BUREAU OF ENERGY EFFICIENCY

ENERGISING INDIA SUSTAINABLY

BUREAU OF ENERGY EFFICIENCY

Annual REPORT 2021-22

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1. General

1.1 The Mission

The mission of the Bureau of Energy Efficiency is to develop policy and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 (EC Act) with the primary objective of reducing energy intensity of the Indian economy. This will be achieved with active participation of all stake holders, resulting in accelerated and sustained adoption of energy efficiency in all sectors of the 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 programmes 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 implementation of programmes and projects on efficient use of energy and its conservation.
- To promote awareness of energy savings and energy conservation.

Role of BEE

BEE coordinates with Designated Agencies, Designated 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 by and under the Energy Conservation Act.

The Act provides regulatory mandates for: Standards & Labeling of equipment and appliances; 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.

Promotional Role

The major Promotional Role of BEE includes:

- Create awareness and disseminate information on energy efficiency and conservation.
- Arrange and organize training of personnel and specialists in the techniques for efficient use of energy and its conservation.
- 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

In terms of section 4 of EC, Act, 2001 the general superintendence, direction and management of the affairs of the Bureau vest in the Governing Council which consist of not less than twenty, but not exceeding twenty six, members to be appointed by the Central Government. The Governing Council consists of the following members:

(a) The Minister in charge of the Ministry or Department of the Central Government dealing with the Power – Ex Officio Chairperson

(b) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Power – Ex Officio Member

(c) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Petroleum and Natural Gas – Ex Officio Member

(d) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Coal – Ex Officio Member

(e) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Non-conventional Energy Sources – Ex Officio Member

(f) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Atomic Energy – Ex Officio Member

(g) The Secretary to the Government of India, in charge of the Ministry or Department of the Central Government dealing with the Consumer Affairs – Ex Officio Member

(h) Chairman of the Central Electricity Authority – Ex Officio Member

(i) Director-General of the Central Power Research Institute – Ex Officio Member

(j) Executive Director of the Petroleum Conservation Research Association – Ex Officio Member

(k) Chairman-cum-Managing Director of the Central Mine Planning and Designing Institute Limited – Ex Officio Member

(l) Director-General of the Bureau of Indian Standards – Ex Officio Member

(m) Director-General of the National Test House, Department of Supply, Ministry of Commerce and Industry – Ex Officio Member

(n) Managing Director of the Indian Renewable Energy Development Agency Limited – Ex Officio Member

(o) One member each from the five power regions representing the States of the region to be appointed by Central Government – Member

(p) Such number of persons, not exceeding four as may be prescribed, to be appointed by the Central Government as members from amongst persons who are in the opinion of the Central Government capable or representing industry, equipment and appliance manufacturers, architects and consumers – Members

(q) Such number of persons, not exceeding two as may be nominated by the Governing Council as members – Members

(r) Director-General of the Bureau of Energy Efficiency – Ex Officio Member-Secretary

1.4 Report of the Director General

- India is one of the fastest growing economies 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 service 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. PAT cycle – VII was notified in October 2021 for the period 2022-23 to 2024-25 wherein 509 DCs have been notified with overall energy saving target of 6.627 MTOE. The PAT scheme has covered 1104 units from 13 sectors for participation till July 2022.
- 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.
- Energy and Resource Mapping activities were initiated in forty (40) SME clusters of eight (8) sectors. Around four hundred (400) detailed energy audits have been carried out in MSMEs with detailed survey on the consumption of energy and its flow within the MSME facilities, technological status, operating practices, knowledge perception etc.
- In an endeavour to continuously conserve and save energy, BEE envisages expansion of the PAT scheme to other sectors and development of a similar programme for Small and Medium Scale Enterprises in the future.
- In the appliance sector, the standard and labelling (S&L) programme of BEE has been very successful to provide the consumer an informed choice about energy intensive appliances and equipment. Voluntary Star Labelling Program for UHD (Ultra High Definition) TV, Air Compressor, High Energy Li-Battery and Tyres

were launched during 2021. With these additions, the programme now covers 30 appliances out of which 11 appliances are under the mandatory regime while the remaining 19 appliances are under the voluntary regime.

- In order to promote energy efficiency in new commercial buildings the updated Energy Conservation Building Code (ECBC) has been developed. Implementation of building energy efficiency lies at the state and local level through its integration in the Municipal bye-laws. As on April, 2021, 20 States and 2 UTs have notified ECBC in their states and 270 Urban Local Bodies (ULBs) from 128 States have incorporated provisions of ECBC for building approval process.
- With an aim towards a Greener Transport Sector, BEE has been working towards promoting Electric Vehicles to meet multiple objectives, inter alia, attaining zero emission goals, energy security, energy efficiency etc. In this regard creation of Charging Infrastructure in the country has been identified as one of the critical areas to push the plan to promote Electric Vehicles in the country.
- The Ministry of Power (MoP) has designated the 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.
- BEE organised the 31st National Energy Conservation Awards (NECA) function on 14th December, 2021. Hon'ble Minister of Power was the chief guest on this occasion. The event had participation of 408 organizations who collectively achieved an annual monetary savings of Rs. 1517 crores.
- State Designated Agencies (SDAs) are the implementing agencies of Bureau of Energy Efficiency (BEE) at State level to facilitate, promote and coordinate efficient use of energy and its conservation. 354 nos. demonstration projects in the areas of lighting, water pumping, retrofitting of electrical appliances in buildings, and waste heat recovery were implemented by 14 SDAs during FY 2021-22. In addition, energy efficiency pilot projects are being carried out in Govt. hospitals across the country. Actions have been initiated in 209 Govt. hospitals, out of which, works have been completed in 90 hospitals.
- BEE is mandated 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. 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 2020-21**
  - ★ Annual Electrical energy savings of 239.77 Billion Units, worth INR 1,11,322 Crores and resulted in reduction of 189.40 Million tonne of CO_2 emissions.
  - ★ Thermal energy savings of 21.40 Million Tonnes of oil Equivalent, worth INR 40,918 Crores and resulted in reduction of 78.56 Million tonne of CO_2 emission.
  - ★ Total energy savings of 42.00 Million Tonnes of oil Equivalent i.e. 4.73% of total primary energy supply of the country.
  - ★ Total cost savings worth INR 1,52,241 crores approximately.
  - ★ Total reduction in CO_2 emission is around 267.98 Million Tonnes

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). 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 has 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 the 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 (ESCerts) that can be traded at the Power Exchanges.

'PAT cycle – II' that was notified in March, 2016 covering 621 DCs from 11 sectors which include eight existing sectors and three new sectors viz. Railways, Refineries and DISCOMs completed on 31st March 2019. The verification and assessment of energy savings were completed in 2020-21. Implementation of PAT cycle – II has resulted into total energy savings of about 14.08 MTOE. This energy saving is equivalent to avoiding emission of about 68.43 million tonnes of CO_2.

The total monetary savings estimated from PAT cycle – II was approximately INR 31445 Crores and the DCs have made total investments of about INR 43721 Crores approximately to achieve the energy savings. The detailed outcome of PAT Cycle – II including energy savings, investment reported, technology up gradation as well as reduction in CO_2 emission was documented by BEE as "Pathways for Accelerated Transformation in Industry Sector" and was released on 1st March 2021 by the Hon'ble Minister.

Subsequent to PAT cycle II, PAT cycle III, IV, V, VI and VII were notified in 2017, 2018, 2019 2020 and 2021 respectively. 'PAT Cycle – III' that was notified in April 2017 as a rolling cycle (notification of DCs/sectors every year starting from PAT cycle – III) was completed on the 31st of March 2020, verification of energy savings achieved under this cycle by 116 notified DCs is 1.745 MTOE against the notified target of 1.06 MTOE.

'PAT Cycle – IV' commenced with effect from April 2018. A total of 109 DCs with a total reduction target of 0.6998 MTOE were notified under PAT cycle – IV. These DCs were from 8 sectors consisting of 6 existing sectors of PAT cycle – I and two new sectors namely Petrochemicals and Commercial Buildings (Hotels).

'PAT cycle – V' had commenced with effect from 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. PAT cycle – V aims to achieve total energy savings of 0.5130 MTOE.

'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 notified. With implementation of PAT cycle – VI, it is expected to achieve a total energy savings of 1.277 MTOE.

'PAT cycle – VII' was notified in October 2021 for the period 2022-23 to 2024-25 wherein 509 DCs have been notified with overall energy saving target of 6.627 MTOE. The PAT scheme has covered 1104 units from 13 sectors for participation till July 2022.

Feasibility Study for Identification of New Sectors:

In order to widen the coverage of PAT scheme, feasibility study (Phase-1) was conducted and completed by BEE for the sectors namely Chemicals, Glass, Sugar, Ceramics, Non-Ferrous Metals (Zinc and Copper) and Mining. The feasibility study in the Phase-1 provided outcomes in terms of threshold energy consumption of the new sector, energy consumption, percentage share in total energy consumption and probable number of Designated Consumers that could be notified from each sector based on the identified threshold.

The Phase-2 of the feasibility study by BEE in the sectors namely Port Trust, Dairy, Automobile Assembly Units, Tyre manufacturers, Forging, Foundry and Refractory.

Potential Assessment Study:

Bureau of Energy Efficiency has undertaken potential assessment study in various sectors under PAT scheme namely Cement, Pulp & Paper, Textile, Chlor Alkali, Aluminum and Sponge Iron plants. The aim of such study was identification of further potential that the Designated Consumers possess to improve energy efficiency where the possible measures for energy efficiency have already been undertaken in the previous PAT cycles. The basic objective behind carrying out this study was reaching measurable benchmarks in respective sectors in order to assess further potential of energy saving and consequent fixation of energy saving targets in subsequent PAT cycles. Based upon the study target for PAT cycle VII have been fixed.

Assessment of various industrial sectors of the economy to meet NDC targets:

BEE has initiated a study in order to determine the targets based on India's Nationally Determined Contributions (NDCs) in industrial sectors and other establishments till 2030. The study is based on total energy consumption pattern / energy intensity / contribution of the industrial sector in GDP, etc. The study also reassesses the energy target gap of each industrial sector and other establishments with NDC based on realistic data of the sectors in line with the announcements in COP 26. The study was used to develop the 1 billion tonne of CO_2 emission reduction goal.

Energy Mapping of Thermal Power Plants:

In order to improve efficiency and performance optimization of Thermal Power Plants and also to identify the heat rate deviation gaps in the unit, Bureau of Energy Efficiency carried out the exercise of energy mapping of some of the most inefficient state/central thermal power plants.

The mapping study included the following:

a) The performance evaluation of process, sub-process, equipment etc.

b) Identification of the gaps in operating parameter as compared to design for each equipment.

c) Comparison of Expected values and Operating values of the parameters, from which the degradation will be derived.

d) Developing adequate saving measure.

In **phase I**, 10 most inefficient power plants have been mapped and has provided a database and broadly identifies areas requiring for improving energy efficiency. The mapping report also indicated measures that could be taken up immediately with comparatively small expenditure to improve plant performance before going in for regular R&M measure.

For the **phase II**, 38 nos. of Thermal Power Plants have been identified and MoUs have been signed for carrying out mapping in efficiency gaps.

Facilitating adoption of Industry 4.0 in PAT Industries:

Industrial sectors continue to be the largest users of electricity. Internet of Things (IoT) and Industry 4.0 can aid in the conservation of energy and make industrial operations more energy efficient. It consists of a network of smart devices connected over the internet with access to a much larger network including sensors, smart phones, data management, report system and more. In a plant, an operator receives alerts from the hardware installed, and delivers live data on errors, malfunctions or deviations.

