co lead
 - International Smart Grid Action Network (ISGAN) Initiative: Co-lead
 - Transforming Solar Supply Chains Initiative
 - Super-efficient Equipment and Appliance Deployment (SEAD) Initiative: Co-lead
 - Bio future Platform Initiative: Co-lead



- Bio future Campaign : Co-lead
- Industrial Deep Decarbonization (IDDI) Initiative (Co-lead):
- Electric Vehicles Initiative (EVI)
- Carbon Capture, Utilization and Storage Initiative (CCUS) Initiative
- Hydrogen Initiative (H2I)
- Clean Energy Solutions Center Initiative
- CEM Investment and Finance Initiative

Several of the world's best technical expert organisations (such as IRENA, IEA, UNEP, UNIDO, NREL, LBNL, etc.) lend their technical assistance and advice to support the work of the CEM.

India is the host of CEM-14 and Mission Innovation (MI)-8 in 2023 and the Ministerial will be held on 21st July, 2023. Thus, in 2022 the CEM Senior Officials' Meeting was organized by Government of India on 6th to 8th April, 2022, in New Delhi, bringing together Clean Energy Ministerial (CEM) delegates from its 29 member governments ahead of 13th Clean Energy Ministerial (CEM13) and Mission Innovation (MI7) which was organized by the United States in September 2022, at Pittsburgh.

Organised over three days, the first day of the Senior Officials' Meeting was scheduled as a joint day of activities between Mission Innovation (MI) and CEM, while the second and third day of events were focused on core CEM issues. Starting from the need for greater collaboration between their RnD community with that of the deployment community, to energising various aspects of the CEM's work program in line with the new phase (CEM3.0) of the CEM, and ideas around how the CEM could be leveraged to shape the decisive decade of energy transition and climate action, the meeting helped deliver on the key goals set before itself by the membership.



Meeting of CEM Senior Officials at New Delhi

The three-day CEM Senior Officials' Meeting was a resounding success with enthusiastic participation witnessed from national and international participants, both in person and virtually. The sessions that transpired over the course of the event brought to the fore a few key aspects which have been listed below.

Members from across the spectrum emphasized on the importance of making clean energy transitions an all of society effort and not one that follows a mere top-down approach. Greater awareness, increased collaboration with all segments of society will be critical to make the transition process “just and inclusive”.

The first Global Clean Energy Action Forum (GCEAF) meeting was hosted by the Department of Energy (DOE), United States of America at Pittsburgh, Pennsylvania, USA on September 21-23, 2022. It was the Joint convening of Clean Energy Ministerial (CEM13) and Mission Innovation (MI-7) annual gathering. The meeting was attended by the senior officials from 23 countries and the European Union, along with more than 4000 participants.



Clean Energy and Mission Innovation Joint Ministerial Meeting at Pittsburgh

India has been an active supporter of certain workstreams of CEM and as such has demonstrated keen interest in leading certain agenda items that are part of the broader work programme such as Industrial Deep Decarbonisation, Super-efficient Equipment and Appliance Deployment, International Smart Grid Action Network.

CEM Senior Official's meeting was held on 20-23 March 2023 at Rio-de-Janeiro, Brazil wherein as per the tradition, the event and details of CEM 14 Ministerial meeting and other activities were announced, that will be part of Ministerial scheduled in July, 2023 in Goa. A delegation led by Director General, Bureau of Energy Efficiency participated in the event.



Meeting of CEM Senior Officials at Brazil

3. BRICS

The BRICS forum consists of 5 member countries namely, Brazil, Russia, India, China and South Africa. In 2006, the four countries initiated a regular informal diplomatic coordination, with annual meetings of Foreign Ministers at the margins of the General Debate of the UN General Assembly (UNGA).

India assumed BRICS Chairship from January, 2021. During the Russian Presidency in 2020, a Road map for BRICS energy cooperation up to 2025 was prepared and agreed



upon by the Member countries. The implementation of the Roadmap is led and coordinated by the Committee of Senior Energy Officials of BRICS, which is entitled to take decisions, formulate proposals for the Ministers and report to them the results during the BRICS Energy Ministers Meeting.

As an outcome of the above meetings, Indian Chairship has prepared three reports namely (I) BRICS Energy Report 2021 (ii) BRICS Energy Technology Report 2021 and (iii) BRICS Energy Research Directory 2021 in consultation with the member countries and in accordance with the Road map for BRICS energy cooperation up to 2025.

4. G20 (Group-20)

The Group of Twenty (G20) comprises 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Türkiye, United Kingdom, and United States) and European Union. The G20 members represent around 85% of the global GDP, over 75% of the global trade, and about two-thirds of the world population.

India has assumed the G20 Presidency w.e.f 1st of December 2022. The theme of India's G20 Presidency - "Vasudhaiva Kutumbakam" or "One Earth · One Family · One Future" - is drawn from the ancient Sanskrit text of the Maha Upanishad. Essentially, the theme affirms the value of all life – human, animal, plant, and microorganisms – and their interconnectedness on the planet Earth and in the wider universe. The theme also spotlights LiFE (Lifestyle for Environment), with its associated, environmentally sustainable and responsible choices, both at the level of individual lifestyles as well as national development, leading to globally transformative actions resulting in a cleaner, greener and bluer future. The logo and the theme together convey a powerful message of India's G20 Presidency, which is of striving for just and equitable growth for all in the world, as we navigate through these turbulent times, in a sustainable, holistic, responsible, and inclusive manner. They represent a uniquely Indian approach to our G20 Presidency, of living in harmony with the surrounding ecosystem.

Energy has been discussed in the G20 as a critical element for sustainable global economy since 2009. A dedicated Energy Sustainability Working Group was established in 2013 to discuss energy related issues. In 2017, energy was discussed as part of the Climate Sustainability Working Group. During the Argentine Presidency in 2018, the energy issues were de-linked from climate and steered towards discussions on energy transition under the Energy Transition Working Group (ETWG). The Working Group deliberates on energy security, accessibility and affordability, energy efficiency, renewable energy, innovation, technology and financing.

Under India's G20 Presidency, the priority areas for the Energy Transitions Working Group (ETWG) are-

- Energy Transition through Addressing Technology Gaps;
- Low-cost Financing for Energy Transition;
- Energy Security and Diversified Supply Chains;
- Energy Efficiency, Industrial Low Carbon Transitions and Responsible Consumption;
- Fuels for Future (3F); and
- Universal Access to Clean Energy and Just, Affordable, and Inclusive Energy Transition Pathways

Bureau of Energy Efficiency under Ministry of Power, Government of India is leading one of the priority areas under Energy Transitions Working Group Meeting (ETWG).



*1st Energy Transitions Working Group Meeting
5th-7th February, 2023 , Bengaluru*



BEE coordinated and successfully organized the 'Site Visit' Infosys Green Buildings Campus, Bengaluru for delegates during 1st ETWG meetings.



BEE coordinated and successfully organized the 'Site Visit' Infosys Green Buildings Campus, Bengaluru for delegates during 1st ETWG meetings.



*2nd Energy Transitions Working Group Meeting
2nd- 4th April, 2023, Gandhinagar*



*Side Event on Enabling a Global Transition to Sustainable Cooling during
2nd Energy Transitions Working Group Meeting*



*Side Event on Enabling a Global Transition to Sustainable Cooling during
2nd Energy Transitions Working Group Meeting*



5. IEA (International Energy Agency)

In March 2017, after a series of intensive consultations with all the relevant ministries, India joined the IEA as an Association country. This was a major milestone for global energy governance and another major step towards the IEA becoming a truly global energy organization and strengthening ties with the key energy players. Since then, Indian delegations have actively participated in IEA committees, meetings and workshops.

Activities so far:

Under the 'Energy Efficiency for Emerging Economies' collaboration programme, the IEA and BEE have initiated projects on:

- Roadmap for Mainstreaming on Energy Efficiency in Residential Buildings in India
- Developing a Policy Package for Unlocking the Energy Efficiency Potential in MSME Segment of Textile Sector in India
- The IEA and the BEE co-hosted the two webinars, one international and one national on Textile sector in India
- The IEA and BEE convened the workshop on Action on transport urban infrastructure and impacts to support social and economic recovery in India

As part of the strong relationship between BEE and IEA, on Energy Efficiency, the Director General of BEE participated in the Global conferences on Energy Efficiency and Working Party Meeting on Energy Efficiency organized by IEA in 2020 and 2021.

India as the Co-lead for the SEAD initiative of CEM is also engaging with the IEA to develop the ladder approach for energy efficient appliances covered under the initiative. The IEA along with the UK partners are also working with the BEE to strengthen the UK's CoP-26 initiative on Product Energy Efficiency.

6. United Nations Development Program (UNDP)

UNDP in co-ordination with BEE has received clearance for Work Program Inclusion and Project Preparation Grant Approval to the Global Environment Facility (GEF) Secretariat against project proposal titled "Accelerating adoption of super-efficient technologies for sustainable thermal comfort in buildings in India" for the Project Identification Form (PIF) for consideration under GEF-7.

7. United Nations Development Program (UNEP)

UNEP in coordination with BEE under GEF- 8 replenishment cycle programming working on project "Delivering Integrated Solutions to Transform India to Green Net Zero Emissions Buildings".

The Proposed project will build on further strengthening a number of efforts already ongoing in India and enable the scale of the efforts required from Building and construction sector. This includes:

- Scaling up the mandatory implementation and enforcement of Energy Conservation Building Code (ECBC) 2017 and ECBC-R
- Expanding the Code to integrate efficient use of green material to reduce GHG emissions building on
 - ☑ Efforts on a building material directory and developing more materials to reduce embedded carbon as well as reduce energy requirement for operating the building.
 - ☑ Strengthening further the National Building Code 2016 guidance on sustainable material for building construction
- Building capacities in Private sector to scale up Green Energy Efficient buildings.
- Strengthening BEE's Efforts of creating ESCO markets in medium and large construction companies.

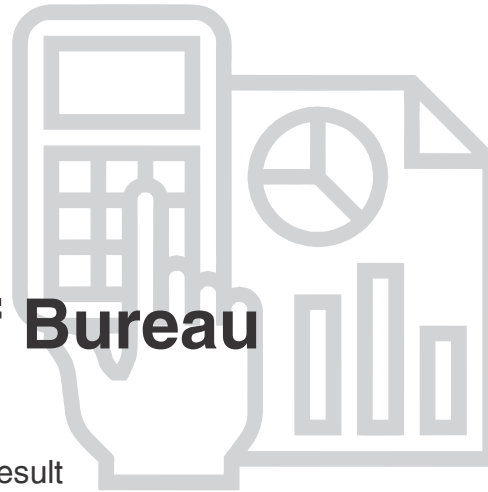


Discussion on Implementation of District Cooling System



3. Accounts of Bureau

- 3.1** Capital Structure
- 3.2** Summary of the Financial Result
- 3.3** Measures taken for Improving or Strengthening the Functioning of the Bureau
- 3.4** Annual Statement of Accounts



3.1 Capital Structure

The Corpus Fund of ₹50 crore received from the Ministry of Power has been used for the establishment of Central Energy Conservation Fund under Section 20 of the EC Act, 2001. This Corpus Fund of ₹50 crore has been invested with NTPC with the approval of Governing Council in the form of Secured, Non-Convertible, Non-Cumulative Redeemable Taxable NTPC Bonds of ₹10 lacs each (Series XVII) for 20 years w.e.f. 1 May, 2003 stipulating inter-alia payment of ₹4.24 crore (approx.) per annum as interest. The interest is being utilized to meet the recurring and non-recurring expenditure of the BEE and no fresh infusion of funds from Government was made during the year. Apart from the above an amount of ₹45.00 crore has been received from Ministry of Power towards Augmentation of BEE Corpus Fund. An amount of ₹2.61 crore has been earned as an interest by investing this Corpus Fund of ₹45.00 crore in fixed deposits with nationalised bank during financial year 2022-23. The total of BEE Corpus Fund along with this addition stands to ₹95.00 crore as on 31/03/2023.