PAT scheme is the flagship program launched by BEE to reduce energy consumption and promote enhanced energy efficiency among specific energy intensive industries in the country. Adoption of IT, IoT (Internet of Things), smart equipment and industry 4.0 applications will facilitate the achievement of PAT targets also.

Further in this direction, capacity building programmes have been conducted by BEE for Designated Consumers already notified under PAT scheme. Further activities in order to fill the gaps are under process.

Continuation of NMEEE under "Roadmap of Sustainable and Holistic Approach to National Energy Efficiency (ROSHANEE)"

In order to gear towards the commitments made under the Nationally Determined Contributions (NDCs), related activities having climate benefits warranted consolidation and alignment with the NDC goals. Thus, NMEEE has been revised to **"Roadmap of Sustainable and Holistic Approach to National Energy Efficiency (ROSHANEE)"** by BEE as a broader version of the Mission and includes all the current and potential areas of energy efficiency in each sector.

Thus, through ROSHANEE, NMEEE is being strengthened with a review of existing approaches and planning a new portfolio of strategies to strengthen energy efficiency across all sectors in the country till 2030. ROSHANEE also aims to bring together seemingly disparate national initiatives however, having common climate benefits such as Zero Effect, Zero Defect, Smart Cities, India Cooling Action Plan etc.

As part of ROSHANEE, for continuation of NMEEE, an SFC proposal has been approved with an out lay of Rs. 167 Crores that include PAT scheme and energy efficiency financing.

(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. Energy Efficiency Financing Platform (EEFP)

The objective of EEFP is to upscale energy efficiency financing in India by providing a platform where Financial Institutions (FIs) can interact with industries for financing and implementation of energy efficiency projects, technologies and appliances.

BEE has launched one day conference named as "Investment Bazaar for Energy Efficiency" to accelerate and facilitate financing of EE projects/technologies through SDAs. Till date, two Investment Bazaar events have been organized in Vizag and Chandigarh in March and November 2021 respectively.

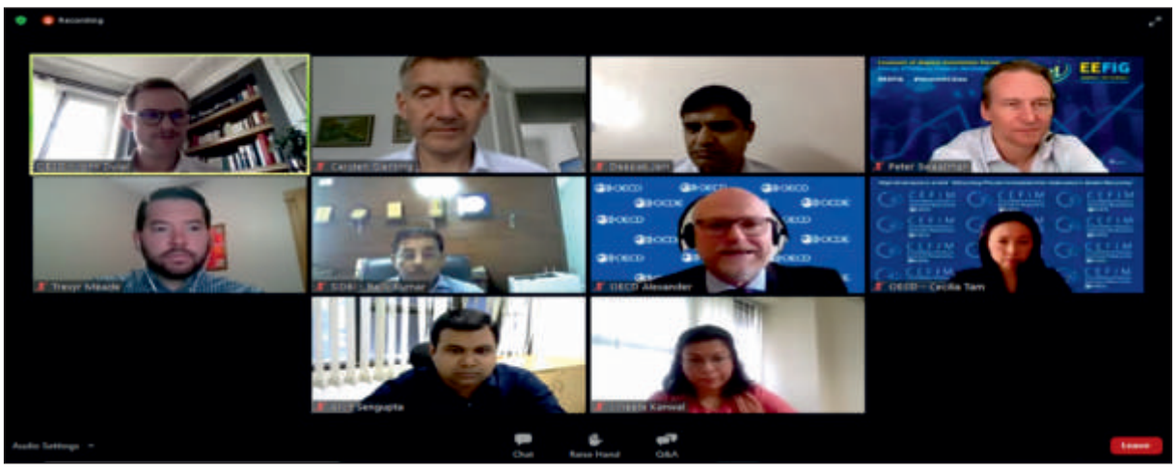
These 'investment bazaars' shall showcase viable EE projects/technologies in presence of representatives of FIs and industries, with an objective of bringing convincing deals for financing those EE projects. EE technologies were also demonstrated by manufacturers during these conference. First Investment Bazar was organized by APSECM in Vizag which was attended by more than 100 OEMs, Financial Institutions, ESCOs, manufacturers, etc.

Second Investment Bazaar was held in Chandigarh in November 2021 and organized by PEDA wherein more than 100 participants from Financial Institutions (Fis), Large Industries, MSMEs, ESCOs had participants. During the event, more than 10 stalls were put up by FIs, ESCOs, OEMs with objective to show case their products to the participants and more than Rs. 11 crore of energy efficiency projects were showcased during the event.

Investment Bazar One day Conference in Chandigarh

On 15th July 2021, an international webinar on Energy Efficiency Finance Platforms & Protocols was organised by BEE in association with OECD's CEFIM Programme. DG-BEE inaugurated the event and welcomed all dignitaries from international organisations such as OECD, DEEP,

ICP (Investor Confidence Project), European EEFIG (Energy Efficiency Financial Institutions Group); as well as Indian representatives from PFC, SIDBI, IREDA, IFC, SDAs and other participants. Dr. Alex Böhmer, Head of South and Southeast Asia, OECD emphasized on building a robust growth in energy efficiency financing sector. This webinar with 15 panelists and 75 participants witnessed some extremely valuable lessons, initiatives, experiences, success stories on financing of energy efficiency measures at the global and regional levels.



Webinar on Energy Efficiency Finance Platforms & Protocols

b. Grading of Energy Efficiency Projects

Programme on Grading of Energy Efficiency Projects was launched in July 2021. The project will reimburse grading fee of graded as well as financed Energy Efficient project. 3 grading agencies and 2 financial institutions have been empaneled under of the programme.

MoA signed between BEE and IREDA for grading of EE projects

The three empaneled grading agencies are CARE Advisory and Research Training Ltd (CART); CRISIL Ltd; and ICRA Analytics Ltd. These agencies shall undertake the grading of the EE projects according to the well-defined evaluation criteria. The graded projects by these agencies can be financed from participating FIs i.e. IREDA and YES bank (the list may increase over time). BEE will reimburse the grading fee amount to these banks. The bank will further adjust the amount in the loan account of the borrower.

(iii) Framework for Energy Efficient Economic Development (FEEED)

The component FEEED is for development of fiscal instruments to promote energy efficiency. Under FEEED, Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE) and Venture Capital Fund for Energy Efficiency (VCFEE) schemes were created to promote the Energy Efficiency financing in India. However, these schemes didn't take off due to lack of interest shown by Financial Institutions in implementing both the guarantee fund as well as equity fund, thus, both the funds have been short closed and the amount available with BEE along with interest is returned to MoP. The existing programmes under FEEED are:

(a) Energy Efficiency Financing Facility (EEFF)

BEE has proposed a dedicated financing facility anchored by PFC and IREDA for taking care of financing requirements of large industries, project aggregation approach covering MSME clusters/ ESCO projects, re-financing to Banks who have lent for Energy Efficiency projects, upcoming energy efficiency areas such as smart grids, electric vehicles, and charging infrastructure.

(b) Facilitation Centre for BEE's financing schemes:

Bureau of Energy Efficiency (BEE) has set-up a Facilitation Centre for encouraging and up scaling Energy Efficiency Financing in the country. The objective of the Facilitation Centre is as follows:

i. To develop an online platform for connecting FIs with potential borrowers to mobilize energy efficiency financing;

ii. To collect the willingness forms and spread awareness of BEE's financing schemes among various beneficiaries like large industries /DCs under the Perform, Achieve and Trade Scheme of BEE, MSMEs, commercial and institutional buildings, Municipalities, Corporations, and commercial establishments; and,

iii. To prepare the list of energy efficiency technologies that will be uploaded on new IT platform and BEE's website.

1.5.2.1 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 implementing 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 m^2 of new commercial buildings by 2030 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 $mtCO_2e$ GHG Abatement through the

environment efficient built it is estimated that Rs. 35,000 crores will be saved by implementing ECBC compliance.

BEE has developed 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.

- **Regulatory framework for ECBC enforcement:**
  - 25 building cells have been working for all States/UTs in 2021-22. The aim is to provide technical assistance for effective implementation and enforcement of building energy efficiency schemes in the States/UTs. These cells oversee ECBC and ENS related activities in states/UTs.
  - ECBC Rules and code notified by Madhya Pradesh and Manipur. Till June, 2022 20 states and 2 UTs have notified ECBC.
  - To commemorate 75th year of India's independence under Bharat ka Amrit Mahotsav, a virtual launch event, "Aiming for Sustainable Habitat: New Initiatives in Building Energy Efficiency 2021" was held on 16th July, 2021, where Hon'ble Minister of Power and NRE, Shri R.K. Singh was the chief guest. Eco Niwas Samhita 2021 and code compliance tool, Handbook and online tool for Replicable Designs for Energy Efficient Residential Buildings, Online tools for design of energy efficient residential buildings, online tool for energy efficient Building Materials Directory of India, NEERMAN Awards and National Training Programme on ECBC and ENS were launched.
  - The 28th meeting of the Joint Implementation Group (JIG) under the Indo-Swiss Building Energy Efficiency Project (BEEP) was convened on 5th August, 2021, through video conferencing.
  - Technical sessions on Role of Media in Promoting Energy Efficiency in Buildings, Building Envelope Solutions for Residential Buildings and Heat Exchange & Ventilation in Residential Buildings followed the launching of following four Knowledge products:-
    - A book on **"Understanding Heat Transfer in Buildings through Numerical Examples"** to train undergraduate and post-graduate engineering students in the basics of building heat transfer and in the design of energy efficient buildings.
    - **Building Envelope Solution Sets,** a ready reckoner for building designers to design energy efficient residential buildings and help achieve compliance with the energy conservation building code for residential buildings or Eco-Niwas Samhita 2018.

- **A manual on External Movable Shading Systems (EMSyS),** a compilation of external shading solutions available in the country to help reduce heat ingress in buildings and keep buildings cooler.
- **Vayu Pravah:** An open-source computational fluid dynamics (CFD) tool to help building designers to improve natural ventilation in buildings and make them cooler and healthier.

- During National Energy Conservation Day Event, on 14th December, 2021, Hon'ble Union Minister of Power and New & Renewable Energy launched Guidebooks for Awareness Generation on Energy Efficient and Thermally Comfortable Buildings. For Net Zero and Net Positive Energy Buildings Shunya Labelling programme was also launched on this occasion.
- Existing Star Rating Programme for Office buildings and BPO has been revised and was effective from 1st January 2022

- **ECBC Implementation and Compliance:**
  - Implementation of ECBC has committed in Andhra Pradesh, Assam, Andaman & Nicobar Island, Haryana, Karnataka, Kerala, Punjab, Sikkim, Telangana, Uttarakhand, Madhya Pradesh, Uttar Pradesh. About 270 ULBs have covered under these states.
  - A total of 1443 buildings are approved by ULB/SDA at design stage and these buildings are at different stages of construction. In 2021-22, 622 of buildings have been approved by ULB/SDA in 7 states namely:

S. No.	States/ UTs	No. of ECBC Compliant buildings
1	Andhra Pradesh	414
2	Haryana	57
4	Kerala	18
4	Punjab	350
5	Telangana	410
6	Uttar Pradesh	185
7	Uttarakhand	9
	Total	**1443**

- **Pilot demonstration of ECBC compliance in building projects:**
  - Technical assistance has been provided for ECBC demonstration projects. About 130 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 70 residential building projects in different climatic zones were supported to showcase ENS compliance across the Country.
- Design and Construction of super ECBC Buildings taken up in 5 more states: Arunachal Pradesh, Chhattisgarh, Puducherry, Sikkim, Uttarakhand. Total 10 states initiated Super ECBC Building Development project.