3.2 Summary of the Financial Results

During the financial year 2022-23, Bureau had earned ₹424.00 lakhs as interest on Corpus Fund of ₹50 crore invested with M/s. NTPC Ltd. and, ₹261.16 lakhs as interest on additional Corpus Fund of ₹45.00 crore invested with Nationalized Bank. Further, the Bureau also earned ₹517.51 lakhs from the fee charged from the candidates for the 22nd and 23rd National Certification Examinations for Energy Managers & Energy Auditors. The expenditure of the BEE on Establishment, Administration expenses, Non-Recurring and Project expenses had been ₹1379.39 lakhs, ₹200.02 lakhs, ₹32.92 lakhs and ₹1.37 lakhs respectively. Further, an expenditure of ₹257.08 lakhs was incurred towards 22nd and 23rd National Certification Examination for Energy Managers & Energy Auditors. The excess expenditure over income of ₹185.84 lakhs has been transferred from the previous year excess income over expenditure.

3.3 Measures taken for improving or strengthening the functioning of the Bureau

01 Director appointed on deputation w.e.f 05.04.2022, 01 PS was promoted to the post of Sr. P.S. w.e.f 19.09.2022, 01 Accountant promoted to the post of F&AO w.e.f 01.04.2022, 01 Stenographer promoted to the post of P.S. w.e.f 28.09.2022, 01 Stenographer appointed w.e.f. 22.04.2022. 07 Sector Experts, 14 Project Engineers, 01 Consultant (Service & Establishment Matters) and 01 Consultant-Rajbhasha (Hindi) appointed on contract basis in BEE during financial year 2022-23.

3.4 Annual Statement of Accounts

Annual Statement of Accounts i.e., Balance Sheet, Income & Expenditure Statement and Receipt & Payments Statement of Accounts duly audited are attached herewith.



SEPARATE AUDIT REPORT OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA ON THE ANNUAL ACCOUNTS OF BUREAU OF ENERGY EFFICIENCY, NEW DELHI FOR THE YEAR ENDED 31 MARCH 2023

1. We have audited the attached Balance Sheet of Bureau of Energy Efficiency (BEE), New Delhi as at 31 March 2023, the Income and Expenditure Account/Receipts and Payments Account for the year ended on that date under Section 19(2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 25(2) of the Energy Conservation Act, 2001. These financial statements are the responsibility of BEE's Management. Our responsibility is to express an opinion on these financial statements based on our audit.
2. This Separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects etc., if any, are reported through Inspection Reports/CAG's Audit Reports separately.
3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.
4. Based on our audit, we report that:
 - i. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.
 - ii. The Balance Sheet, Income and Expenditure Account/Receipts and Payments Account dealt with by this report have been drawn up in the format as prescribed by Ministry of Finance and adopted by BEE under section 25(1) of the Energy Conservation Act, 2001.
 - iii. In our opinion, proper books of accounts and other relevant records have been maintained by BEE as required under Section 25(1) in-so-far as it appears from our examination of such books.

iv. We further report that:

A. Comments on Accounts

1. Balance Sheet

1.1. Corpus/ Capital Fund

Energy Conservation Fund (Schedule-1): ₹73,597.83 lakh

Standard & Labeling Fee (S&L): ₹56,821.33 lakh

Accrued amount of S&L fees for the year 2022-23 was ₹10563.28 lakh, out of which, fees amounting to ₹4753.16 lakh only was recognized on cash basis. This has resulted in understatement of both, S&L fees under Schedule 1 and 'Current Assets, Loans, Advances etc.' (Schedule 11), by ₹5810.12 lakh each.

Further, 'Fees received during the year' includes ₹4994.49 lakh which pertains to previous years, and therefore, should have been disclosed separately.

Moreover, the Significant Accounting Policy No. 6 (Schedule 24) regarding recognition of revenue including labeling fee received under Standard & Labeling Scheme on receipt basis, also needs to be modified to follow accrual basis in line with the Bureau of Energy Efficiency (Form of Annual Statement of Accounts and Records) Rules, 2007, which stipulated that the financial statements of BEE were required to be prepared on the basis of historical cost convention, unless otherwise stated and on accrual method of accounting.

1.2. Current Assets, Loans, Advances Etc. (Schedule-11): ₹72,577.48 lakh

Earmarked/Endowment Funds (Schedule 3): ₹6353.30 lakh

Current Assets, include various check testing equipment valuing ₹114.15 lakh which were (meant for disposal as scrap through MSTC Ltd. after confirmation and accounted for @ 5 per cent value, i.e., ₹10.23 lakh) lying with various testing labs/ third parties since long, ranging up to ten years, that too without any confirmation. This resulted in overstatement of both, 'Current Assets' (Schedule-11) as well as 'Earmarked/Endowment Funds' (Schedule 3) by ₹103.91 lakh each.

2. Income and Expenditure Account

2.1. Establishment Expenses (Schedule-20): ₹1379.39 lakh

As per the Bureau of Energy Efficiency (Forms of Annual Statement of Accounts and Records) Rules, 2007, the financial statements of BEE were required to be prepared on the basis of historical cost convention, unless otherwise stated and on accrual method of accounting.



'Establishment Expenses', however, do not include the accrued amount of salary and allowances of permanent employees amounting to ₹59.14 lakh, which resulted in understatement of both, Establishment Expenses (Schedule 20) and 'Current Liabilities and Provisions' (Schedule-7) by ₹59.14 lakh each.

The Significant Accounting Policy No. 1b (Schedule 24) regarding booking of salary and allowances to the permanent employees on cash basis also needs to be modified to be in line with above mentioned Rules of BEE.

2.2. Other Administrative Expenses etc. (Schedule-21): ₹200.02 lakh

Vide Management Letter dated 29.11.2021 and DO dated 01.11.2022, the management was advised to ensure correct accounting of various voluntary contribution payments, which were made in respect of the Clean Energy Ministerial (CEM), a high-level global forum, on accrual basis.

During the year 2022-23, BEE booked an amount of ₹391.80 lakh pertaining to CEM in S&L scheme which is not related to the S&L scheme. The same should have been accounted for as under:

- An amount of ₹14.86 lakh as prior period expense, as it pertains to the financial year 2021-22,
- ₹354.79 lakh as current year's expense, and
- ₹22.15 lakh as prepaid expenses, which related to the financial year 2023-24.

Thus, 'Prior Period Expenses' and 'Contribution to IEA (CEM)', both under 'Other Administrative Expenses etc.' (Schedule-21), and 'Prepaid expenses' under 'Current Assets, Loans and Advances etc.' (Schedule 11), are understated by ₹14.86 lakh, ₹354.79 lakh and ₹22.15 lakh respectively apart from understatement of Earmarked Funds (Others) – Schedule 3 due to incorrect deduction therefrom against S&L Programme by ₹ 391.80 lakh.

2.3. Other Expenses (Project Expenses) (Schedule-21): ₹258.45 lakh

Expenses incurred in respect of 22nd and 23rd National Level Certification Examination for the year 2022-23 amounted to ₹472.25 lakh (₹248.70 lakh and ₹223.55 lakh respectively), out of which only ₹257.08 lakh were actually accounted for on cash basis. This resulted in understatement of both Other Expenses (Project Expenses) (Schedule-21) and Current Liabilities and Provisions (Schedule 7) by ₹215.17 lakh each.

B. Grants-in-aid

Out of the Grants in aid of ₹13902.82 lakh (comprising unspent opening balance of ₹5995.81 lakh from previous year, amount received during the year ₹7715.93 lakh and interest earned ₹191.08 lakh), BEE could utilize a sum of ₹8019.46 lakh (including refund of interest ₹136.34 lakh), during the year leaving unutilized amount of ₹5883.36 lakh as on 31 March 2023.

C. Management Letter

Deficiencies which have not been included in the Separate Audit Report would be brought to the notice of the Director General, Bureau of Energy Efficiency, New Delhi through a Management Letter issued separately for remedial/corrective action.

- v. Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account/ Receipts & Payments account dealt with by this report are in agreement with the books of accounts.
- vi. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts and subject to matters stated above and other matters mentioned in the Annexure-I to this Separate Audit Report, give a true and fair view in conformity with the accounting principles generally accepted in India.
 - (a) In so far as it relates to the Balance Sheet, of the state of affairs of the Bureau of Energy Efficiency, New Delhi as at 31 March 2023 and
 - (b) In so far as it relates to Income & Expenditure Account, of the excess of expenditure over income for the year ended on that date.

For and on behalf of the C&AG of India

Place: New Delhi
Date: 25 October, 2023

Sd./-
(Sanjay K. Jha)
Director General of Audit (Energy)
New Delhi



Annexure-I (Referred to in para 4 (VI))

1	Adequacy of Internal Audit System	BEE is not having Internal Audit Wing. Internal Audit is being conducted by the Principal Accounts Office of the Ministry of Power (MoP). However, Internal Audit of BEE for the years 2021-22 and 2022-23 has not yet been conducted. Further, various old observations are pending for settlement since long.
2	Adequacy of Internal Control System	<ul style="list-style-type: none"> Internal Control system is commensurate with the size of AB. However, few lapses, which were observed, have been commented upon suitably vide DSAR/ Management Letter.
3	Systems of Physical Verification of Assets	Physical Verification of fixed assets for the year 2022-23 was carried out.
4	System of Physical Verification of Inventory	Physical Verification of inventory for the year 2022-23 was carried out.
5	Regularity in payment of Statutory dues	BEE is regular in payment of statutory dues. BEE, without obtaining any exemption with regard to applicability of GST on the fees/receipts till date, neither collected nor paid such statutory liability (except for E-Certs fee), which amounted to ₹5,123.41 lakh on the fee/receipts collected by BEE for the years 2018-19 to 2022-23.
6	Significant risk to financial reporting observed during the course of audit	No significant risk perceived.
7	Details of loss of cash or Government property due to theft, misappropriation, fraud and embezzlement etc. during the year	Management certified that no case was reported during the year.

Director General of Audit (Energy)



Reply to Separate Audit Report of the Comptroller & Auditor General of India on the Annual Accounts of Bureau of Energy Efficiency, New Delhi for the year ended 31 March 2023

A. COMMENTS ON ACCOUNTS

1. Balance Sheet

1.1. Corpus/ Capital Fund

Energy Conservation Fund (Schedule-1): ₹73,597.83 lakh

Standard & Labeling Fee (S&L): ₹56,821.33 lakh

Accrued amount of S&L fees for the year 2022-23 was ₹10563.28 lakh, out of which, fees amounting to ₹4753.16 lakh only was recognized on cash basis. This has resulted in understatement of both, S&L fees under Schedule 1 and 'Current Assets, Loans, Advances etc.' (Schedule 11), by ₹5810.12 lakh each.

Further, 'Fees received during the year' includes ₹4994.49 lakh which pertains to previous years, and therefore, should have been disclosed separately.

Moreover, the Significant Accounting Policy No. 6 (Schedule 24) regarding recognition of revenue including labeling fee received under Standard & Labeling Scheme on receipt basis, also needs to be modified to follow accrual basis in line with the Bureau of Energy Efficiency (Form of Annual Statement of Accounts and Records) Rules, 2007, which stipulated that the financial statements of BEE were required to be prepared on the basis of historical cost convention, unless otherwise stated and on accrual method of accounting.

Reply

As per the Regulation, manufacturers are supposed to pay the labelling fee of the respective financial year within 30 days from the date of closing of that financial year. Since inception of this programme, the labelling fees are indicated in Schedule 1 of the Balance Sheet on cash basis. Bureau is continuously following with such manufacturers who had not submitted the Production Data and also not paid the labelling fee. Bureau has already blocked their accounts on S&L Portal and also in process to forfeit the Performance Securities of the respective manufacturers. As per the audit observation, Bureau will take strong action against all such manufacturers to comply and get payment for labelling fees. After completing this, Bureau will also try to account the labelling fee on accrual basis from the next financial year (2024-25).

1.2. Current Assets, Loans, Advances Etc. (Schedule-11): ₹72,577.48 lakh

Earmarked/Endowment Funds (Schedule 3): ₹6353.30 lakh

Current Assets, include various check testing equipment valuing ₹114.15 lakh which were (meant for disposal as scrap through MSTC Ltd. after confirmation and accounted for



@ 5 per cent value, i.e., ₹10.23 lakh) lying with various testing labs/ third parties since long, ranging up to ten years, that too without any confirmation. This resulted in overstatement of both, 'Current Assets' (Schedule-11) as well as 'Earmarked/Endowment Funds' (Schedule 3) by ₹103.91 lakh each.

Reply

As per the observation of CAG, with reference to Clause 10.5.2 (i) of Manual for Procurement of Goods, 2022, all appliances of check testing will be disposed as scrap through MSTC Limited, a PSU under the administrative control of the Ministry of Steel, Government of India. The scrap value shall be fixed at 5% of the book value.

Accordingly, the scrap value would be revised in the book of accounts during FY 2023-24.

2. Income and Expenditure Account

2.1. Establishment Expenses (Schedule-20): ₹1379.39 lakh

As per the Bureau of Energy Efficiency (Forms of Annual Statement of Accounts and Records) Rules, 2007, the financial statements of BEE were required to be prepared on the basis of historical cost convention, unless otherwise stated and on accrual method of accounting.

'Establishment Expenses', however, do not include the accrued amount of salary and allowances of permanent employees amounting to ₹59.14 lakh, which resulted in understatement of both, Establishment Expenses (Schedule 20) and 'Current Liabilities and Provisions' (Schedule-7) by ₹59.14 lakh each.

The Significant Accounting Policy No. 1b (Schedule 24) regarding booking of salary and allowances to the permanent employees on cash basis also needs to be modified to be in line with above mentioned Rules of BEE.

Reply

BEE has been following the Government practice of accounting Salary and Allowances from March to February every year since its inception. The salary of March is released in April. Accordingly, expenditure towards pay and allowances, contribution to Employees Provident Fund and Dearness Allowance is also accounted for.

To change the policy at this stage will result that in the year of changing we will have to show 13 months' salary and in the next year it will be 11 months' salary. This will affect the taxation also. This observation was discussed with the earlier CAG audit team and they also realized the problem. Moreover, BEE is mentioning the same in Schedule 24 that Salary and Allowances are booked on cash basis.



2.2. Other Administrative Expenses etc. (Schedule-21): ₹200.02 lakh

Vide Management Letter dated 29.11.2021 and DO dated 01.11.2022, the management was advised to ensure correct accounting of various voluntary contribution payments, which were made in respect of the Clean Energy Ministerial (CEM), a high-level global forum, on accrual basis.

During the year 2022-23, BEE booked an amount of ₹391.80 lakh pertaining to CEM in S&L scheme which is not related to the S&L scheme. The same should have been accounted for as under:

- An amount of ₹14.86 lakh as prior period expense, as it pertains to the financial year 2021-22,
- ₹354.79 lakh as current year's expense, and
- ₹22.15 lakh as prepaid expenses, which related to the financial year 2023-24.

Thus, 'Prior Period Expenses' and 'Contribution to IEA (CEM)', both under 'Other Administrative Expenses etc.' (Schedule-21), and 'Prepaid expenses' under 'Current Assets, Loans and Advances etc.' (Schedule 11), are understated by ₹14.86 lakh, ₹354.79 lakh and ₹22.15 lakh respectively apart from understatement of Earmarked Funds (Others) – Schedule 3 due to incorrect deduction therefrom against S&L Programme by ₹391.80 lakh.

Reply

The Clean Energy Ministerial (CEM) was established in 2009 as a high-level global forum to promote the advancement of clean energy. The CEM does this by combining an annual meeting for Energy Ministers with ongoing technical work which focus on a range of issues across the energy spectrum. These technical work within CEM are referred to as Initiatives and Campaigns.

Super-efficient Equipment and Appliance Deployment (SEAD) is a global market transformation initiative for super-efficient equipment and appliances under CEM established in 2009 and it is being co-lead by India and USA since its inception. SEAD participating governments work together to develop common technical foundations to enable faster and easier adoption of cost-effective product efficiency policies.

The SEAD initiative under CEM has helped India to accelerate penetration of energy efficient appliances/equipment which is driven through the Standards and Labelling (S&L) programme of BEE. This initiative under CEM has helped the S&L programme of BEE in accelerating knowledge on standards of testing products; larger stakeholder involvement; more information about best-in-class products to



aid in policy making; and periodic upgradation of energy efficiency standards which led to accelerated energy savings under the programme.

The SEAD Efficient Model Award presented for the first-time during India hosting of CEM-4 in 2013 for Energy Efficient Flat Panel TV and LED, facilitated India to become the first country to regulate the performance, safety and quality of LED bulbs in 2014. Subsequently, BEE launched the S&L programme for LED bulbs in 2015.

The initiative has also enabled BEE to include more appliances under the ambit of S&L programme and has resulted in benchmarking of product across the market and monitoring efficiency of energy efficient products. As on August, 2023 there are 34 appliances/equipment covered under the S&L programme increased from 4 in 2009 which has resulted in significant increase in collection of labelling fees and energy savings. As of FY 2021-22, S&L programme has led to energy savings of 70.43 BU with labelling fee revenue over Rs.90.00 crore per year.

In view of above, it was decided in consultation with Ministry to incur expenses towards providing voluntary contribution to CEM from the revenue of BEE other than the grant received from Govt. of India in May, 2021 for contribution towards CEM Phase II. During 10th meeting of the Governing Council of BEE chaired by Hon'ble Minister of Power and New & Renewable Energy, it was decided that expenditure upto Rs 20.00 Crore in any project/activity may be approved by Management Advisory Committee (MAC) from the revenue of S&L fee towards relevant activities with intimation to the GC in its next meeting. An agenda was placed in 22nd Meeting of MAC held on 7th September, 2022 for towards making contribution towards CEM Phase III from S&L fee. The MAC approved the proposal of contribution of EUR 3,00,000 to be disbursed in three instalments during three years for the session July-2022 to June -2023, July-2023 to June-2024 and July, 2024 to June, 2025 respectively.

Thus, the total CEM expenditure made from Standard & Labelling fee comprise of followings items:

S. No.	Particulars	Expenditure in Rs.
(i)	Voluntary contribution towards CEM Phase II (1st July, 2019 to 30th June, 2022)	2,65,08,069
(ii)	Voluntary contribution towards CEM Phase III (1st July, 2022 to 30th June, 2023) for the session July 2022 to June 2023	88,59,893
(iii)	Organizing CEM Senior Officials' Meeting on 6-8th April, 2022	38,00,556
(iv)	Towards printing stationary and miscellaneous	11,210
Total		3,91,79,728

2.3. Other Expenses (Project Expenses) (Schedule-21): ₹258.45 lakh

Expenses incurred in respect of 22nd and 23rd National Level Certification Examination for the year 2022-23 amounted to ₹472.25 lakh (₹248.70 lakh and ₹223.55 lakh respectively), out of which only ₹257.08 lakh were actually accounted for on cash basis. This resulted in understatement of both Other Expenses (Project Expenses) (Schedule-21) and Current Liabilities and Provisions (Schedule 7) by ₹215.17 lakh each.

Reply

The National Productivity Council (NPC), an Autonomous organization under Department for Promotion of Industry & Internal Trade, Ministry of Commerce and Industry, Government of India is engaged by Bureau for carrying out the National Level Energy Manager and Auditor Certification examinations since its inception.

Since last in all 23 examinations, the actual expenditure is booked into the Income & Expenditure account under the head of “Other Expenses (Project Expenses) (Schedule 21)” only when certified UC is received from the M/s National Productivity Council (NPC). This practice was continued for all 23 examinations.

For the FY 2022-23 the UC along with the verified documents for 23rd examination is awaited from NPC. Till the time the UC and relevant documents are not received, the advance payment is shown as “Advance” in Schedule-11.

Bureau agrees with the observation of audit team and this is noted for future compliance.

B. Grants-in-aid

Out of the Grants in aid of ₹13902.82 lakh (comprising unspent opening balance of ₹5995.81 lakh from previous year, amount received during the year ₹7715.93 lakh and interest earned ₹191.08 lakh), BEE could utilize a sum of ₹8019.46 lakh (including refund of interest ₹136.34 lakh), during the year leaving unutilized amount of ₹5883.36 lakh as on 31 March 2023.

Reply

It is to state that previous year unspent balance of Rs. 5692.28 lakh has been revalidated by the Central Government on 19/06/2023 with a condition that the same would be utilized out of the BE of current Financial Year 2023-24. Also, an interest amount of Rs. 191.08 lakh has been surrendered to MOP on 12th July, 2023.



Annexure-I (Referred to in para 4 (VI))

1.	Adequacy of Internal Audit System	BEE is not having Internal Audit Wing. Internal Audit is being conducted by the Principal Accounts Office of the Ministry of Power (MoP). However, Internal Audit of BEE for the years 2021-22 and 2022-23 has not yet been conducted. Further, various old observations are pending for settlement since long.	Reply: Every year Pay & Accounts Office (PAO) of Ministry of Power conducts the internal audit. The Internal Audit for the financial year 2020-21 has been completed and the Internal Audit for FY 2021-22 & 2022-23 will be conducted from 4th December, 2023 to 8th December, 2023 as per strictly follow-up by BEE.
2.	Adequacy of Internal Control System	• Internal Control system is commensurate with the size of AB. However, few lapses, which were observed, have been commented upon suitably vide DSAR/ Management Letter.	Reply: The suggestions of audit is noted for compliance.
3.	System of Physical Verification of Assets	Physical Verification of fixed assets for the year 2022-23 was carried out.	-
4.	System of Physical verification of inventory	Physical Verification of inventory for the year 2022-23 was carried out.	-
5.	Regularity in payment of Statutory dues	BEE is regular in payment of statutory dues. BEE, without obtaining any exemption with regard to applicability of GST on the fees/receipts till date, neither collected nor paid such statutory liability (except for E-Certs fee), which amounted to `5,123.41 lakh on the fee/receipts collected by BEE for the years 2018-19 to 2022-23.	Reply: As per the opinion of tax consultant the activities of Bureau are statutory functions and hence are not in a nature of carrying on or further business, therefore, the registration fee and labelling fee collected by Bureau would not be subject to GST. As GST has been transition from service tax, it is need to consider the position of taxability under service tax regime. As per the decision of CESTAT (vide final order no. ST/A/50937/2018-CU [DB] dated 27/02/2018) where the service tax was not chargeable on the fees collected by BEE. It has been upheld by the order that BEE has acted in pursuance to the statutory regulations and obligations in pursuance to an act of Parliament due to which it has collected statutorily fixed fee for such performance hence cannot be subject to service tax.



			<p>In view of above facts, BEE has written letter to Ministry of Power to seek an appropriate clarification about the applicability of GST on various fees being collected by BEE for different programmes. In response to this and considering the position of taxability under service tax regime and as per the decision of CESTAT (vide final order no. ST/A/50937/2018-CU [DB] dated 27/02/2018) where the service tax was not chargeable on the fees collected by BEE, therefore, the Ministry of Power did not felt necessary to refer the matter with Finance Ministry. In view of above facts, there is no non-compliance by BEE.</p> <p>However, as per the audit observation Bureau will carry out study through tax expert on this matter and based on the outcomes it will be again referred to the Ministry of Finance through MoP to seek their views on the applicability of GST on the fees collected by BEE.</p> <p>Accordingly, the outcome would be reported to the Audit.</p> <p>In the view of above, the para may be dropped.</p>
6.	Significant risk to financial reporting observed during the course of audit	No significant risk perceived.	—
7.	Details of loss of cash or Government property due to theft, misappropriation, fraud and embezzlement etc. during the year	Management certified that no case was reported during the year.	—



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of the Entity **BUREAU OF ENERGY EFFICIENCY**

BALANCE SHEET AS AT 31ST MARCH, 2023

(Amount - ₹)

CORPUS/ CAPITAL FUND AND LIABILITIES	Schedule	Current Year	Previous Year
ENERGY CONSERVATION FUND	1	7,35,97,82,934	6,24,17,67,746
RESERVES AND SURPLUS	2	-	-
EARMARKED/ENDOWMENT FUNDS	3	63,53,29,868	65,88,82,104
SECURED LOANS AND BORROWINGS	4	-	-
UNSECURED LOANS AND BORROWINGS	5	-	-
DEFERRED CREDIT LIABILITIES	6	-	-
CURRENT LIABILITIES AND PROVISIONS	7	22,78,55,700	23,93,91,818
TOTAL		8,22,29,68,502	7,14,00,41,668
ASSETS			
FIXED ASSETS	8	1,52,20,524	1,60,74,602
INVESTMENTS - FROM EARMARKED/ENDOWMENT FUNDS	9	95,00,00,000	95,00,00,000
INVESTMENTS - OTHERS	10	-	-
CURRENT ASSETS, LOANS, ADVANCES ETC.	11	7,25,77,47,978	6,17,39,67,066
MISCELLANEOUS EXPENDITURE (to the extent not written off or adjusted)		-	-
TOTAL		8,22,29,68,502	7,14,00,41,668
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