Star Rating of Commercial Buildings

Having regard to the fact that the rate of growth in commercial building sector is amongst the highest, and that, this sector needs to be moderated in its energy consumption BEE introduced the Star Rating for existing buildings as a voluntary policy measure to reduce the adverse impact of buildings on the environment. This programme is based on the energy usage in the building over its area expressed in kWh/sqm/year. This program rates buildings on 1-5 scale, with 5 star labelled buildings being most efficient.

Recently, BEE has revised the EPI band for Star Rating for Office Buildings and BPOs. The revision of the scheme is effective from January 2022. Till the end of March 2022, total 264 buildings have been awarded Star Rating under this programme.

BEE is now looking forward to develop a web portal to ease the application and expedite the process for verification and approval. Also, to boost participation from the Govt. sector BEE has waived off Application and renewal fees from the buildings owned/managed by Central/State Govt., PSUs, Railways etc.

Shunya Labelling Programme for Net Zero and Net Positive Energy Buildings

To widen the scope of Building Labelling Programme based on Energy Consumption, BEE has introduced Labelling programme for Net Zero Energy Buildings (NZEB) and Net Positive Energy Buildings (NPEB). The programme was launched by Hon'ble Minister for Power and NRE on 14th December 2021 in NECA event.

The programme is named as "Shunya" Labelling Programme. Shunya is the Hindi meaning of Zero (0) thus making it suitable to label the NZEB and NPEB buildings as Shunya.

Two types are Labels are proposed, one is the Shunya Label for NZEBs while another is for NPEBs i.e., Shunya+ (Shunya Plus). For this programme the buildings having $10 \leq EPI \leq 0$ kWh/m2/year, will be awarded by Shunya Label, while the buildings having EPI < 0 kWh/m2/year will be awarded by Shunya+ label. The programme will encourage the building owners and promotors to make energy efficient buildings and further making improvements to make it net zero or net positive energy buildings.

Launch of Guidebook on "Awareness Generation on Energy Efficient Buildings"

1.5.2.2 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.

As a part of Azadi ka Amrit Mahotsav, a National Workshop on Energy Efficiency in the Indian Residential Sector was held on 10th December, 2021.

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 built on plot area more than 500 m2.

Eco-NiwasSamhita Compliance (ENS) Tool: An online compliance tool has been developed by BEE to ensure ease of compliance and adoption by ULB's, home owners and developers. Part -1 is available on BEE's website. Part -2 of ENS Compliance Tool is presently in final stage of development.

Capacity Building

- The National Training Programme on ECBC and ENS was conducted on 19th July, 2021 for architects, building professionals, field officials and other stakeholders. 1113 participants attended the training programme.
- A webinar to introduce BEE's National Energy Efficiency Roadmap for Movement towards Affordable & Natural habitat (NEERMAN) Awards was held on 6th of August, 2021. The NEERMAN Awards for Energy Efficient Building Design in India have been constituted with the objective to annually acknowledge and encourage exemplary building designs complying with BEE's Energy Conservation Building Codes and to disseminate information for efficient use of energy and its conservation.
- National Media Consultation on Energy Efficient Buildings was conducted on 27th August, 2021, as a culmination event for the Media Engagement Programme. Various aspects of energy efficiency in buildings were addressed and reiterated to the media. The objective of the media engagement program was to engage the media in creating awareness, sustaining debate through accurate information and enabling them to do quality reporting on the issue. Under this programme, several state level media workshops have been organized and media fellowships on affordable housing design and energy efficient buildings have been awarded in association with Centre for Media Studies (CMS) and the Indo-Swiss Building Energy Efficiency Project (BEEP) with support from Swiss Development Cooperation (SDC).
- An online Training Workshop "Integration of Building heat transfer in engineering undergraduate/postgraduate curriculum" was conducted on 28th and 29th August, 2021, in collaboration with the Indo-Swiss Building Energy Efficiency Project (BEEP) and IIT, Bhillai. The programme was attended by around 20 faculty members involved in teaching heat transfer and allied subjects in IITs, NITs and other engineering colleges.

- Webinar to provide training on the navigation of Replicable Design Web tool developed under "Replicable Designs for Energy Efficient Residential Buildings" project was conducted on 17th September, 2021.
- 4th Indo-Swiss Building Energy Efficiency Camp (BEEP Camp) was organized during December 11 - 26, 2021, for architecture & engineering students and young professionals. The faculty pool of technical experts and soft skill trainers from India and Switzerland provided intensive training, designed to enable learning in the domain of building energy efficiency and the integrated design process.
- Till Jun, 2022 1,443 training programmes have been conducted and 55,658 professionals have been trained.

Energy Efficiency Label for Residential Buildings

Energy Efficiency Label for Residential Buildings" was launched by Hon'ble Minister of State (IC) for Power and Renewable during the conference of Ministers for Power, New & Renewable Energy of States & Union Territories held at Gurugram, Haryana in 2019.

The key objective of the programme is to make a transparent instrument over the energy performance of a home which will gradually lead to an effective model taken into consideration while deciding over the home prices in future. The objective of the labeling program is to make the energy performance of a home an instrument of comparison while deciding over the home prices in the future. It also aims to provide a benchmark to compare one house over the other on the energy efficiency standards to create a consumer-driven market transformation solution for energy efficiency in the housing sector.

This program is another step towards realizing the vision of an energy surplus India with 24*7 power to all. Proposed labelling program will cover all types of residential buildings in India. All the envisaged objectives can be achieved through the proposed labeling mechanism by making it as mandatory information required in any real estate transaction/leasing.

Building Sector under PAT Scheme

Buildings are identified as one of the most Energy Intensive Sector in India. There is a huge scope of energy saving from Building sector. ECBC are limited to new buildings only and can be implemented at design and construction phase only. However, existing buildings can also save a lot of energy.

In order to conserve energy and to promote energy efficiency in existing buildings, Commercial Buildings Sector has been covered under the PAT Cycle –IV and subsequent cycles there forth;

1. To start with in PAT Cycle-IV, 37 Hotels were notified as Designated Consumers (DC) under Commercial Building having energy consumption more than 1000 TOE (Tons of oil equivalents).
2. While in PAT Cycle -V and forthcoming cycles of PAT threshold consumption has been revised to 500 TOE to qualify a hotel as a DC under commercial building sector. In PAT cycle V, 31 more Hotels were added as DCs with the saving potential of 1360 TOE till 2022.

3. Similarly in PAT cycle VI, 64 more Hotels were notified as a designated consumer with the target saving of 4154 TOE till 2023. Now, cumulatively 132 Hotels as DCs are covered under the PAT Scheme.

4. Airports are added as a new sub-sector under the Commercial Building Sector to be included under PAT Scheme. As per the gazette notification, Airports - having energy consumption of 500 metric tonne of oil equivalent (mTOE) per year and above will be considered as a Designated Consumer under PAT Scheme.

1.5.3 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.

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. Apart from developing the Fuel Efficiency Standards for vehicles, BEE is working on development of testing facilities and tools and Star Labelling programme for Tyres.

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 vide S.O. 1072(E) in April 2015 and phase-I of the norms implemented in 2017-18. The norms are amended vide S.O. 5020 (E) dated 6th 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) Constant Speed Fuel Consumption Norms for Heavy Duty Vehicles having Gross Vehicle Weight more than 12 tonnes, notified in August 2017. The same is 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.

3) The Heavy-Duty Fuel Economy (HDFE) and Light & Medium duty Fuel Economy (LMDFE) norms were notified earlier for BS-IV complied vehicles. For BS-VI complied vehicles a correction factor is derived which is to be multiplied on the HDFE and LMDFE norms equations for BS-IV complied vehicles.

4) A technical Committee constituted by BEE under chairmanship of ED, PCRA comprising members from SIAM, ICAT, ARAI and representatives from key vehicle manufacturers. The “correction factor” has been derived by the committee in order to notify that correction

factor and the norms have been amended vide S.O. 1464(E) and 1465(E) for the BS-VI complied L&MCVs and HDVs respectively. First phase of the both the LMDFE and HDFE norms has been implemented from 1st April 2022.

5) 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 in this sector to boost fuel savings. Voluntary phase of the Star Labelling of Tyres was launched by Hon'ble Minster for Power and NRE on 14th December 2021.

6) BEE is working on the Development of Computer Based Simulation Tool for assessment of Fuel Efficiency of the Vehicles as per Indian Scenario. The tool may be the indigenous or may be any other tool being used in other countries and modified according to Indian specific conditions. A committee of technical experts has been constituted and work has started to develop the same.

In addition to CAFE norms for passenger cars BEE is looking forward to developing the CAFE norms for Two-wheelers also. Proposal for fuel efficiency programme for tractors in form of Star Rating scheme was sent to MoP for approval of launch of the voluntary phase. However, Ministry has asked BEE to revise the same and to start awareness programme for farmers to educate them about the fuel savings by the tractors and other farm equipment. BEE is looking into other provisions to develop the fuel efficiency programme for tractors in line with suggestion of ministry.

Star Labelling of Tyres launched by Hon'ble Minister for Power and NRE

E-Mobility

The Ministry of Power (MoP) has designated the Bureau of Energy Efficiency (BEE) as the Central Nodal Agency (CNA) under the Guidelines and Standards issued on 14th January 2022. Each state is required to designate a Nodal Agency for the installation of EV charging infrastructure. In addition, 28 states have designated its State Nodal Agencies (SNAs) to oversee the installation 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 Himachal Pradesh State Electricity Board Limited (HPSEBL)
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)
16. Kerala Kerala State Electricity Board Ltd (KSEB)
17. Madhya Pradesh MP Urja Vikas Nigam Limited
18. Haryana Haryana Renewable Energy Development Agency (HAREDA)
19. Andaman & Nicobar Directorate of Transport
20. Sikkim Power Department, Sikkim
21. Arunachal Pradesh Central Electrical Zone, Deptt. of Power, Itanagar
22. Bihar Transport Department, Patna
23. Tamil Nadu Tamil Nadu Generation and Distribution Corporation Limited
24. Puducherry Electricity Department

25. Chhattisgarh
    (a) Chhattisgarh State Power Distribution Company Limited (CSPDCL)
    (b) Transport Department, Raipur
26. Chandigarh Electricity Wing, Engineering Department
27. Uttar Pradesh Invest UP under Department of Infrastructure and Industrial Development
28. Maharashtra Maharashtra State Electricity Distribution Company Limited (MSEDCL)

Additionally, the Ministry of Power directed the Bureau of Energy Efficiency to start a nationwide "Go Electric" media campaign to educate the general public regarding the benefits of E-Mobility and clean & safe cooking. 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 for 9 cities viz. Mumbai, Delhi, Bangalore, Hyderabad, Ahmedabad, Chennai, Kolkata, Surat, and Pune.
- BEE is supporting creation of EV accelerator Cells in these 9 focus cities.
- Under "Go Electric Campaign" BEE has conducted 52 roadshows, 50 webinars and 39 Nukkad Natak (Street Plays).
- BEE is in the process of developing a database & mobile application to enable EV users to locate public charging stations.
- In terms of the information available , 1742 public charging stations are installed at various locations in the country till the end of March 2022.