Date : 14.06.2023

Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Milind Deore
Secretary

Abhay Bakre
Director General

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of the Entity **BUREAU OF ENERGY EFFICIENCY**

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2023

(Amount - ₹)

	Schedule	Current Year	Previous Year
INCOME			
Income from Services	12	-	-
Grants/Subsidies	13	-	-
Fees/Subscriptions	14	5,17,51,443	80,65,217
Income from Investments (Income on Invest from earmarked/endow. Funds transferred to Funds)	15	6,85,16,052	6,51,60,239
Income from Royalty, Publication etc.	16	-	-
Interest Earned (Net)	17	4,52,14,190	4,49,48,654
Other Income	18	11,41,620	9,10,780
Increase/(decrease) in stock of Finished goods and works-in-progress	19	-	-
TOTAL (A)		16,66,23,305	11,90,84,890
EXPENDITURE			
Establishment Expenses	20	13,79,39,255	12,07,23,508
Other Administrative Expenses etc.	21	2,00,02,423	1,59,50,953
Other Expenses (Project Expenses)	21	2,58,45,131	2,48,47,073
Expenditure on Grants, Subsidies etc.	22	-	-
Interest	23	-	-
Depreciation	8	14,20,514	16,36,157
Loss on Sale of Fixed Assets		-	1,32,022
TOTAL (B)		18,52,07,323	16,32,89,713
Balance being excess Income over Expenditure (A-B)		(1,85,84,018)	(4,42,04,823)
Transfer to Special Reserve		-	-
Transfer to/from General Reserve		-	-
BALANCE BEING (DEFICIT) CARRIED TO CORPUS/CAPITAL FUND		(1,85,84,018)	(4,42,04,823)
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

Date : 14.06.2023

Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Milind Deore
Secretary

Abhay Bakre
Director General



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of the Entity **BUREAU OF ENERGY EFFICIENCY**

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST MARCH, 2023

RECEIPTS	Details	Current Year	Previous Year	PAYMENTS	Details	Current Year	Previous Year
		(Amount - ₹)	(Amount - ₹)			(Amount - ₹)	(Amount - ₹)
I. Opening Balances							
a) Cash in Hand	-	-	-	I. Expenses	13,69,13,862	15,58,06,304	11,97,86,381
b) Bank Balances (Schedule - 11)	67,76,87,785	2,38,86,01,039	4,00,63,66,176	a) Establishment Expenses (Schedule 20)	1,88,92,442	1,85,21,265	1,85,21,265
I. Savings Accounts	4,69,98,83,771	4,00,63,66,176	80,58,02,106	b) Administrative Expenses (Schedule 21)			
ii. Deposit Accounts	61,70,58,720	5,99,46,27,276		II. Payments made against funds for various projects (Schedule 21)		1,00,94,15,715	1,86,65,69,027
iii. Savings Accounts - Plan Scheme				III. Investments and deposits made			
II. Grants Received (Schedule - 3)				IV Expenditure on Fixed Assets & Capital Work in Progress		85,82,210	66,30,077
From Government of India (Continued Scheme 2017-20)				Purchase of Fixed Assets including S&L Check Testing Equipments (Sch. - 8)			
BEE				V. Refund of surplus money/loans			
i. Energy Conservation Building Codes (ECBC)	11,92,93,000	25,00,00,000	25,00,00,000	i) Surplus/Interest of Grants refunded to MOP/GOI	1,36,33,631		5,60,04,640
ii. Strengthening of State Designated Agencies (SDA)	42,00,00,000	55,00,00,000	7,82,00,000	ii) Unspent Grant refunded to MOP/GOI (BLY SEEP & WB) (Schedule - 3 & 7)			4,06,66,114
iii. State Energy Conservation Fund (SECF)			6,00,00,000	iii) PRGFEE (Schedule - 1)	4,27,51,198		1,17,60,96,977
iv. Designated Consumers and Small Medium Enterprises (SME)	3,58,00,000	5,00,00,000	5,00,00,000	iv) VCFEEE (Schedule - 1)	47,54,618	6,11,39,447	51,21,79,276
v. Agriculture Demand Side Management (Ag DSM)	5,00,00,000	7,82,00,000	7,00,00,000	VI. Other Payments			
vi. Municipal Demand Side Management (Mu DSM)	5,00,00,000	10,00,00,000	10,00,00,000	Escorts Portal Maintenance Fees (Schedule-3)		10,325	
vii. Capacity Building of DISCOMs				Other Advances (Assets) (Schedule - 11)		320	
viii. Ag DSM- Energy Efficiency in Integrated Cold-chain	3,00,00,000			Bill Desk			
ix. EE for Electric Vehicles	1,39,00,000			Other Receivables (Assets) (Schedule - 11)			1,25,557
x. EE for Vehicles	26,00,000			Security Deposit & Performance Security (Schedule - 7)		1,40,71,729	12,18,055
xi. National Energy Conservation Awards & Pairing Competition	5,00,00,000			EMD Refund (Other Current Liabilities-Schedule - 7)		14,14,000	17,31,750
EC				Other Payments			
i. Energy Conservation Awareness				Unpaid Cheques (Schedule-7)		7,00,265	
ii. National Mission on Enhanced Energy Efficiency OTHERS (Schedule - 3)							
UNIDO-GEF-BEE Project Receipt	4,50,45,913	4,50,45,913					
III. Income on Investments/ Other Receipts							
a) i. Earmarked Funds (Corpus-BEE) (Schedule - 15)	4,24,00,000	4,24,00,000	4,24,00,000				
ii. Earmarked Funds (Corpus-NMEEE) (Schedule - 15)	2,35,91,073	77,15,93,000	2,53,05,855				
iii. PRGFEE (Schedule - 1)	1,12,578						
iv. VCFEE (Schedule - 1)	93,858						
v. E-Certs Fee (Schedule - 3)	20,88,005	6,82,85,514	75,28,349				
b) Earmarked Funds							
BEE							
i. Energy Conservation Building Codes (ECBC)	8,43,904	10,06,867	10,06,867				
ii. Strengthening of State Designated Agencies (SDA)	30,12,793	7,76,442	7,76,442				
iii. State Energy Conservation Fund (SECF)	16,81,074	98,926	98,926				
iv. Small Medium Enterprises (SME)	14,00,169	17,23,028	17,23,028				
v. Agriculture Demand Side Management (Ag DSM)	5,99,069						
vi. Municipal Demand Side Management (Mu DSM)	9,68,478	15,139	15,139				
vii. Capacity Building of DISCOMs	19,22,254	1,04,27,741	3,11,563				
CIF		6,88,99,79,444	8,83,81,35,480	CIF		1,25,11,40,315	3,79,95,29,119

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) Name of the Entity BUREAU OF ENERGY EFFICIENCY

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST MARCH, 2023

RECEIPTS	Details		(Amount - ₹)		PAYMENTS	Details	(Amount - ₹)		
	Current Year	Previous Year	Current Year	Previous Year			Current Year	Previous Year	
BIF	6,86,99,79,444	8,83,81,35,490			BIF			1,25,11,40,315	3,79,95,29,119
viii. Ag DSM- Energy Efficiency in Integrated Cold-chain	2,78,544	-	VII. Closing Balances (Schedule - 11)						
ix. EE-Electric Vehicles	1,24,987	-	a) Cash in Hand						
x. EE for Vehicles	1,188	-	b) Bank Balances						
xi. National Energy Conservation Awards & Printing Competition	9,13,239	-	i) Savings Accounts	22,19,723					67,76,87,785
xii. Energy Conservation Awareness	27,93,090	-	ii) Deposit Accounts						4,69,98,83,771
Energy Conservation			iii) Savings Accounts - Plan Scheme						61,70,55,720
ii. National Mission on Enhanced Energy Efficiency	45,69,255	74,81,943	iv) Savings CSS Account						6,95,89,75,185
IV. Interest Received									
a) On Bank deposits (Schedule - 11 & 17)	4,55,28,796	5,14,61,284							
b) On Bank deposits (Standard & Labelling) (Schedule - 1 & 11)	17,35,97,864	14,08,87,957							
c) Saving Account (Schedule - 17)	3,62,252	8,88,725							
d) ECBC Regn Fees (Schedule-3)	2,56,074	-							
e) Ecert Trading Fees (Schedule-3)	6,02,340	-							
f) PRGFEE (Schedule - 1)	-	76,38,619							
g) VCFEE (Schedule - 1)	-	46,60,760							
V. Other Income									
Miscellaneous Income (Processing Fee & RTI Fee) (Sch - 18)	11,41,620	9,10,780							
Examination Fund-2020/21st Exam.	-	76,82,477							
Examination Fund-2022-23 (22nd & 23rd) (Schedule - 14)	5,15,20,920	-							
Energy Auditor Accreditation fee (Schedule - 14)	2,30,523	3,82,740							
VI. Any other receipts									
Building Labeling Fee - ECBC (Schedule - 3)	26,50,000	1,00,000							
Sale of Fixed Assets	-	79,200							
Standard & Labelling (Regd./Label.Fee) (Schedule - 1 & 11)	99,29,08,841	70,74,64,165							
Cheques Write Back due to Expiry	20,90,879	64,88,808							
Security Deposit & Performance Security (Schedule - 7)	78,86,095	89,84,504							
Security Deposit (Liabilities)									
Standard & Labelling (S&L) (Schedule - 7)	1,87,00,000	81,00,000							
EMD Deposit (Other Current Liabilities-Schedule - 7)	1,38,54,130	5,10,800							
Other Receivables (Assets) (Schedule- 11)	1,25,419	78,420							
Total	8,21,01,15,500	9,79,41,56,395	Total	9,79,41,56,395	Total	8,21,01,15,500	9,79,41,56,395	8,21,01,15,500	9,79,41,56,395

Date : 14.06.2023
Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Milind Deore
Secretary

Abhay Bakre
Director General

BUREAU OF ENERGY EFFICIENCY
(Ministry of Power, Government of India)





FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST March, 2023

SCHEDULE 1

(Amount - ₹)

SCHEDULE 1 - CORPUS/ CAPITAL FUND	Current Year		Previous Year	
A. ENERGY CONSERVATION FUND				
1. Corpus Fund				
Opening balance brought forward				
Balance as at the beginning of the year (BEE)	50,00,00,000		50,00,00,000	
Contribution towards Corpus Fund (Augmentation of Corpus Fund - NMEEE)	45,00,00,000	95,00,00,000	45,00,00,000	95,00,00,000
2. Standard & Labeling Fee (S&L)				
Opening balance brought forward	4,54,55,34,242		3,85,27,50,772	
Less: Fund transferred to Scheme during the year	13,81,69,237		17,40,93,826	
Add: Fees received during the year	99,29,08,841		70,74,64,165	
Add: Interest during the year	28,18,59,602	5,68,21,33,448	15,94,13,131	4,54,55,34,242
3. Building Labeling Fee				
Opening balance brought forward	-		56,00,000	
Transferred to Schedule-3	-	-	56,00,000	-
4. E-Certs Trading Fee				
Opening balance brought forward	-		66,99,988	
Transferred to Schedule-3	-	-	66,99,988	-
5. Opening Balance of Excess of Income over Expenditure				
Balance transferred from the Income & Expenditure Account	74,62,33,504		79,04,38,327	
	(1,85,84,018)	72,76,49,486	(4,42,04,823)	74,62,33,504
Total		7,35,97,82,934		6,24,17,67,746
B. OTHERS - PRGFEE & VCFEE FUND				
1. PRGFEE				
Opening balance brought forward	-		1,21,10,96,978	
Less: Amount refunded to MoP	-		1,17,60,96,977	
Add: Interest during the year (previous year interest includes interest received from RECPDCL)	1,12,578		76,38,619	
Less: Amount refunded to MoP	1,12,578	-	4,26,38,620	-
2. VCFEE				
Opening balance brought forward	-		51,21,79,276	
Less: Amount refunded to MoP	-		51,21,79,276	
Add: Interest during the year	93,858		46,60,760	
Less: Amount refunded to MoP	93,858	-	46,60,760	-
Total				