GO ELECTRIC Campaign:

"GO ELECTRIC" awareness campaign was inaugurated in February 2021. In addition, 50 webinars, 52 EV roadshows 39 street plays have been organised by the SNAs in their respective states till end of March 2022.

Launch of "Go Electric Campaign"

1.5.4 Standards and Labeling Scheme

Standards and Labelling (S&L) program was initiated with the objective of providing consumers an informed choice regarding the energy consumption and the cost saving potential of various energy consuming appliances. S&L scheme covers the star labelling program for 30 appliances, out of which 11 appliances are under mandatory regime and remaining 19 appliances are under voluntary regime. Total 55.6 crore star labelled products manufactured during the year 2020-21 leading to electricity savings of 61.6 BU and CO_2 emission reduction of 50.16 million tonnes. List of appliances is given below.

A. Appliances under Mandatory Regime

1. Room Air Conditioners
2. Frost Free Refrigerator
3. Tubular Florescent Lamp
4. Distribution Transformer
5. Room Air Conditioner (Cassette, Floor Standing)
6. Direct Cool Refrigerator
7. Color TV
8. Storage type Electric Water Heater
9. Inverter Air Conditioner
10. LED lamps

B. Appliances under Voluntary Regime

1. Induction Motors
2. Pump Sets
3. LPG-Stoves
4. Washing Machine
5. Computer (Notebook/Laptops)
6. Ballast (Electronic/Magnetic)
7. Office Equipment's (Printer, Copier, Scanner, MFD's)
8. Diesel Engine Driven Mono-set Pumps
9. Solid State Inverter
10. DG Sets
11. Chillers
12. Microwave Ovens

13. Ceiling Fans
14. Solar Water Heater
15. Light Commercial Air Conditioners
16. Deep Freezers
17. UHD TV
18. Air Compressors
19. Li-ion traction batteries and systems
20. Tyres

The key benefits of S&L scheme are as follows:

(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.

With the continuous efforts, Standards & Labeling has reached the following milestones during the 2021-22 Financial Year:

(i) Introduction of Voluntary Energy performance standards for High Energy Li-Battery and Tires on 14 December, 2021.

(ii) Extension in the energy consumption standards for Room Air Conditioners, Storage Water Heater, Refrigerators, Color Television, Chillers, Microwave Ovens, Deep Freezers, Light Commercial Air Conditioners, Ultra High Definition Television and Liquified Petroleum Gas Stove.

(iii) 1,112 brands are registered under mandatory program and 683 brands are registered under voluntary program.

(iv) Under these brands, 10,479 models are registered under mandatory program and 9,082 models are registered under voluntary program.

(v) Under Check Testing activity, 268 star labeled appliance samples have been check tested by BEE during FY 19-20 and FY 20-21 and 168 new appliances are under process for check testing.

(vi) Empanelment of 9 NABL accredited laboratories for check testing of star rated appliances.

(vii) Under Lab Capacity Building Program, Rs. 47.19 Crore have been sanctioned for setting up of new test labs for various appliances.

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) Retailers Training Programme to disseminate knowledge on star Label particulars among the retailers to enable them to explain and convince customers to prefer energy efficient appliances at the time of purchase. Around 8000 retailers have been educated so far.

1.5.5 Agriculture Demand Side Management (AgDSM)

This 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 EE pumps

BEE in coordination with State Designated Agencies (SDAs) is conducting various training and awareness programmes for farmers and equipment technicians. In 2021-22 about 240 number of training and awareness programmes for Farmers/ Stakeholders have been conducted for promoting EE pumpsets in agriculture sector along with water conservation covering about 18063 farmers/stakeholders.

Session on "Energy Efficiency Opportunities in agriculture sector" held in KVKs-Punjab

Session on "Energy Efficiency Opportunities in agriculture sector" held in KVKs-Karnataka

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 2021-22 about 48 numbers of capacity building programs for equipment technicians have been conducted in 10 states providing training to around 378 pump technicians.

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.

d) Preparation of DPRs for AgDSM program

To conceptualize and to identify the growth of the projects under AgDSM program, DPRs are being prepared by the SDAs. Further by analyzing the details relevant to the program, new intervention would be made on Energy Efficiency. Along with this, feasibility study would also be carried out under AgDSM program.

e) Energy Efficiency in Integrated Cold-Chain Sector

India is the second-largest producer of fruits and vegetables in the world. The production of horticulture crops was around ~312 million tonnes from an area of ~25 million hectares in 2017-18, of which 1% was exported. The Indian Council of Agriculture Research (ICAR) estimates that the agriculture sector incurs 18 to 25% food losses across the

supply chain. The food loss that occurs post-harvest and before connecting to markets is effectively a loss of saleable volume and value and is an economic burden on the food supply system.

The India Cooling Action Plan (ICAP) launched in March 2019 highlights that the Cold Chain sector offers an excellent opportunity for reducing cooling demand, energy consumption and refrigerant requirement through improved design and use of energy-efficient building material, cooling equipment and information technology.

The key objectives of the scheme are as follows:

- Development of O&M guidelines in vernacular for dissemination and implementation of guidelines through incorporation in existing standards of MIDH, APEDA, etc.
- Development of design guidelines for Energy Efficient Integrated Cold-Chain design specifications, materials and equipment selection in vernacular and implementation through incorporation in construction approval, existing subsidy schemes, etc.
- Tip sheets on the benefits of energy efficient practices in vernacular and web-based platform containing directory of design consultants and a product catalogue on building materials and integrated cold-chain equipment.
- Demonstration projects at 4 locations (2 in Group- A States and 1 each in Group-B and C States wherein two retro-fit projects and two fresh demo sites will be developed).
- Training and certification program for Integrated Cold-Chain O&M personnel.
- Training and capacity building of owners and design consultants.
- Training programs for farmers and cold-chain operators on post-harvest management.

1.5.6 Municipal Demand Side Management program (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 energy use inefficiency in the country. MuDSM 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 ULBs, public water bodies, urban development departments. In 2021-22, 57 no. of capacity building programmes for the officials of Urban Local bodies (ULBs),

Urban Development Directorates (UDDs) and Municipalities on Energy Efficiency measures in municipality sector have been conducted covering around 3400 no. of officials from different ULBs, UDDs and MCs in around 10 states.

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).

1.5.7 Small and Medium Enterprises (SMEs)

Introduction to Sector

The Micro, Small and Medium enterprise (MSME) sector accounts for a large share of world economic activity. The MSME sector contributes immensely towards economic growth, job creation, poverty alleviation and inequality reduction. For developing economies like India, the MSME sector assumes even greater importance due to its close linkages with socio-economic aspects; contribution in fostering entrepreneurship and generating employment opportunities at comparatively lower capital costs.

Over the years, the MSMEs in the country have moved up the value chain from manufacture of simple goods to sophisticated products. There are 64 million MSME units in India providing employment to over 110 million people and contributes to about 28% of the GDP. The MSME sector in India is characterized with presence of industrial clusters representing various energy intensive sectors like ceramics, brick, glass, textile, metallurgy etc.

Energy Efficiency (EE) is the centre of improving the competitiveness of the MSME sector and reducing carbon emissions. Adoption of Energy Efficient Technologies (EET) and best operating practices in industrial process is of vital importance for mitigating greenhouse gases (GHG) emissions and tackling climate change. The sector holds immense potential in fostering energy efficiency and upgradation of technologies.

To make Energy Efficient India and follow a path of sustainable development, it is important that the MSME sector adopt the green and efficient manufacturing processes. Various programme/ schemes of Govt. of India and BEE remain a key driving force of energy conservation/uptake of energy efficiency among the SMEs. While these programmatic interventions have made an impact, there is a long way to go before majority of SMEs voluntarily increase their uptake of energy efficiency interventions.

National Programme on Energy Efficiency and Technology Upgradation of MSMEs

To improve energy efficiency of MSMEs, significant efforts and progress has been made since 2007 which also include the bilateral partnerships exclusively for MSME sector. However, many gaps still remain in the ecosystem for providing EE services to MSMEs. Accordingly, to enhance the energy efficiency of this sector, and to bring together the various MSME stakeholders and enable them to revisit the achievements, what remains to be done, and to chart the course ahead, Bureau has taken several initiatives.

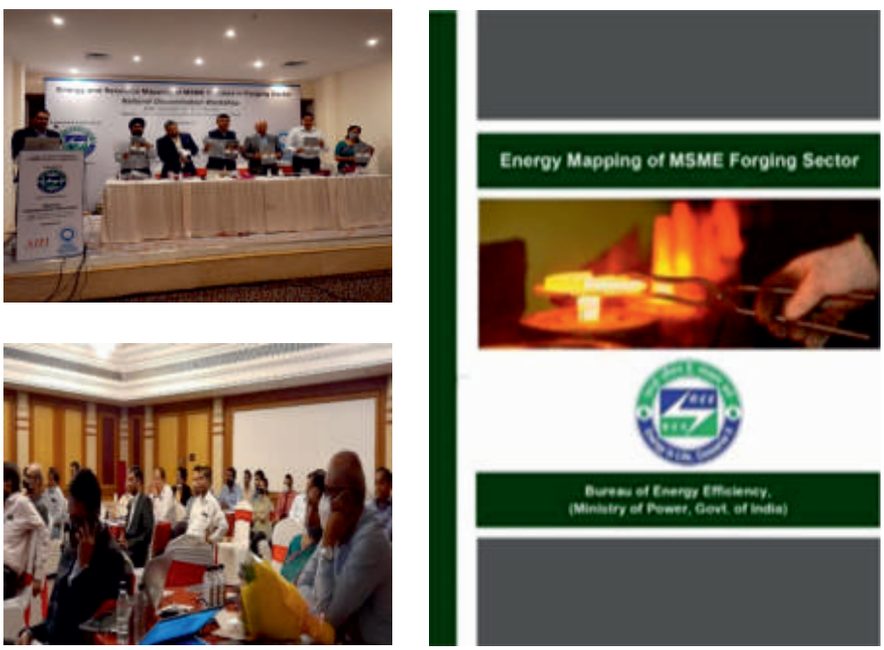
- Energy and Resource Mapping activities were initiated in forty (40) SME clusters of eight (8) sectors. Around four hundred (400) detailed energy audits have been carried out in MSMEs with detailed survey on the consumption of energy and its flow within the MSME facilities, technological status, operating practices, knowledge perception etc.
- As a part of 'Azaadi ka Amrit Mahatsov' and creating the awareness of energy conservation in SMEs during the energy conservation week, Interactive workshop on Energy and Resource Mapping of MSME Sectors was organized on 11th December 2021 where sector specific stakeholder, implementing agencies, and sector experts from 8 energy intensive sectors (Foundry, Forging, Steel Re-Rolling, Paper, Glass & Refractories, Chemicals, Pharma and Bricks) were attended. In this event, draft sectoral roadmaps were discussed for comments and suggestions.

Interactive workshop on Energy and Resource Mapping of MSME Sectors

- To develop sectoral benchmarks and prepare roadmap for sustainable growth and make the intervening globally competitive, a National Dissemination Workshop was organized at Belgaum on 25th November 2021 for Foundry sector where different stakeholders including owners of foundry industries, service providers, BFC, and IIF were attended.

National Dissemination Workshop, Belgaum

- The “Energy Mapping Study” ultimately aims to generate a sector level energy efficiency roadmap for MSME sector. In order to disseminate the findings and interventions required to increase the uptake of EE solutions in various forging sector, a National Level Workshop was organized at Pune on 29th November 2021 for Forging sector.