SCHEDULE 2

SCHEDULE 2 - RESERVES AND SURPLUS:	Current Year		Previous Year	
1. Capital Reserve: [Grants-in-Kind (USAID)] - (BEE)				
As per last Account	-		-	
Less : Sale of Assets during the year	-		-	
Less : Loss on Sale of Assets during the year	-	-	-	-
2. Revaluation Reserve:				
As per last Account	-		-	
Addition during the year	-		-	
Less : Deductions during the year	-	-	-	-
3. Special Reserve:				
As per last Account	-		-	
Addition during the year	-		-	
Less : Deductions during the year	-	-	-	-
4. General Reserve:				
As per last Account	-		-	
Addition during the year	-		-	
Less : Deductions during the year	-	-	-	-
TOTAL				



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of the Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2023

(Amount: ₹)

SCHEDULE 3 (Part-I) - EARMARKED FUNDS (Government Grants)	Promoting Energy Efficiency Activities in different sectors of India Economy												Energy Efficiency in Small and Medium Enterprises (SMEs)		Balance c/f to next page (pg. no. 7-8)		
	Strengthening of SDAs to promote efficient use of energy and its conservation at State level				Demand Side Management (DSM) Initiatives				Capacity Building of DISCOMS				Current Year	Previous Year	Current Year	Previous Year	
	SDA Strengthening Programme (SDA)		Contribution to State Energy Conservation Fund (SECF)		Agriculture DSM Programme (Ag DSM)		Ag DSM - Energy Efficiency in Integrated Cold-chain		"Municipal DSM Programme (Mu DSM)"		Previous Year		Current Year	Previous Year	Current Year	Previous Year	
a) Opening balance	7,00,51,221	1,12,22,198	4,00,95,764	14,29,056	41,845	3,50,626	-	3,47,019	13,46,148	53,19,761	6,23,17,531	8,17,87,595	23,18,54,205	10,14,55,384	-	-	
b) Additions during the year:																	
i. Donations/grants	42,00,00,000	55,00,00,000	6,00,00,000	6,00,00,000	5,00,00,000	7,82,00,000	3,00,00,000	5,00,00,000	7,00,00,000	-	10,00,00,000	5,00,00,000	58,58,00,000	90,82,00,000	28,31,587	1	
ii. Income from investments made on account of funds	30,12,793	7,51,620	16,81,074	95,784	5,99,069	-	2,78,544	9,68,478	14,655	19,22,254	3,01,603	16,67,945	98,62,381	-	-	-	
iii. Other additions (Sale of assets)	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL (a+b)	49,30,64,014	56,19,73,819	4,17,76,838	6,15,24,820	5,06,40,914	7,85,50,626	3,02,78,544	5,13,15,497	7,13,60,803	6,09,23,079	10,56,21,364	9,95,17,700	13,34,55,540	82,75,16,586	1,01,24,86,972		
c) Utilisation/Expenditure towards objectives of funds																	
i. Capital Expenditure																	
- Fixed Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Check Testing Equipments (Stock in Hand)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total																	
ii. Revenue Expenditure																	
- Salaries, Wages and allowances etc.	20,77,986	26,13,931	-	-	-	12,29,220	-	-	-	4,07,878	4,24,222	10,41,862	10,91,417	35,27,706	53,58,790	-	-
- Other Administrative/Project expenses	29,49,51,680	48,67,17,540	-	2,00,00,000	2,43,48,175	7,72,55,524	-	1,01,64,194	7,09,27,783	2,01,86,443	4,31,67,870	3,18,63,485	6,75,97,317	38,15,13,978	76,56,66,034	-	-
- Income from investments returned to MOP	7,51,620	25,91,127	95,784	14,29,056	-	24,037	-	14,655	86,001	3,01,603	30,28,447	16,67,945	24,02,402	28,31,387	95,61,070	-	-
- Others (unspent Grant returned to MoP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Others (Sale of Assets - Refund to MOP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	29,77,81,266	49,19,22,598	95,764	2,14,29,056	2,43,48,175	7,85,08,781	-	1,01,78,849	7,10,13,784	2,08,95,924	4,66,20,539	3,45,73,292	7,10,91,136	38,78,73,271	78,05,85,894		
TOTAL (c)	29,77,81,266	49,19,22,598	95,764	2,14,29,056	2,43,48,175	7,85,08,781	-	1,01,78,849	7,10,13,784	2,08,95,924	4,66,20,539	3,45,73,292	7,11,38,009	38,78,73,271	78,06,32,767		
NET BALANCE AS AT THE YEAR END (a+b-c) (A)	19,52,82,748	7,00,51,221	4,16,81,074	4,00,95,764	2,62,92,739	41,945	3,02,78,544	4,11,36,648	3,47,019	4,00,27,155	5,90,00,825	6,49,44,408	6,23,17,531	43,96,43,316	23,18,54,205		
a) Income from fee																	
Opening Balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer from Schedule - 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Additions during the year	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Less : Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (a)																	
b) Assets under Grant:																	
i. Opening balance of the assets	19,223	32,055	-	-	-	-	-	13,781	22,967	13,763	22,937	41,888	22,939	88,655	1,00,898		
ii. Additions to the assets:																	
Donations/grants	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL (b)	19,223	32,055						13,781	22,967	13,763	22,937	41,888	22,939	88,655	1,47,771		
c) Utilisation/Expenditure																	
- Sale/ Loss on sale of fixed assets	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Other Administrative expenses (Depreciation)	7,680	12,815	-	-	-	-	-	5,512	9,186	5,505	9,174	16,755	27,924	35,462	59,089		
Total (c)	7,680	12,832						8,269	13,781	8,258	13,763	25,133	41,888	53,193	88,655		
BALANCE AS AT THE YEAR END (d)=(b-c)	11,533	19,223						8,269	13,781	8,258	13,763	25,133	41,888	53,193	88,655		
NET BALANCE AS AT THE YEAR END (B) (a+d)	19,52,94,281	7,00,70,444	4,16,81,074	4,00,95,764	2,62,92,739	41,945	3,02,78,544	4,11,44,917	3,60,800	4,00,35,413	5,90,14,588	6,49,69,541	6,23,55,419	43,96,96,509	23,19,42,860		
GRAND TOTAL (A+B)																	



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of the Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2023

SCHEDULE 3 (Part-I) SCHEDULE 3 - EARMARKED FUNDS (Government Grants)	Promoting Energy Efficiency Activities in different sectors of India Economy												National Mission on Enhanced Energy Efficiency (NMEEE)		Total	
	Balance b/f from previous page (pg. no. 7-8)		Building Energy Efficiency		Energy Efficiency in Transport Sector		Energy Conservation Awards and Painting Competition				BEE-GEF-WB MSME Project (External Aided Project)		National Mission on Enhanced Energy Efficiency (NMEEE)		Total	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
a) Opening balance	23,18,54,205	10,14,55,384	85,31,327	8,92,45,867	-	-	2,89,63,406	6,88,70,642	12,05,38,199	14,00,58,969	18,85,010	20,96,93,922	41,15,27,566	59,95,81,059	81,30,43,437	
b) Additions during the year:																
i. Donations/grants	56,58,00,000	90,82,00,000	11,92,93,000	25,00,00,000	1,39,00,000	5,00,00,000	5,00,00,000	5,00,00,000	-	15,00,00,000	-	20,00,00,000	20,00,00,000	77,15,93,000	1,55,62,00,000	
ii. Income from investments made on account of funds	96,62,381	28,31,587	8,43,904	8,28,505	1,188	9,13,239	6,90,497	27,93,090	14,58,263	45,69,255	-	45,69,255	78,24,779	1,91,08,044	1,36,33,631	
iii. Other additions (Sale of assets)	-	1	-	-	-	-	-	-	-	-	-	-	21,546	-	21,547	
TOTAL (a+b)	82,75,16,586	1,01,24,86,972	12,86,68,231	34,00,74,372	1,40,24,987	11,95,61,139	7,98,76,645	12,33,31,289	29,15,17,231	18,85,010	21,42,63,177	61,93,73,891	1,39,02,82,103	2,38,46,98,615		
c) Utilisation/Expenditure towards objectives of funds																
i. Capital Expenditure																
- Fixed Assets	-	46,873	-	24,987	-	-	-	-	-	-	-	-	19,46,847	38,04,401	38,76,261	
- Check Testing Equipments (Stock in Hand)	-	46,873	-	24,987	-	-	-	-	-	-	-	-	19,46,847	38,04,401	38,76,261	
Total	-	46,873	-	24,987	-	-	-	-	-	-	-	-	19,46,847	38,04,401	38,76,261	
ii. Revenue Expenditure																
- Salaries, Wages and allowances etc.	35,27,706	53,58,790	4,55,950	9,98,040	-	-	11,65,239	17,67,748	25,34,050	26,32,004	-	58,32,082	60,19,497	1,35,15,027	1,67,76,079	
- Other Administrative/Project expenses	38,15,13,978	76,56,66,034	3,93,09,303	32,58,39,737	76,31,802	8,60,76,035	7,21,07,005	9,92,48,021	15,79,85,279	15,79,85,279	-	17,04,99,561	33,24,27,277	77,28,50,115	1,66,79,94,462	
- Income from investments returned to MOP	28,31,587	95,61,070	8,28,505	46,80,281	-	-	6,90,497	27,53,950	14,58,263	1,03,61,649	-	78,24,779	2,85,16,724	1,36,33,631	5,60,04,640	
- Others (unspent Grant refunded to MOP)	-	-	-	-	-	-	-	-	-	-	-	-	3,88,10,070	-	4,08,66,114	
- Others (Sale of Assets - Refund to MOP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	38,78,73,271	78,05,85,894	4,05,93,758	33,15,18,058	76,31,802	9,05,97,733	7,39,62,741	10,32,40,334	17,09,79,032	17,09,79,032	18,85,010	18,41,56,422	40,58,75,588	79,99,88,773	1,78,14,41,285	
TOTAL (c)	38,78,73,271	78,05,85,894	4,05,93,758	33,15,18,058	76,31,802	9,05,97,733	7,39,62,741	10,32,40,334	17,09,79,032	17,09,79,032	18,85,010	18,61,03,269	40,96,79,969	80,19,45,620	1,78,53,17,556	
NET BALANCE AS AT THE YEAREND (a+b-c) (A)	43,96,43,316	23,18,54,205	8,00,74,473	65,31,327	63,93,185	59,13,904	60,743	2,00,90,955	12,05,38,199	18,85,010	2,81,59,908	20,96,93,922	58,83,36,464	59,95,81,059		
a) Income from fee																
Opening Balance	-	-	57,00,000	-	-	-	-	-	-	-	-	-	-	2,01,51,488	-	
Transfer from Schedule - 1	-	-	56,00,000	-	-	-	-	-	-	-	-	-	-	66,99,998	1,22,99,998	
Additions during the year	-	26,50,000	1,00,000	-	-	-	-	-	-	-	-	-	21,01,172	47,51,500	76,51,500	
Interest	-	2,56,074	-	-	-	-	-	-	-	-	-	-	6,02,340	8,58,414	-	
Less - Expenses	-	-	-	-	-	-	-	-	-	-	-	-	10,325	10,325	-	
Total (e)	-	86,06,074	57,00,000	-	-	-	-	-	-	-	-	-	1,71,44,675	1,44,51,488	2,01,51,488	
b) Assets under Grant																
i. Opening balance of the assets	88,655	1,00,888	19,990	-	-	-	-	-	-	-	-	-	48,04,806	36,66,884	37,67,762	
ii. Additions to the assets:																
- Donations/grants	-	46,873	-	24,987	-	-	-	-	-	-	-	-	19,46,847	38,04,401	38,76,261	
TOTAL (b)	88,655	1,47,771	19,990	24,987	-	-	-	-	-	-	-	67,51,653	74,71,285	68,60,298	76,44,043	
c) Utilisation/Expenditure																
- Sale/ Loss on sale of fixed assets	-	17	-	-	-	-	-	-	-	-	-	-	-	7,37,969	-	
- Other Administrative expenses (Depreciation)	35,462	59,099	7,996	4,997	-	-	-	-	-	-	-	-	24,03,037	19,26,527	19,92,623	
Total (c)	35,462	59,116	7,996	4,997	-	-	-	-	-	-	-	24,03,037	24,03,037	24,46,495	27,30,592	
BALANCE AS AT THE YEAREND (d)=(b-c)	53,193	88,655	11,994	19,990	-	-	-	-	-	-	-	43,48,616	48,04,806	44,13,803	49,13,451	
NET BALANCE AS AT THE YEAREND (B) (a+d)	53,193	88,655	86,18,068	57,19,990	-	-	-	-	-	-	-	2,14,93,291	1,92,56,294	3,01,64,552	2,50,64,939	
GRAND TOTAL (A+B)	43,96,96,508	23,19,42,880	9,66,92,541	1,42,51,317	63,93,185	59,13,904	60,743	2,00,90,955	12,05,38,199	18,85,010	4,96,53,199	22,89,50,216	61,85,01,036	62,46,46,998		