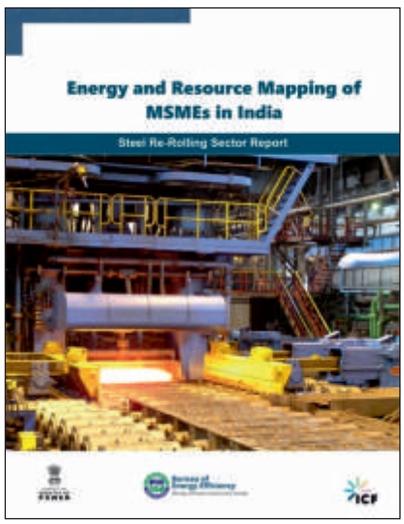


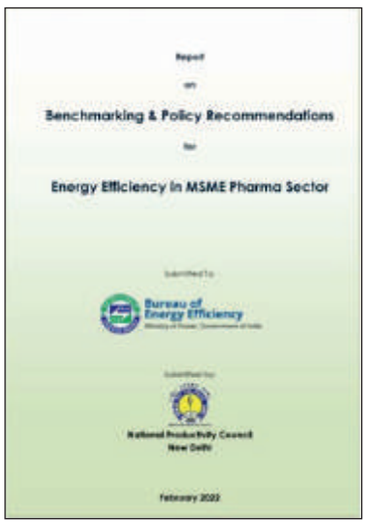
National Dissemination Workshop, Pune

- The National Dissemination Workshop on sectoral roadmap for glass & refractory sector under the project 'Energy and Resource Mapping of MSME sector in India' was organized in East Godavari cluster at Rajahmundry, Andhra Pradesh on 16th February 2022. The objective of the workshop is to share the findings of the energy and resource mapping study and salient features of the roadmap. The features of roadmap include implementation mechanism at cluster level with support from key stakeholders including relevant ministries and government departments.

National Dissemination Workshop, Rajahmundry

- For Steel Re-rolling Mill, National Dissemination Workshop was organized at Punjab on 11th February, 2022. The objective of this program is to focus on estimating the energy consumption, production, technology aspects in each cluster of SRRM sector and estimate the current scenario of the sector.





National Dissemination Workshop, Punjab

- For Paper sector, National Dissemination Workshop was organized in hybrid mode at Morbi, Gujarat on 25th February, 2022 where stakeholder from Association, MSME Units, SDA representative were attended.

National Dissemination Workshop, Gujarat

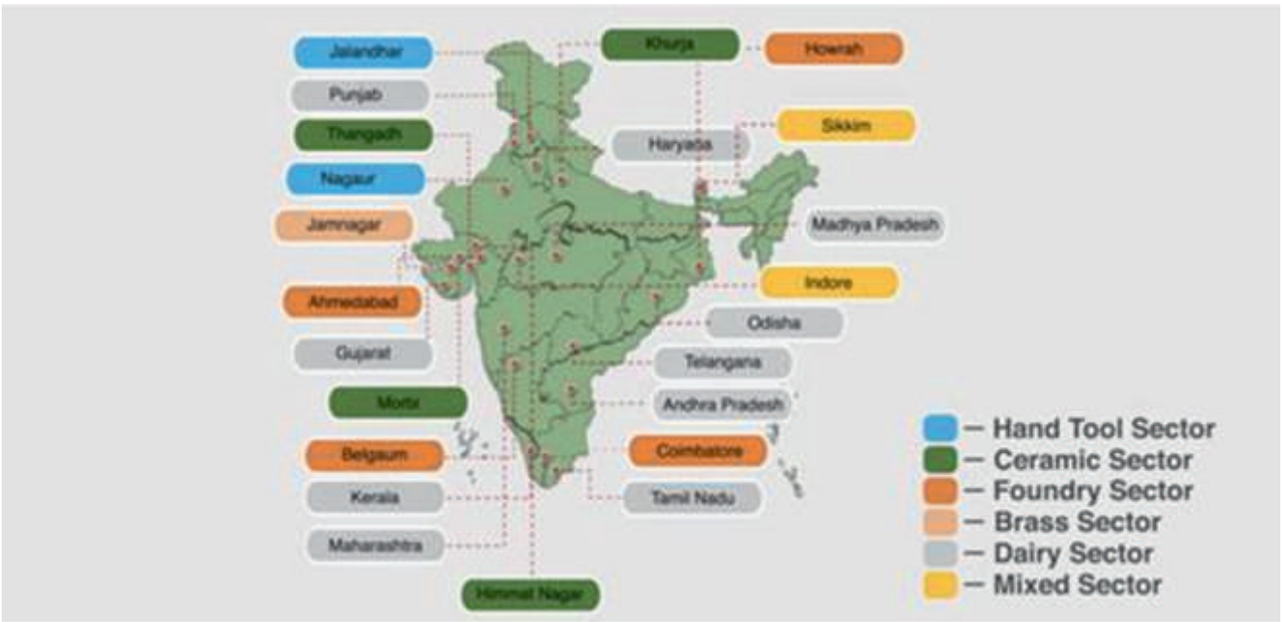
- To discuss the outcomes of the study and obtain remarks of the stakeholders on policy roadmaps and to develop the sector specific strategies for improving energy efficiency, National Dissemination Workshop for Pharma sector was organized at SRICT, Ankleshwar, Gujarat on 15th March, 2022.

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

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 energy in selected MSME clusters in India'. The project aims to develop and promote a market environment for introducing energy efficiency (EE) and enhanced use of renewable energy (RE) technologies in process applications in selected energy intensive industrial clusters, comprising micro, small and medium enterprises (MSMEs). The project is supported by the Ministry of Micro, Small and Medium Enterprises (MoMSME) and Ministry of New and Renewable Energy (MNRE).



Sector Wise MSME Clusters

The project was started 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 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) to reach out to MSME's at national level.

Key achievements of this programme during FY 2021-22 are as below:

- Developed cluster level/unit level cloud-based data analytics tool for energy-use database and benchmarking system. This will provide the MSME entrepreneurs with simple way to keep round-the-clock track of the energy consumption in the units/ enterprises.
- Re-heating furnace prototypes has been installed in Jalandhar and Nagaur clusters with association with IIT-Delhi.
- Project has initiated to develop policy and regulatory frame work for 23 clusters.
- Project has also upscale its project activities in Dairy (Rajasthan), Foundry (Faridabad) & Hand tool (Ludhiana) to reach out to national level.
- Developed knowledge products like promotional videos and tutorial videos on the implemented EE & RE technologies in cluster.

- Developing a dedicated webpage for the project under SIDDHIE portal.
- Developed different knowledge products like case studies, Fact sheets for wider dissemination of project activities.
- To develop and monitoring of Simplified Digital Hands-on Information on Energy Efficiency in MSMEs (SIDHIEE) is a repository of policy focussed initiatives executed by BEE for MSME Sector, showcasing holistic database of BEE's Initiatives pursued to strengthening MSME Sectors. SIDHIEE is an effort to benefit stakeholders allied to MSMEs. This portal showcases-
  1. End to end supports
  2. Technology Demonstrations
  3. Awareness of Energy Efficiency and Key Performance Indicators (KPIs)
  4. Energy Management System in SME Sector
  5. Guidance to Access to Finance
  6. Research and Tools
  7. Case studies on energy efficient practices
  8. Details of Stakeholders (Manufacturing units, Technology Service Providers, Cluster Development Centres, and many more.

Key indicators achieved by the project till March 2022

- Implemented around **1843 (around 70 Technologies implemented multiple times in different units)** Energy Efficiency and Renewable Energy measures in **750 MSME** units in **23 clusters**.
- Achieved an energy savings of **24,102 TOE (tonnes of oil equivalent)** and avoided **1,45,935 tonnes of CO_2** emissions per year.
- Achieved a monetary savings of **INR 142 Crores (USD 18.2 Million)** and achieved investment of **INR 244 Crores (USD 31.3 Million)** by MSME units.

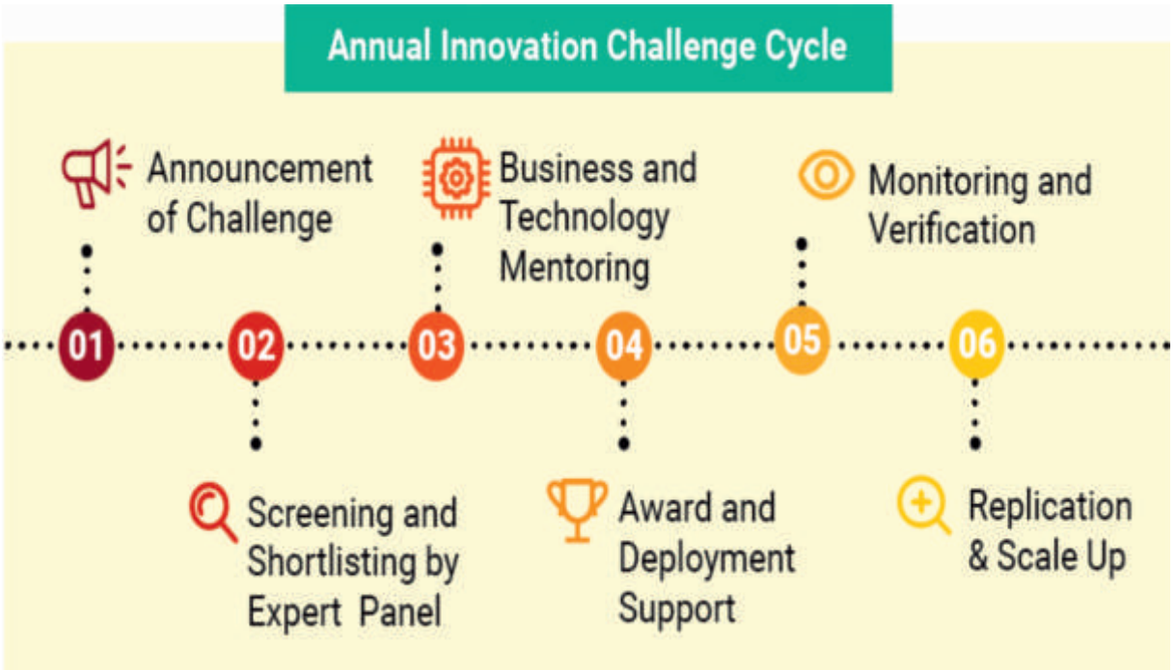
2. Facility for Low Carbon Technology Deployment (FLCTD)

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.



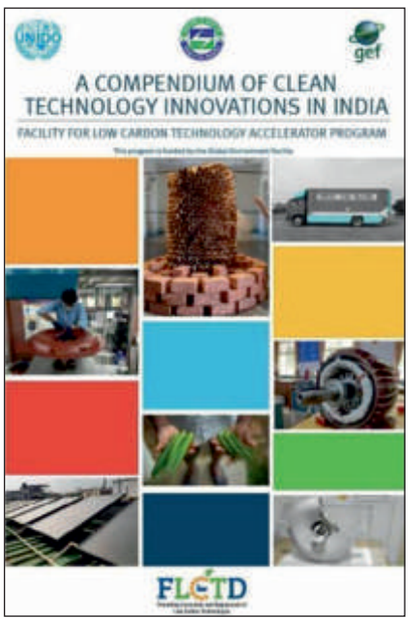
- The project provides financial assistance up to US $50,000 to the winners to validate the innovation and demonstrate its efficacy in the field conditions – a necessary pre-condition for commercialization.
- The FLCTD project also runs a Low-carbon Accelerator, that provides guidance to start-ups to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

Component II – Technical assistance for Technology Transfer Support Facility.

- The objective 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.

Key achievements of this program during FY 2021-2022 are as below:

- Under the 4th Annual Innovation challenge, 19 innovative technologies were selected for providing financial support to perform the field demonstration.
- 8 technologies from previous innovation challenges were validated after a thorough M&V process, and are now in the process of commercialization.
- 3rd Accelerator program was launched in partnership with Startup India on 11th August 2021 and received 206 applications by the closing deadline of 26th September 2021. Applications were scrutinized by Sangam AIC team and the PMU and thereafter 3rd cohort was launched with 23 start-ups and 15 mentors on 22nd October 2021. The startups underwent rigorous training for the next 3 months program was launched on 20th October 2021 virtually. The in-person presentations were conducted in New Delhi on 27th February 2022 and the winners were selected on 1st March 2022.
- On the occasion of 20th Foundation Day, the National Innovation Conclave on Low Carbon Technologies was organised on 1st March 2022 at India Habitat Center, New Delhi. The event was graced by Shri R.K. Singh, Union Minister of Power and New and Renewable Energy, and Shri Krishan Pal Gurjar, Minister of State of Power and Heavy Industries. 34 winners of the FLCTD innovation challenge and start-ups from FLCTD Accelerator program participated in an exhibition to showcase their technology solutions.



National Innovation Conclave on Low Carbon Technologies

1.5.8 Capacity Building of DISCOMs

Demand Side Management is a crucial process to reduce electricity consumption, especially when the usage is at its peak. A high requirement of electricity does not only increase the electricity cost but also causes power outages by putting pressure on the electricity grid. Therefore, capacity building and other support is essential for the DISCOMs to implement Demand Side Management programs in their respective areas. In this context, Bureau of Energy Efficiency launched a program for capacity building of DISCOMs since 2014. This was helped in capacity building of DISCOM's officials and development of various mechanisms to promote DSM in their respective areas. Bureau has included 62 electricity distribution companies and the activities like establishment of DSM cell, load research and preparation of DSM action plan for these DISCOMs, manpower/consultancy support, capacity building of officials of DISCOMs had been completed.

The major achievements under Capacity Building of DISCOMs program on Demand Side Management scheme till date are as follows:

- Included 62 distribution companies (DISCOMs) at pan India level.
- Dedicated DSM cells have been established at these DISCOMs.
- DSM action plans have been prepared based on load survey carried out for all beneficiary DISCOMs and submitted to DISCOMs for their implementation.

- DSM regulations have been notified for 24 States and 8 UTs. Remaining states are pursuing to notify their DSM regulations for their respective states.
- On DSM & energy efficiency, 1,450 master trainers from senior and middle management officials of DISCOMs have been trained and capacity building of 7650 circle level officials have been trained under this program.
- 69 DSM proposals have been prepared for 53 DISCOMs and submitted to respective DISCOMs for implementation. is estimated that there is a saving potential of 22919 MW and annual saving of about 62696 MU lies with these 28 DISCOMs and investment requirement is about Rs. 44, 994 Crore.

A. Capacity building of circle level officials of DISCOMs on DSM and Energy Efficiency

Bureau has organized capacity building of circle level officials of DISCOMs training program on DSM and energy efficiency in association with SDAs. The technical sessions were arranged by engaged agency during these training programs under this program. The primary objective of this program was to introduce the trainers to the changing dynamics of energy efficiency in the country. The program was mainly designed to provide basic concepts of DSM and various financial analyses involved in its implementation.

Training Programme for circle level officials

B. Preparation of DSM action plans based on load research study conducted at DISCOMs.

The agency has conducted the load servey at beneficiary DISCOMs and DSM action plans were prepared for each DISCOM under this program. These DSM action plans have been submitted to the DISCOMs for implementaion. However, some of the DISCOMs have implemented demand side meausres at their DISCOMs.

DSM measures at DISCOMs

1.5.9 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 Renewable Energy Development Agency, 7 Power Department, 7 Electrical Inspectorate, 4 Distribution Companies, and 2 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 2021-22, fund amount of Rs. 48 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.

  354 nos. of demonstration projects in the areas of street lighting, water pumping, retrofitting of electrical appliances in buildings, and waste heat recovery were

implemented by 14 SDAs during FY 2021-22. In addition, 19 SDAs undertook replacement of existing conventional appliances with energy efficient appliances in 1356 nos. of Government schools.

- **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 2021-22, 192 villages were taken up by 13 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.

- **Institutionalization of enforcement machinery at state level:** Main objective of this sub-component is to develop robust enforcement mechanisms to ensure effective implementation of Bureau's various programmes like PAT, ECBC, S&L, etc. and undertake capacity building of the enforcement machinery at State level including Inspecting Officers appointed at SDAs, Adjudicating Officers at SERCs and other government officials who may be associated with carrying out enforcement of the said programmes.

- **Manpower support to SDAs:** This constituent of the programme for strengthening of SDAs enables SDAs to engage manpower at their offices who assist them in executing their functions smoothly and effectively.

- **State Energy Efficiency Research & Outreach Programme:** This sub-component has the following main objectives:

  - To strengthen partnership between policy makers & educational / technical / research institutions to forward energy efficiency drive.
  - To enhance the outreach activities undertaken by SDAs.

  Many awareness campaigns physically / virtually have been conducted at regional / local level, wherein, awareness on Energy Conservation and Energy Efficiency is spread amongst the general public, officials of Govt. depts., school students & teachers, etc.

  Wide-scale awareness on Energy Conservation and Energy Efficiency has been created through promotional material like pamphlets, booklets, banners, brochures, posters, etc. developed in English and local dialects.

- **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 2021-22, more than 100 physical and 600 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, 31 States have notified their SECF and 26 States have provided their matching contribution towards BEE's first installment.

1.5.10 Miscellaneous

1.5.10.1 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.

The **country has now total 17,256 Energy Auditors and Energy Managers, out of which 10,456 are qualified as Certified Energy Auditors,** from the previous 20 examinations conducted during 2004-2021.

National Certification Exam for Energy Managers and Energy Auditors

The 21st National Certification Exam was conducted on 25th & 26th September 2021.

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.

At present there are **285 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 empanelled firms. At present total no. of **85 empanelled 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 104 workshops and it is ongoing.

1.5.10.2 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.

1.5.10.3 Energy Efficiency in Cold Chain Sector

"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

In this context, BEE with support of World Bank Group, Energy Sector Management Assistance Program (ESMAP) has taken up the project titled **"Cold Chain Energy Efficiency in India: Analysis of Energy Efficiency opportunities in Packhouses"**. The project has analysed the energy efficiency potential for promoting Energy Efficiency in pack-houses in India. The report of the study incorporated comments of the stakeholders such as M/o Agriculture and Farmers Welfare, M/o Food Processing, MOEFCC, NITI Aayog. M/o Power, Department of Commerce and APEDA. A technical committee has been constituted and Design Guidelines and Operation and Maintenance Manual is under preparation.

1.5.10.4 Awareness and Outreach (2021-22)

The Bureau of Energy Efficiency (BEE) launched a Campaign to create awareness regarding energy conservation among the general public. According to the guidelines laid down by the Ministry of Information and Broadcasting, a media campaign through electronic, outdoor and print media was carried out through Bureau of Outreach & Communication (BOC) (erstwhile DAVP) and the National Film Development Corporation of India (NFDC). In order to create awareness about Energy Conservation and spread it among masses for wider coverage, BEE has undertaken several activities in Print, Electronic, Social, and Outdoor Media, which are listed as given below:

1. Print Media:

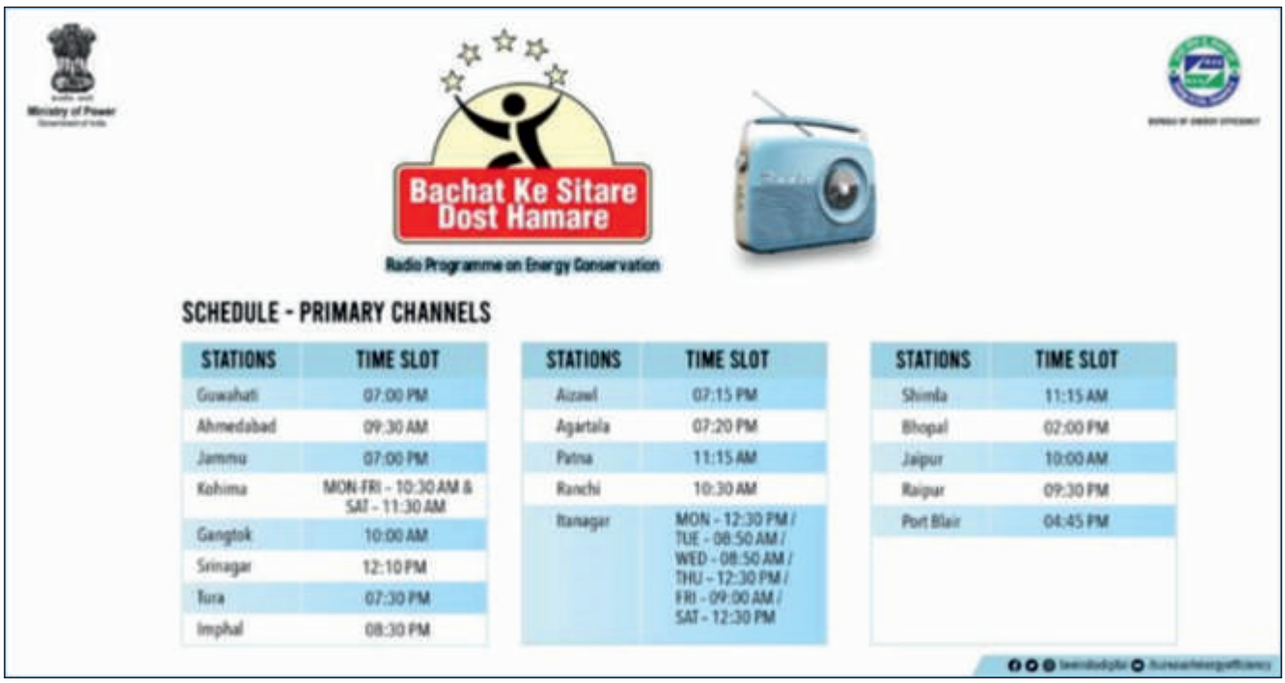
BEE has been releasing advertisements in Newspapers to spread awareness and educate people about star rating of electric appliances. This helps in educating people more about the

labels and their use. In addition to this, advertisements were also released pan India for announcing National Energy Conservation Awards (NECA), Perform, Achieve & Trade (PAT), etc.

2. Electronic Media:

Radio Program:

To enhance public awareness, BEE has been running Edu-tainment Program Bachat Ke Sitare - Dost Humare, sponsored radio programme of 15 mins. episodes each in 19 languages. In recent past, BEE has broadcasted its radio programme in All India Radio (FM GOLD and FM RAINBOW) in the evening time band between 7-8 PM from Monday to Saturday.



Each episode included awareness related to energy conservation, global warming and tips on energy consumption. In the programme general messages were duly integrated in an entertaining way.

3. Outdoor Media:

Exhibition: During the year, BEE participated in 7th Smart Cities India Expo from 23rd March - 25th March, 2022, (3-day event) Pragati Maidan, New Delhi to display its achievements regarding various energy conservation/efficiency schemes. The visitors received promotional material including leaflets/ brochures/newsletters by the BEE. The stall represented the ECBC, Shunya labelling, Eco Niwas Samhita and Electric Vehicles through its creatively designed panels. Engagement activities like quiz contests were also organised during the event.