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST March, 2023

SCHEDULE 4 & 5

(Amount - ₹)

SCHEDULE 4 - SECURED LOANS AND BORROWINGS	Current Year	Previous Year
1. Central Government		
2. State Government		
3. Financial Institutions		
a) Term Loans	-	-
b) Interest Accrued and due	-	-
4. Banks:		
a) Term Loans	-	-
- Interest accrued and due	-	-
b) Other Loans	-	-
- Interest accrued and due	-	-
5. Other Institutions and Agencies		
6. Debentures and Bonds		
7. Others		
TOTAL	-	-

SCHEDULE 5 - UNSECURED LOANS AND BORROWINGS	Current year	Previous Year
1. Central Government	-	-
2. State Government	-	-
3. Financial Institutions	-	-
4. Banks:		
a) Term Loans	-	-
b) Other Loans	-	-
5. Other Institutions and Agencies	-	-
6. Debentures and Bonds	-	-
7. Fixed Deposits	-	-
8. Others	-	-
TOTAL		



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SCHEDULE 6 & 7

(Amount - ₹)

SCHEDULE 6 - DEFERRED CREDIT LIABILITIES	Current Year		Previous Year	
a) Acceptance secured by hypothecation of capital equipment and other assets	-	-	-	-
b) Others	-	-	-	-
TOTAL	-	-	-	-

SCHEDULE 7 - CURRENT LIABILITIES AND PROVISIONS	Current Year		Previous Year	
A. CURRENT LIABILITIES				
Sundry Creditors				
Sundry Creditors (Others)		10,28,927		32,79,190
Security Deposit & Performance Guarantee		2,30,08,683		2,61,44,316
Security Deposit (Standard & Labelling)		14,85,13,500		13,28,63,500
Duties & Taxes				
TDS Payable	87,51,740		6,29,564	
GST Payable	20,11,420	1,07,63,160	74,812	7,04,376
Other Current Liabilities				
Payable to MoP (PRGFEE & VCFEE)	-		4,72,99,380	-
Payable to Others	4,45,41,430	4,45,41,430	2,91,01,056	7,64,00,436
TOTAL (A)		22,78,55,700		23,93,91,818
B. PROVISIONS				
1. For Taxation		-		-
2. Gratuity		-		-
3. Superannuation/Pension		-		-
4. Accumulated Leave Encashment		-		-
5. Trade Warranties/Claims		-		-
TOTAL (B)		-		-
TOTAL (A+B)		22,78,55,700		23,93,91,818



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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2023

S. No.	SCHEDULE 8 - FIXED ASSETS DESCRIPTION	Rate of Depreciation	GROSS BLOCK			DEPRECIATION BLOCK			NET BLOCK					
			As on 01/04/22	Additions during the year	Sale	Adjustment	As on 31/03/23	As on 01/04/22	for the year	Sale	Adjustment	As on 31/03/23	As on 31/03/22	
BUREAU OF ENERGY EFFICIENCY														
(A)	Tangible Assets													
1	Land		-	-	-	-	-	-	-	-	-	-	-	-
2	Building		-	-	-	-	-	-	-	-	-	-	-	-
3	Furniture & Fixtures	10%	1,69,36,868	4,22,995	-	-	1,73,59,863	1,07,24,925	6,62,254	-	1,13,87,179	59,72,684	62,11,943	
4	Office Equipments	15%	99,92,610	7,97,420	-	-	1,07,90,030	73,64,914	4,58,517	-	78,23,431	29,66,599	26,27,696	
5	Office Equipments	100%	-	31,985	-	-	31,985.00	-	31,985	-	-	-	-	
6	Vehicle	15%	24,59,824	-	-	-	24,59,824	20,65,708	59,118	-	21,24,826	3,34,998	3,94,116	
7	Computer/Peripherals	40%	60,82,959	72,999	-	-	61,55,958	56,19,106	2,00,136	-	58,19,242	3,36,716	4,63,853	
8	Computer/Peripherals	100%	-	-	-	-	-	-	-	-	-	-	-	
(B)	Intangible Assets													
1	Computer - Software	40%	97,026	19,950	-	-	1,16,976	85,740	8,504	-	94,244	22,732	11,286	
	TOTAL		3,55,69,287	13,45,349	-	31,985	3,68,82,661	2,58,60,393	14,20,514	-	2,72,48,922	96,33,729	97,08,894	
ASSETS UNDER GRANT														
(A)	Tangible Assets													
1	Land		-	-	-	-	-	-	-	-	-	-	-	-
2	Building		-	-	-	-	-	-	-	-	-	-	-	
3	Furniture & Fixtures	10%	7,51,057	-	-	-	7,51,057	3,08,440	44,262	-	3,52,702	3,98,355	4,42,617	
4	Office Equipments	15%	72,90,294	5,50,500	-	-	78,40,794	47,54,736	4,62,909	-	52,17,645	26,23,149	25,35,558	
5	Computer/Peripherals	40%	1,05,86,721	7,80,747	-	-	1,13,67,468	79,31,509	13,10,061	-	92,41,570	21,25,898	26,55,212	
(B)	Intangible Assets													
1	Computer - Software	40%	31,48,725	-	-	-	31,48,725	24,16,404	2,92,928	-	27,09,332	4,39,393	7,32,321	
2	Computer - Software	100%	-	6,15,600	-	-	6,15,600	-	6,15,600	-	-	-	-	
	TOTAL		2,17,76,797	19,46,947	-	6,15,600	2,31,08,044	1,54,11,089	27,25,760	-	1,75,21,249	55,86,795	63,65,708	
	GRAND TOTAL		5,73,46,084	32,92,196	-	6,47,585	5,99,90,695	4,12,71,482	41,46,274	-	4,47,70,171	1,52,20,524	1,60,74,602	
	PREVIOUS YEAR		10,81,40,516	43,38,083	5,49,93,238	1,39,277	5,73,46,084	9,14,43,117	40,00,270	5,40,32,628	4,12,71,482	1,60,74,602	1,66,97,399	

Note:- 100% depreciation has been charged on Assets costing Rs. 5,000/- or less each.



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2023

SCHEDULE 9 & 10

(Amount - ₹)

SCHEDULE 9 - INVESTMENT FROM EARMARKED/ENDOWMENT FUNDS		Current year	Previous Year
1. In Government Securities		-	-
2. Other approved Securities		-	-
3. Shares		-	-
4. Corpus Fund			
i. Bonds of NTPC (20 year)	50,00,00,000		50,00,00,000
ii. FDR (Augmentation of Corpus Fund - NMEEE)	45,00,00,000	95,00,00,000	45,00,00,000
5. Subsidiaries and Joint Ventures		-	-
6. Others			
Bank of Baroda - PRGFEE	-		1,21,10,96,978
Bank of Baroda - VCFEE	-		51,21,79,276
Bank of Baroda - S&L Fee	-		3,75,65,70,969
			5,47,98,47,223
Transferred to Schedule - 11	-	-	5,47,98,47,223
TOTAL		95,00,00,000	95,00,00,000

SCHEDULE 10 - INVESTMENT - OTHERS		Current Year	Previous Year
1. In Government Securities		-	-
2. Other approved Securities		-	-
3. Shares		-	-
4. Debentures and Bonds		-	-
5. Subsidiaries and Joint Ventures		-	-
6. Others		-	-
TOTAL		-	-



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SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2023

SCHEDULE 11

(Amount - ₹)

SCHEDULE 11- CURRENT ASSETS, LOANS, ADVANCES ETC.	Current Year		Previous Year	
A. CURRENT ASSETS:				
I. Cash-in-Hand	-	-	-	-
II. Bank Accounts (With Scheduled Banks)				
- On Deposit Accounts				
FDRs with Scheduled banks - BEE	81,52,57,087		84,71,32,999	
FDRs with Scheduled banks - S&L	4,54,55,34,242		3,85,27,50,772	
	5,36,07,91,329		4,69,98,83,771	
- On Savings Accounts				
BEE (Bank of Baroda Saving & Sweep A/c - BEE)	3,26,68,519		4,39,25,343	
BEE (Bank of Baroda Saving & Sweep A/c - S&L)	91,36,32,410		57,80,78,732	
BEE (Bank of Baroda Saving & Sweep A/c - Plan Scheme)	3,77,52,536		61,70,55,720	
BEE (Bank of Baroda Saving & Sweep A/c - PRGFEE)	-		4,26,38,620	
BEE (Bank of Baroda Saving & Sweep A/c - VCFEE)	-		46,60,760	
BEE (Bank of Baroda Saving & Sweep A/c - Examination)	2,60,84,326		72,43,323	
BEE (Bank of Baroda Saving) - CSS-1	53,53,41,625		-	
BEE (Bank of Baroda Saving) - CSS-2	4,23,57,562		-	
BEE (Bank of Baroda Saving) - CSS-1 - Holding	43,14,953		-	
BEE (Bank of Baroda Saving) - CSS-2 - Holding	46,01,049		-	
BEE (Indian Overseas Bank , Chennai)	6,14,280		4,59,611	
BEE (Indian Overseas Bank Saving & Sweep A/c - Delhi)	8,16,596		6,81,396	
	1,59,81,83,856	6,95,89,75,185	1,29,47,43,505	5,99,46,27,276
III. Postage Stamps in hand		-		-
IV. Check Testing Equipment (S&L Project) {Refer S.No.10 of Schedule-25}		1,14,14,912		80,21,171
B. LOANS, ADVANCES AND OTHER ASSETS:				
I. Other Advances				
National Productivity Council, Chennai	86,06,683		-	
Other Advances	11,32,776	97,39,459	26,76,872	26,76,872
II. Staff Advances		1,03,900		5,89,856
III. Other Deposits (Security Deposits)		3,97,000		3,97,000
IV. Income Accrued (On Investments/Fixed Deposit Receipts)				
i. BEE	3,74,73,823		3,81,50,681	
ii. NMEEE	1,63,05,568		1,37,80,589	
iii. S&L	22,28,82,658	27,66,62,049	11,46,20,920	16,65,52,190
V. Other Receivables				
BEE	3,42,858		8,02,110	
Standard & Labeling (S&L)	84,138	4,26,996	83,818	8,85,928
VI. Prepaid Expenses		28,477		2,16,773
Total		7,25,77,47,978		6,17,39,67,066



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 12 & 13

(Amount - ₹)

SCHEDULE 12 - INCOME FROM SALES/SERVICES	Current Year	Previous Year
1) Income from Sales		
a) Sale of Finished Goods	-	-
b) Sale of Raw Material	-	-
c) Sale of Scraps	-	-
2) Income from Services		
a) Labour and Processing Charges	-	-
b) Professional/Consultancy Services	-	-
c) Agency Commission and Brokerage	-	-
d) Maintenance Services (Equipment/Property)	-	-
e) Others	-	-
Total	-	-

SCHEDULE 13 - GRANTS/SUBSIDIES	Current Year	Previous Year
(Irrevocable Grants & Subsidies Received)		
1. Central Government	-	-
2. State Government(s)	-	-
3. Government Agencies	-	-
4. Institutions/Welfare Bodies	-	-
5. International Organisations	-	-
Total	-	-



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 14 & 15

Amount - ₹)

SCHEDULE 14 - FEES/SUBSCRIPTION	Current Year	Previous Year
1. Entrance Fees	-	-
2. Annual Fees (National Level Certification Examination-2022 - 23/22nd & 23rd Exam.)	5,15,20,920	76,82,477
3. Energy Auditor Accreditation Fees	2,30,523	3,82,740
Total	5,17,51,443	80,65,217

SCHEDULE 15 - INCOME FROM INVESTMENTS	Investment from Earmarked Fund		Investment - Others	
	Current Year	Previous Year	Current Year	Previous Year
(Income on Invest. From Earmarked/Endowment Funds transferred to Funds)				
1. Interest				
a) On Govt. Securities	-	-	-	-
b) Other Bonds (NTPC - Corpus Fund)	4,24,00,000	4,24,00,000	-	-
c) Corpus Fund - NMEEE	2,61,16,052	2,27,60,239	-	-
2. Dividends				
a) On Shares	-	-	-	-
b) On Mutual Fund Securities	-	-	-	-
3. Rents	-	-	-	-
4. Others	-	-	-	-
Total	6,85,16,052	6,51,60,239	-	-



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 16 & 17

(Amount - ₹)

SCHEDULE 16 - INCOME FROM ROYALTY, PUBLICATION ETC.	Current Year	Previous Year
a) Income from Royalty	-	-
b) Income from Publications	-	-
Total	-	-

SCHEDULE 17 - INTEREST EARNED		Current Year	Previous Year
1. On Term Deposits:			
a) <u>With Scheduled Banks</u>			
Interest Income - BEE	4,43,44,737		4,23,32,300
Interest Income - Examination	5,07,201	4,48,51,938	17,27,629
b) With Non-Scheduled Banks		-	-
c) With Institutions		-	-
d) Others		-	-
2. On Saving Accounts:			
a) <u>With Scheduled Banks</u>			
Interest Received - IOB Bank, Chennai	14,038		10,166
Interest Received - IOB Bank, Delhi	1,73,983		6,13,652
Interest Received - Bank of Baroda, Delhi	1,49,373		2,51,021
Interest Received - Bank of Baroda, Delhi (Examination)	24,858	3,62,252	13,886
b) With Non-Scheduled Banks		-	-
c) Post Office Savings Accounts		-	-
d) Others		-	-
3. On Loans:			
a) Employees/Staff		-	-
b) Others		-	-
4. Interest on Debtors and Other Receivables		-	-
5. Interest on Gratuity Fund		-	-
Total		4,52,14,190	4,49,48,654



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 18, 19 & 20

(Amount - ₹)

SCHEDULE 18 - OTHER INCOME	Current Year	Previous Year
1. Profit on Sale/disposal of Assets:		
a) Owned assets	-	-
b) Assets acquired out of grants, or received free of cost	-	-
2. Miscellaneous Receipts	11,41,620	9,10,780
3. Others (Sundry balances write back)	-	-
Total	11,41,620	9,10,780

SCHEDULE 19 - INCREASE/(DECREASE) IN STOCK OF FINISHED GOODS & WORK IN PROGRESS	Current Year	Previous Year
a) Closing stock		
- Finished Goods	-	-
- Work-in-progress	-	-
b) Less: Opening stock		
- Finished Goods	-	-
- Work-in-progress	-	-
NET INCREASE/DECREASE [a-b]	-	-

SCHEDULE 20 - ESTABLISHMENT EXPENSES	Current Year		Previous Year	
	(I & E)	(R & P)	(I & E)	(R & P)
a) Salaries and Wages	11,84,11,572	11,81,07,341	10,20,31,275	10,20,09,225
b) Allowances and Bonus	45,08,710	40,11,461	44,41,236	49,22,986
c) EPF Charges	98,22,264	97,41,898	96,35,317	97,21,254
d) Others (Leave Salary)	4,60,738	-	4,36,157	4,36,157
e) Others (Pension Contribution)	9,88,011	-	9,56,754	9,56,754
f) Expenses on Employees' Retirement and Terminal Benefits (Gratuity)	2,76,961	8,08,021	7,45,151	2,14,091
g) Expenses on Employees' Retirement and Terminal Benefits (Leave Encashment)	13,29,108	21,90,959	10,38,062	1,76,211
h) Staff Welfare Expenses	21,41,891	20,54,182	14,39,556	13,49,703
Total	13,79,39,255	13,69,13,862	12,07,23,508	11,97,86,381



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 21

(Amount - ₹)

SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC.	Current Year		Previous Year	
	(I & E)	(R & P)	(I & E)	(R & P)
a) Repairs and Maintenance	31,70,284	29,68,983	10,99,557	8,76,740
b) Vehicle Running and Maintenance	14,39,448	14,29,802	9,41,056	9,54,054
c) Postage, Telephone & Communication Charges	12,24,954	11,44,948	7,08,196	6,68,685
d) Printing & Stationery	17,60,620	17,33,525	9,87,639	9,88,350
e) Travelling and Conveyance Expenses	32,47,990	33,05,335	5,46,653	5,65,679
f) Expenses on Workshop, Seminar & Training Programme	22,03,883	27,28,571	8,21,716	7,59,048
g) Auditor Remuneration	14,41,440	-	12,12,640	2,90,880
h) Legal & Professional Charges	10,20,003	10,57,629	11,87,221	9,21,451
i) Advertisement and Publicity	10,08,240	10,08,240	8,38,390	9,02,613
j) Contribution to IEA (CEM)	-	-	-	20,08,853
k) Office Maintenance	30,43,428	30,73,276	9,54,460	9,22,635
l) Bank Charges	71	71	14,965	14,965
m) Prior Period Expenses	4,42,062	4,42,062	66,38,460	86,47,312
TOTAL - A	2,00,02,423	1,88,92,442	1,59,50,953	1,85,21,265

SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC.	Current Year		Previous Year	
	(I & E)	(R & P)	(I & E)	(R & P)
<u>Project Expenditure - (BEE)</u>				
National Level Certification Examination	2,57,07,945	3,68,76,087	2,46,84,673	1,26,29,349
Energy Auditors Accreditation	1,37,186	1,37,186	1,62,400	1,62,400
	2,58,45,131	3,70,13,273	2,48,47,073	1,27,91,749
<u>Grants-in-Aid Projects (Ministry of Power)</u>				
Energy Conservation Building Codes (ECBC)	-	3,92,14,980	-	17,14,98,878
State Designated Agencies (SDA)	-	29,64,14,784	-	30,43,87,852
State Energy Conservation Fund (SECF)	-	-	-	8,00,00,000
Agriculture & Municipal Demand Side Management (Ag.DSM)	-	2,43,29,711	-	5,03,84,735
Municipal Demand Side Management (Mu.DSM)	-	1,01,64,194	-	15,229
Small Medium Enterprises (SME)	-	3,25,59,192	-	1,41,76,678
Capacity Building of DISCOMS	-	2,05,94,321	-	9,86,34,511
EE for Vehicles		23,25,153		
EE for Electric Vehicles		71,69,080		
National Energy Conservation Awards & Painting Competition		7,26,91,208		
Energy Conservation Awareness (Awareness Campaign)	-	9,90,92,183	-	12,46,06,231
Nation Mission on Enhanced Energy Efficiency (NMEEEE)	-	17,32,30,139	-	17,38,62,085
BEE-GEF-WB-Project	-	-	-	6,55,920
	-	77,77,84,945	-	1,01,82,22,119
<u>Project Expenditure - (OTHERS)</u>				
UNIDO Project	-	6,54,27,606	-	65,72,287
Standard & Labelling (S&L)	-	12,91,89,891	-	6,63,14,709
	-	19,46,17,497	-	7,28,86,996
TOTAL - B	2,58,45,131	1,00,94,15,715	2,48,47,073	1,10,39,00,864
TOTAL - A+B	4,58,47,554	1,02,83,08,157	4,07,98,026	1,12,24,22,129



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 22 & 23

(Amount - ₹)

SCHEDULE 22 - EXPENDITURE ON GRANTS, SUBSIDIES ETC.	Current Year	Previous Year
a) Grants given to Institutions/Organisations	-	-
b) Subsidies given to Institutions/Organisations	-	-
TOTAL	-	-

SCHEDULE 23 - INTEREST	Current Year	Previous Year
a) On fixed loans	-	-
b) On Other Loans (including Bank Charges)	-	-
c) Others	-	-
TOTAL	-	-



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATION)
Name of Entity BUREAU OF ENERGY EFFICIENCY
SCHEDULES FORMING PART OF THE ACCOUNTS
FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 24 – SIGNIFICANT ACCOUNTING POLICIES

1) ACCOUNTING CONVENTION

- a. The financial statements are prepared under the historical cost convention and on the accrual method of accounting, unless otherwise stated.
- b. In case of expenses on account of Salary and Allowances to the permanent employees are booked on cash basis.

2) INVENTORIES

Inventories are valued at Cost.

3) INVESTMENTS

Investments are carried at cost.

4) FIXED ASSETS

- a. Fixed assets are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses in related to acquisition.
- b. Fixed Assets received by way of non-monetary grants (other than Corpus Fund) are capitalized at values stated, by corresponding credit to Capital Reserve.
- c. Fixed Assets representing Grant-in-Kind are reduced by an amount of depreciation provided during the year on such assets and a corresponding reduction in Capital Reserve created on account of Grant-in Kind is made.

5) DEPRECIATION

- a. Depreciation on Fixed assets is computed on written down value except on unserviceable items in accordance with the rate prescribed in the Income Tax Act, 1961.
- b. In respect of additions to/deductions from fixed assets during the year, depreciation is considered on pro-rata basis as under: -

Assets acquired/put to use for up to 180 days = Depreciation for six months

Assets acquired/put to use for more than 180 days = Depreciation for full year



- c. Assets costing Rs. 5,000/- or less each are fully provided.
- d. Depreciation is segregated into Fixed Assets & Fixed Assets representing Grant-in-Kind.

6) ACCOUNTING FOR GRANTS AND REVENUE

Grants and Revenue including labelling fee received under Standard & Labelling Scheme are accounted for on the receipt basis except interest income.

7) GOVERNMENT and OTHER GRANTS/SUBSIDIES

- a. Government grants of the nature of contribution towards capital cost of setting up projects are treated as Capital Reserve.
- b. Grant-in-Kind received in the form of Fixed Assets is shown under Capital Reserve net of depreciation provided on such assets.
- c. Government and Other grants/subsidy are accounted on realization basis and are shown as Income under Grants received from Central Government.
- d. Expenditure incurred under various Schemes against Grants received from Ministry of Power, Government of India is accounted for the year of release of Grant.

8) FOREIGN CURRENCY TRANSACTIONS

- a. Transactions denominated in foreign currency are accounted at the exchange rate prevailing at the date of transaction.
- b. Current assets, foreign currency loans and current liabilities are converted at the exchange rate prevailing as at the year-end and the resultant gain / loss is adjusted to cost under relevant Projects.

9) LEASE

Lease rentals are expensed with reference to lease terms.

10) RETIREMENT BENEFITS

- a. The Bureau has taken the Gratuity Policy with LIC of India for Liability towards gratuity payable on death/retirement of its employees.
- b. The Bureau has taken the Leave Encashment benefit Policy of LIC of India for Liability towards Leave Encashment benefit of its employees.
- c. As per rule called the "Bureau of Energy Efficiency (Terms and Conditions of Service of Employees) Rules, 2017," all retired employees are entitled for reimbursement of medical expenses (Indoor and Outdoor).



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATION)
Name of Entity BUREAU OF ENERGY EFFICIENCY
SCHEDULES FORMING PART OF THE ACCOUNTS
FOR THE YEAR ENDED 31ST MARCH, 2023

SCHEDULE 25 – NOTES ON ACCOUNTS

1) CONTINGENT LIABILITIES

NIL

2) CURRENT ASSETS, LOANS AND ADVANCES

In the opinion of the Management, the current assets, loans and advances have a value on realization in the ordinary course of transaction, equal at least to the aggregate amount shown in the Balance Sheet.