7th Smart Cities India Expo

The event was focused on infrastructure development and building smart cities to upgrade urban infrastructure and create new cities, construction of green buildings etc.

Semi-Naming/Co-branding of Lajpat Nagar Metro Station:-

Bureau of Energy Efficiency in its endevour to promote energy efficiency hired Lajpat Nagar Metro Station for branding and displaying awareness messages at the station. The station having strategic location provided unique promotional avenues like graffiti on walls. Various messages were displayed to carter to the general public commuting through the area.

Branding of Lajpat Nagar Metro Station

4. Social Media:

BEE has been actively disseminating information about its schemes, messages on energy conservation and tips to conserve energy. In the last year, over 1,200 messages were posted on BEE's social handles. i.e. Facebook, Twitter, Instagram, LinkedIn, Loksanvaad, and YouTube channel.

Social Media Posts

5. Publication:

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

- Annual Report (2020-21)
- BRICS Energy Report 2021
- BRICS Energy Research Directory 2021
- BRICS Energy Technology Report 2021

Images of Reports & Newsletters Published

6. Other Awareness Activities:

- Print, electronic, and social media platforms were used effectively to propagate messages on Energy Conservation and Energy Efficiency.
- Created awareness videos for the following and uploaded on BEE website :-
  1. Shunya Labelling programme for Net Zero Energy Buildings and Net Positive Energy Buildings Programme.
  2. Lifestyle for Environment (LIFE)
  3. Cold Storage
  4. Perform, Achieve and Trade (PAT) Scheme
  5. Multimedia Tutorials

1.6 Awards and Painting Competition

National Energy Conservation Award

The Bureau of Energy Efficiency (BEE), under Ministry of Power, is mandated as per the Energy Conservation Act 2001, to regulate and promote energy efficiency and its conservation in India.

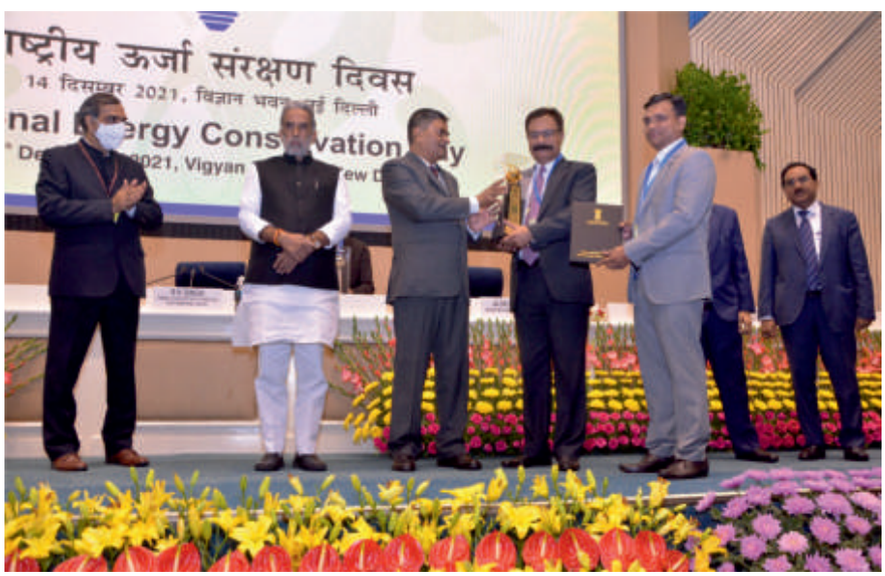
One of the important endeavor under awareness and outreach programme has been the Energy Conservation Awards. To raise awareness on energy efficiency and its conservation, the BEE, under the guidance of Ministry of Power, recognizes and encourages endeavors of industrial units, institutions and establishments in reducing energy consumption by felicitating them with Energy Conservation Awards on the occasion of National Energy Conservation Day, celebrated on 14th December every year.

The awards were given for the first time on December 14, 1991, which was declared as the 'National Energy Conservation Day'. Since then, National Energy Conservation Awards (NECA) has been attracting the attention of all the stakeholders and has witnessed increasing participation level year after year. These awards are presented on EC day by eminent dignitaries and highest functionaries such as Hon'ble President, Hon'ble Prime Minister and Hon'ble Union Minister of Power etc.

For 2021 year, the Award Committee has selected 15 units for First prize, 12 units for Second Prize, 19 units for Certificate of Merit and 9 Awards for the Most Energy Efficient Appliance of the Year.

The National Energy Conservation Day 2021 was celebrated in the august presence of Shri R.K. Singh, Hon'ble Union Minister for Power and New & Renewable Energy on 14th December 2021.

For NECA 2021, 408 Units have participated and collectively achieved an annual monetary savings of ₹1517 crores.



32nd National Energy Conservation Award (NECA) 2022

LIST OF AWARD WINNERS

Category	Sector	1st Prize	2nd Prize	Certificate of Merit (COM)
Industry	Cement	**Dalmia Cement Bharat Ltd.** Cuttack (Odisha)	**Sagar Cements Ltd.** Visakhapatnam (Andhra Pradesh)	**(1) JK Cement Works** Mudhol (Karnataka) **(2) Dalmia Cement Bharat Ltd.** Kadapa (Andhra Pradesh)
	Drug & Pharmaceutical	**Shri Mohta Ayurvedic** Rasayanshala Bikaner (Rajasthan)	**Cipla Ltd.** Solan (Himachal Pradesh)	**Dr. Reddy's Laboratories Ltd.** Srikakulam (Andhra Pradesh)
	Food & Processing	**Surat District Co-Operative Milk Producers' Union Ltd.** Surat (Gujarat)	–	**Marico Ltd.** Thirubhuvanai (Puducherry)
	Iron	**Visa Steel Ltd.** Jajpur (Odisha)	–	**Jaideep Ispat & Alloys Pvt. Ltd.** Dhar (Madhya Pradesh)
	Paper & Pulp	**Emami Paper Mills Ltd.** Baleshwar (Odisha)	–	–
	Plastic	**Marelli Motherson Automotive Lighting India Pvt. Ltd.** Pune (Maharashtra)	**Subros Ltd.** Gurugram (Haryana)	**Titan Company Ltd. (Eye Care Division)** Chikkaballapur (Karnataka)
	Tyre	**JK Tyre & Industries Ltd.** Kanchipuram (Tamil Nadu)	**JK Tyre & Industries Ltd.** Rajsamand (Rajasthan)	**Balkrishna Industries Ltd.** Alwar (Rajasthan)
	Zonal Railways	**North Eastern Railway Gorakhpur** (Uttar Pradesh)	**North Central Railway Prayagraj** (Uttar Pradesh)	**(1) South Western Railway** Hubbali (Karnataka) **(2) South East Central Railway** Bilaspur (Chhattisgarh)
	Metro Railways	–	–	**Lucknow Metro Rail Corporation** Lucknow (Uttar Pradesh)

LIST OF AWARD WINNERS				
Category	**Sector**	**1st Prize**	**2nd Prize**	**Certificate of Merit (COM)**
Transport	**Hotels**	**The Residency Towers** Coimbatore (Tamil Nadu)	**Trident Gurgaon** Gurugram (Haryana)	**(1) Taj Palace Hotel** (New Delhi) **(2) ITC Grand Chola** Chennai (Tamil Nadu) **(3) ITC Limited - ITC Gardenia** Bengaluru (Karnataka)
Buildings	**Hospitals**	**Railway Hospital Krishna** (Andhra Pradesh)	**Division Railway Hospital** Rajkot (Gujarat)	**(1) Railway Hospital Erode** (Tamil Nadu) **(2) Divisional Railway Hospital** Kalyan (Maharashtra)
	Shopping Malls & Plazas	–	–	**Gaur Central Mall Ghaziabad** (Uttar Pradesh)
	Airport	–	–	**GMR Hyderabad International Airport Ltd.** Hyderabad (Telangana)
Institutions	**CPWD, State PWD & PHED**	**Kacheguda Heritage Building** Hyderabad (Telangana)	**Electric Traction Training Centre** Krishna (Andhra Pradesh)	**Rail Sanchalan Bhavan** Hyderabad (Telangana)
	DISCOM	–	–	**Uttar Gujarat Vij Company Ltd.** Mehsana (Gujarat)
	State Performance Award (based on SEEI-2020)	**Group - 1: Karnataka** **Group - 2: Punjab** **Group - 3: Assam** **Group - 4: Puducherry**	**Group - 1: Rajasthan** **Group - 2: Kerala** **Group - 3: Uttarakhand** **Group - 4: Chandigarh**	–

Category	Appliance Name	Model Number
Appliances	Color Television	SAMSUNG (Model No. UA32T4310AKXXL)
	Washing Machine	SAMSUNG (Model No. WT70M3000HP)
	Ceiling Fan	HAVELLS (Model No. EFFICIENCIA NEO)
	Storage Type Water Heater	HAVELLS (Model No. MONZA Dx25)
	Pump	C.R.I. Pumps (Model No. PLANO 104)
	Distribution Transformer	JAYBEE (Model No. JBKIR-25-2STAR-AM)
	LED Bulb	Orient Electric (Model No. 9W SELF BALLASTED LED BULB)
	Air Conditioner	VOLTAS (Model No. 4502911)
	Refrigerator	HAIER (Model No. HRD-1922)

NATIONAL ENERGY EFFICIENCY INNOVATION AWARDS (NEEIA) 2021

In addition to NECA awards, this year BEE initiated one of the important endeavors under awareness and outreach programme, National Energy Efficiency Innovation Awards (NEEIA). The awards were encouragement to establishments and participants in various categories to apply new methods to achieve energy efficiency and to lay greater focus on research. These awards were given for the first time on December 14, 2021, on the 'National Energy Conservation Day' along with the NECA awards. The applicants belonged to Category A (Industry, Transport, Building) & Category B (Students & Research Scholars). A total of 149 applicants participated for NEEIA 2021.

For NEEIA 2021, 07 awards were given as stated below				
Category	**Sector**	**1st Prize**		**Certificate of Recognition (COR)**
Category A	**Industries**	Shri Vivek Verma **(Low temperature evaporation technology)**	Shri Satish Kumar Dabbiru **(Recycling of Plastics in Electric Arc Furnace)**	Shri Ketan Goel **(Arrest Master ABS: Compressed Air Saving Device for Cooling Applications)**
	Transport	–	–	Smt. Rajni Yadav **(Switching OFF/ON lights and fans at Railway stations in integration with NTES (National Train Enquiry System) train movement data)**
	Industries	Himalayan Institute of Alternatives, Ladakh (HIAL) **(Passive Solar Heated (PSH) Buildings of HIAL)**	–	Shri Amarjit Singh **(Energy Savings for a leading QSR chain in India)**
Category B	**Students & Research Scholars**	–	–	Shri Ashutosh Tiwari **(Hybrid Treadmill Electric - Scooter)**

NATIONAL PAINTING COMPETITION ON ENERGY CONSERVATION 2021

Ministry of Power (MoP), Govt. of India has been organizing National Painting Competition on Energy Conservation since 2005. In the wake of COVID Pandemic, the competition was not organized during 2020. In an attempt to revive the programme, MoP launched Painting Competition – 2021 with redefined "New Methodology" under the overall coordination of Bureau of Energy Efficiency (BEE) and with the active support of 11 Central Public Sector Undertakings (CPSU) in all the 36 States and Union Territories of India.