3) TAXATION

Section 49 of The Energy Conservation Act, 2001, Exemption from tax on Income provides – “Notwithstanding anything contained in the Income Tax Act, 1961 (43 of 1961) or any other enactment for the time being in force relating to the tax on Income, profit or gains –

(a) The Bureau;

(b) The existing Energy Management Centre from the date of its constitution to the date of establishment of the Bureau,

shall not be liable to pay any income-tax or any tax in respect of their income, profits or gains derived”.

In accordance with the above, there is no taxable Income of the Bureau under Income Tax Act 1961 and, therefore no provision for Income Tax has been considered.

4) FOREIGN CURRENCY TRANSACTIONS

The Bureau has incurred the foreign currency expenditure on account of Annual Contribution to IEA/CEM and foreign travelling expenditure for projects.

5) RETIREMENT BENEFITS

The Bureau has booked expenditure of Rs.2,76,961/- towards premium paid to LIC of India on account of Gratuity and Rs.13,29,108/- on account of Leave Encashment Benefits for regular employee of BEE and NMEEE. BEE maintains Gratuity / Leave encashment of its employees through LIC (a Government Body), LIC does the actuarial valuation for the employees of BEE and NMEEE. As per the certificates issued by the LIC, the actuarial value of the Gratuity fund and Group Leave Encashment Scheme as on 31/3/2023 are as follows: -

i. Gratuity fund	- Rs. 1,36,40,583/- (Previous year – Rs.1,45,55,847/-)
ii. Group Leave Encashment Schemes	- Rs. 1,36,40,693/- (Previous year – Rs.1,27,44,992/-)



- 6) Bureau has earned interest income on sweep accounts with bank in respect of unutilized funds of various Government Schemes. Hence, Interest income calculated on the unutilized fund on the basis of monthly average balance has been credited to respective Schemes out of the Interest Income received and the same is being returned to Ministry of Power.
- 7) During the year an amount of Rs. 1,27,47,68,443/- (Schedule-1) (Previous year – Rs. 86,68,77,296/-) has been received by the Bureau as labelling fee and interest thereon through the implementation of Standard & Labelling Programme under clauses (a), (b) and (d) of Section 14 of the EC Act. Bureau has considered the labelling fee under Standard & Labelling Programme (S&L) on receipt basis to maintain the uniformity.
- 8) The Standard & Labelling Programme is approved under the Scheme for “Promoting Energy Efficiency Activities in Different Sectors of Indian Economy” for the FYs 2021-26 as per OM No. 14/2/2020-EC dated 25th October , 2022. During the year under this scheme, an amount of Rs. 13,81,69,237/- (Previous year – Rs.17,40,93,826/-) was transferred from Energy Conservation Fund” (Schedule-1) to Schedule-3 to meet the expenditure of the Scheme.
- 9) During the year 2017-18, under PAT Cycle-I, the Scheme of E-Certs (Energy Saving Certificates) trading has been introduced vide Central Electricity Regulatory Commission Notification No. L-1/97/2016 dated 27/5/2016. Under the Scheme, BEE acts as Administrator of the Scheme and POSOCO acts as Registry. POSOCO will collect all the fee and charges from eligible entities and will maintain all books of accounts for the same. POSOCO will share fee and charges in the ratio of 50:50 between the Registry and the Administrator.
- 10) Check Testing Equipments amounting to Rs. 1,14,14,912/- (Previous Year Rs. 80,21,171/-) under Standard & Labelling Programme (S&L) have been shown as Current Assets, which are lying with third party (Testing Labs) at different locations. These inventories are under the Standard & Labelling Programme and not for trade purpose. BEE has requested all labs to provide the confirmation regarding availability of this stock with them. Meanwhile, as per advice of the audit BEE revalued the available stock of Check Testing Equipment’s. The method of revaluation has been taken as Deprecation @ 15% per annum as per I-TaxAct subject to residual value of 5%.
The difference amounting to Rs. 20,14,400/- between original cost and revalued cost has been shown as “Other Administrative Expenses’ under Schedule-3. Check Testing Equipment’s under S&L Scheme has been shown at revalued cost of Rs. 1,14,14,912/- in Schedule-11.



Product wise details of Check testing equipments as on 31/3/2023 are as follows:

S. No.	Name of the Equipment	Value as on 01.04.2022	Additions during the year	Original Total Cost	Loss on revaluation	Revalued as on 31.03.2023
1	Air conditioners	31,69,890	20,81,002	52,50,892	7,87,633	44,63,259
2	Ceiling Fan	28,322	55,393	83,715	12,558	71,157
3	Induction Cooktop	23,421	-	23,421	3,513	19,908
4	Induction Motors	70,615	-	70,615	10,592	60,023
5	Pump Set	3,03,393	-	3,03,393	45,509	2,57,884
6	Microwave Oven	-	11,990	11,990	1,799	10,191
7	Refrigerators	19,82,859	16,32,945	36,15,804	5,42,372	30,73,432
8	Television	16,61,352	8,86,862	25,48,214	3,82,232	21,65,982
9	Tubular Fluorescent Lamp	1,64,425	1,10,017	2,74,442	41,167	2,33,275
10	Washing Machine	1,42,581	-	1,42,581	21,387	1,21,194
11	Water Heaters	4,74,313	6,29,932	11,04,245	1,65,638	9,38,607
	Total	80,21,171	54,08,141	1,34,29,312	20,14,400	1,14,14,912

11) Bid Processing fee and RTI fee etc. Rs.11,41,620/- (Previous year – Rs.9,10,780/- including RTI fee) has been shown as “Fees for Miscellaneous Services” under the Schedule-18 – Other Income.

12) In exercise of the powers conferred by clauses (n), (o) and (p) of sub-section (2) of section 13, clauses (d), (e) and (f) of sub-section (2) of section 58 and section 8 of EC Act, the Bureau of Energy Efficiency with the previous approval of the Central Government, is conducting examination to identify Energy Managers & Auditors from 2004 onwards. During the Financial Year 2022-23 the following exams have been conducted and examination fee collected and expenditure thereon, is as follows:-

Particular	22nd Examination	23rd Examination	Total Amount
Fee Collected for Examination	2,82,40,419/-	2,32,80,501/-	5,15,20,920/-
Expenditure Incurred	2,48,70,004/-	8,37,941/-	2,57,07,945/-

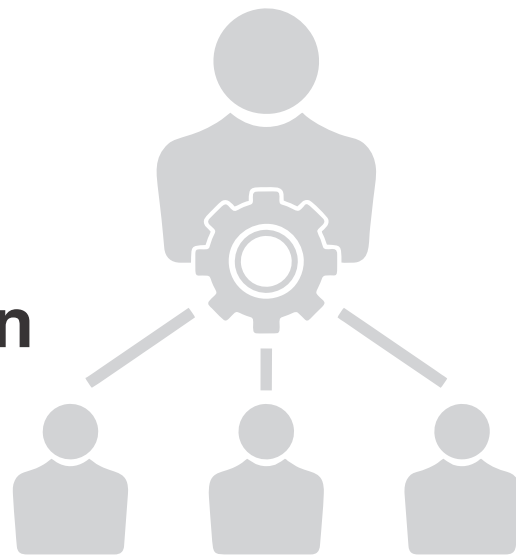
During the financial year Rs. 86,06,683/- paid to National Productivity Council towards Advance Expenses for conducting of 23rd Examination. The same has been shown under Schedule No. 11- “Current Assets, Loans, Advances etc.” under 'Other Advances'. There is no provision / expenses has been booked for 23rd exam as no UCs received from National Productivity Council.

- 1) Corresponding figures for the previous year have been re-grouped/re-arranged, wherever necessary.
- 2) Schedules 1 to 25 are annexed to and form an integral part of the Balance Sheet as at 31st March, 2023 and the Income and Expenditure Account for the year ended on that date.



4. Administration

- 4.1 Grievance Redressal
- 4.2 Right to Information Act
- 4.3 Welfare of SC/ST/OBC
- 4.4 Welfare of Minorities
- 4.5 Implementation of Official Language
- 4.6 Vigilance
- 4.7 Welfare of persons with Disabilities





4.1 Grievance Redressed

Grievances are received in the Bureau of Energy Efficiency through Centralized Public Grievance Redress And Monitoring System (CPGRAM), an online web-enabled system over NICNET developed by NIC, in association with Directorate of Public Grievances (DPG) and Department of Administrative Reforms and Public Grievances (DARPG).

During 2022-23, in all 40 grievances were received in BEE from the CPGRAM portal and the same were disposed off within admissible time limit.

4.2 Right to Information Act

During the year 2022-23, in all 126 application seeking information under RTI Act were received in BEE and all of these were replied to/transferred within the admissible time limit.

During the same period 04 appeals were also received by the Appellate Authorities, they were also disposed off within admissible time limit.

4.3 Welfare of SC/ST/OBC

Representation of SC/ST/OBC in the Bureau of Energy Efficiency is indicated in proforma given below:-

Group	Total Employees as on 31.03.2023	Representation					
		SCs	SC%	STs	ST%	OBC	OBC%
A	17	02	11.76%	-	-	01	5.88%
B	07	01	14.28%	-	-	01	14.28%
C	01	-	-	-	-	-	-
Total	25	03	12%	-	-	02	8%

4.4 Welfare of Minorities

Representation of Minorities in the Bureau of Energy Efficiency is indicated in proforma given below:-

Group	Total Employees as on 31.03.2023	Representation of Minorities	Percentage of Minorities
A	17	01	5.88%
B	07	-	-
C	01	-	-
Total	25	01	4%

4.5 Implementation of Official Language

Bureau of Energy Efficiency has made a lot of progress in the implementation of Official Language during the year 2022-23. 100% compliance of official language policy was ensured. The targets given in all the heads of the annual program have been achieved. 100% compliance of Section 3(3) and Rule 5 was achieved. The situation of correspondence has improved a lot. All senior officers are writing notes in Hindi only. There is a growing interest in Hindi work in all sections.



This year Hindi Pakhwara was organized in BEE from 14-28 September, 2022. During the fortnight, essay competition, Hindi poetry recitation competition, Hindi typing competition, quiz competition related to official language and general knowledge, noting and drafting competition and separate Hindi dictation competition was organized for class IV employees. Eight prizes namely first, second, third prize and five consolation prizes were given to the winners of the competition.

Hindi workshops were organized in every quarter during the year. The expert guest speakers not only shared their in-depth knowledge and experiences but also helped in solving the problems faced by the participants in their day to day work in Hindi as per the requirements of the Official Language Act.

Apart from this, quarterly meetings of the Official Language Implementation Committee were held regularly to review the progressive use of Hindi under the chairmanship of the Director General (BEE). In these meetings, the chairman encouraged to do correspondence and write notes in Hindi only.

During the year, the following steps were taken for the promotion of official language Hindi:

1. Publication of Hindi house magazine 'Bachat Ke Sitare'.
2. Publication of 'Rajbhasha Sahayika'.
3. On July 13, 2022, a special Hindi workshop was organized on the topic 'Azadi ka Amrit Mahotsav and Kanthastha (Translation Tool)' for all the member offices of the Town Official Language Implementation Committee (NARAKAS), South Delhi-2, in which 137 members participated.
4. On March 07, 2023, on the occasion of International Women's Day, a Hindi essay competition was organized on the topic 'Women Empowerment and Social Development' and on March 09, 2023, a function was organized in honor of the women of Bureau in the presence of the Director General. In which prizes and mementos were presented.
5. On March 23, 2023, A Rajbhasha Technical Seminar on 'Mission LIFE' was organized by BEE for all the members of Narakas, South Delhi-2 in which 32 member offices participated and seven papers were presented through PPT and Six Prizes totaling Rs. 13,000/- were awarded by the Bureau.

4.6 Vigilance

During the year 2022-23, there were no major complaints received and no disciplinary case initiated.

4.7 Welfare of persons with Disabilities

Representation of physically Challenged Employees in the Bureau of Energy Efficiency is indicated in the format given below:-

Group	Total Employees as on 31.03.2022	Physically Challenged Employees				Percentage of Physically Challenged employees
		VH	HH	OH	Total	
A	17			01	01	5.88%
B	07	-	-	-	-	-
C	01	-	-	-	-	-
Total	25	-	-	01	01	4%





BUREAU OF ENERGY EFFICIENCY

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