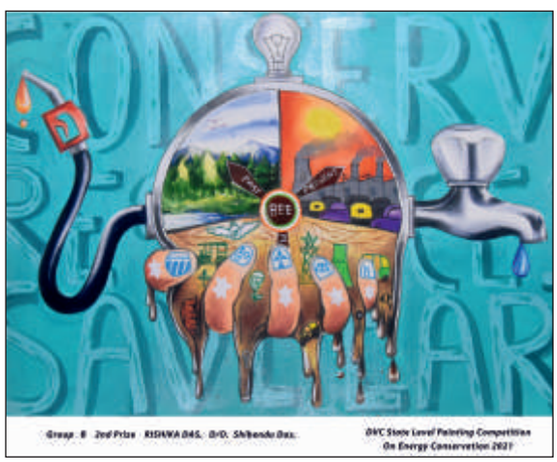
This year, Painting Competition on Energy Conservation has been organized in two stages only, a shade different from earlier years. School Level Painting Competition was not undertaken as most of the schools were either closed or working with partial attendance due to local administrative restrictions.

In view of the ongoing pandemic scenario, all possible follow ups were ensured at all levels to follow local administrative norm to meet protocol standards.

Nodal Agency, nominated by MoP for ground level support, of the respective Stat /UT identified one or more Nodal Schools or suitable locations in the Capital City and other major cities to organize State Level Painting Competition. Individual students were also eligible to register themselves on BEE portal for participation in competition. Nodal Agencies conducted State Level Painting Competitions for all the registered participants at prescheduled venues.

Students of 5th, 6th and 7th standard under Group 'A' and 8th, 9th and 10th standard under Group 'B' were eligible to participate in this year's competition. More than 80,000 students from 36 States/UTs' participated at around 300 venues for State Level Painting Competitions. Paintings drawn were evaluated by State Level eminent jury.

Paintings drawn were evaluated by State Level eminent jury and winners were awarded in the gracious presence of dignitaries of States such as Hon'ble Governor, Minister, Local MLAs senior Bureaucrats etc.



National Painting Competition on Energy Conservation 2021

LIST OF NATIONAL WINNERS

GROUP – A		GROUP – B	
Prize	**Student**	**Prize**	**Student**
1st	Sagarika Sarania (Class 7) Guwahati Public School, Guwahati (Assam)	1st	Rishika Das (Class 10) Elite Co-Ed. H.S., Bikramnagar (West Bengal)
2nd	Jigmat Chosal (Class 6) Druk Padma Karpo, Leh (Ladakh)	2nd	Sristi Paul (Class 8) St. Paul's School, Agartala (Tripura)
3rd	Abir Das (Class 6) Melaghar Eng. Medium H.S. School, Melaghar (Tripura)	3rd	Anurag Singha (Class 10) Axel Public School, Guwahati, (Assam)
Consolation 1	Soham Samanta (Class 7) Raisina Bengali Sr. Sec School, Gole Market (Delhi)	Consolation 1	Aditya Chourasia (Class 10) Govt. Pt RD Tiwari Utkrist Vidyalaya, Raipur (Chhattisgarh)
Consolation 2	Nidhi Ballare (Class 7) Saraswati Bhavan Convent High School, Bhokara (Maharashtra)	Consolation 2	Debmalya Das (Class 8) South Garia Jadunath Vidyamandir, South Garia (West Bengal)
Consolation 3	Raktim Barua (Class 7) Sri Krishna Mission School, Agartala, (Tripura)	Consolation 3	Rituparno Roy (Class 7) Kendriya Vidyalaya Khanapara, Guwahati, (Assam)
Consolation 4	Siya Verma (Class 7) Presentation Convent Sr Sec School, Gandhi Nagar (Jammu & Kashmir)	Consolation 4	M. Mahidhar (Class 10) N S M Public School, Patamata, Vijayawada, (Andhra Pradesh)
Consolation 5	Atharv Shankhdhar (Class 7) Delhi Public School Jankipuram (Uttar Pradesh)	Consolation 5	Koshika Slathia (Class 8) MV International School, Samba (Jammu & Kashmir)
Consolation 6	Deepika Satpathy (Class 6) Modern Public School Meghadambaru, Kuruda Balasore (Odisha)	Consolation 6	K. S. Tamilarasan (Class 9) Presidency H.S. School, Kavery Nagar, Reddiarpalayam (Puducherry)
Consolation 7	Debanjali Roy (Class 6) South Point Institute Udaynarayanpur (West Bengal)	Consolation 7	Utkarsh Bansal (Class 10) Oxford School, Vikas Puri (Delhi)
Consolation 8	Aastha (Class 7) Govt. Model Sr. Sec. School, Sec-28 (Chandigarh)	Consolation 8	Mufeeda Shehabudeen K (Class 10) Govt Girls Sr Sec School, Anrodth (Lakshadweep)
Consolation 9	Abhinav Kumar (Class 7) Denobili School Chandrapura (Jharkhand)	Consolation 9	Diya Roy Chowdhury (Class 8) Holy Cross School, Durjoynagar (Tripura)
Consolation 10	Pahi Baruati (Class 6) Anand Academy, Down Town (Assam)	Consolation 10	Kooyel Acherjee (Class 8) Alok Public School, Alok City, Silvassa, (Dadra & Nagar Haveli)

Programs organized by BEE under 'Azadi ka Amrit Mahotsav' (AKAM)

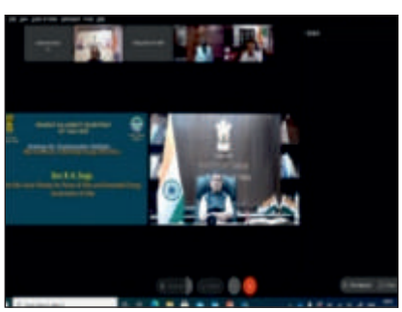
1. Launch of Amrit Mahotsav in Power and Energy Sector by initiating Energy Efficiency Enterprise (E3) Certifications programme for brick sector on 12th March 2021

Shri R K Singh, Minister of State (I/C) for Power and New & Renewable Energy and Minister of State for Skill Development &Entrepreneurship, launches "Energy Efficiency Enterprise (E3) Certifications Programme for Brick manufacturing Sector" in order to kick-start a series of events from Ministry of Power, Government of India under 'Azadi Ka Amrit Mahotsav'.


Launch of E3 Certification Programme

2. Inauguration of "Aiming for Sustainable Habitat: New Initiatives in Building Energy Efficiency 2021" on 16th July 2021

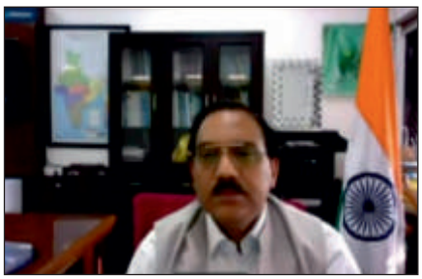
Shri R.K. Singh, Union Minister of Power and New & Renewable Energy today announced various initiatives being taken by Government of India towards energy efficiency in the building sector, as part of 'Azadi Ka Amrit Mahotsav'. While inaugurating "Aiming for Sustainable Habitat: New Initiatives in Building Energy Efficiency 2021" which was virtually launched today by Bureau of Energy Efficiency, Union Minister Shri R.K .Singh reiterated his commitment to ensure continuous efforts to enhance energy efficiency in the economy, especially in the buildings sector. He congratulated BEE for organizing the launch event and suggested all officials to continue to strive to remove all barriers in implementing Energy Efficiency in the Buildings sector, creating energy efficient demand and energy efficient designs.



Launch of Programme on "Aiming for Sustainable Habitat"

3. Online Trading of Energy Saving Certificates and Issuance of Energy Saving Certificates on 19th August 2021

As part of "Azadi Ka Amrit Mahotsav", Ministry of Power organised an event yesterday here to issue Energy Saving Certificates to best performing Industrial units. Shri Alok Kumar, Secretary, Ministry of Power issued more than 57 lacs Energy Saving Certificates to 349 industrial units because they saved more energy than the targets. These units will be able to trade certificates through Power Exchange Portal after a month to those units who could not achieve their targets.



Booklet launched on "Lessons learnt in ESCerts trading under PAT scheme at IEX during PAT cycle I and way forward"

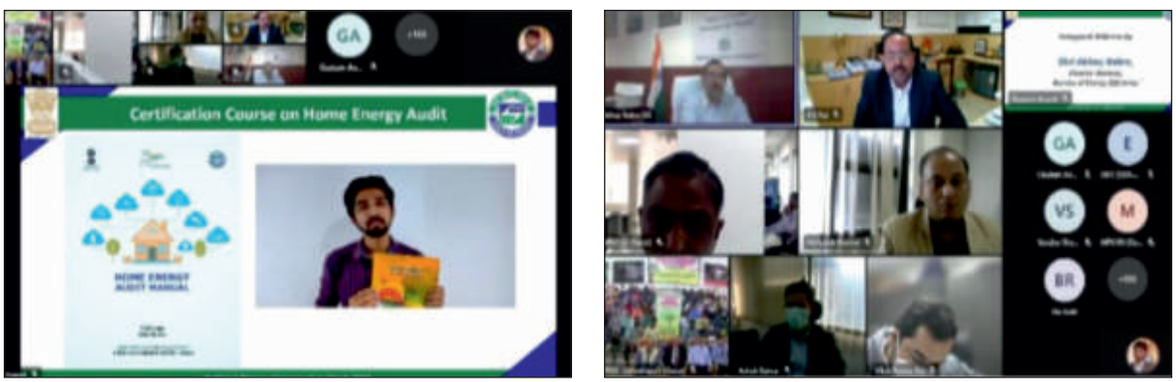
4. Enhanced action on energy efficiency by States - Review meeting of current level of activities in the field of energy efficiency and clean energy transition on 22nd October 2021

Union Minister for Power, Shri R. K. Singh chaired a virtual meeting today with senior officials from State Governments and industry partners to review the current level of activities in the field of energy efficiency and clean energy transition being implemented by State Agencies. This is necessary in view of India's commitment to energy transition and to fulfill Paris Agreement Goals. During June 2021 the Union Power Minister had interacted with concerned Ministries and Departments of Central Government and it was concluded that state agencies will also have to play more active role in this endeavour.

Interaction with State Governments & Industry Partners

5. Virtual launch of Certificate Course on Home Energy Assessment Program

BEE virtually launched a 'Certification Course on Home Energy Assessment (HEA)' on 8th December, 2021. A Home Energy Assessment enables appropriate accounting, quantification, verification, monitoring, and analysis of energy use of various energy-consuming equipment and appliances in a house and the submission of a technical report with feasible solutions and recommendations for improving energy efficiency, with a cost-benefit analysis and action plan to reduce energy consumption.



Launch of Certificate Course on Home Energy Assessment

This would ultimately lead to a reduction in energy bills and the carbon footprint of the consumer. The certification program will create awareness on importance and benefits of energy audit and energy efficiency and conservation among students from engineering/diploma colleges. This will increase employability of youth in the domain of energy efficiency, climate change mitigation, and sustainability.

6. Webinar on Technology Transfer for Decarbonization of Industry

Bureau of Energy Efficiency (BEE) organised a virtual workshop on 'Technology Transfer for Decarbonization of Industry' on December 9, 2021. The workshop zoomed into specific technology transfer options for the decarbonization of the steel and cement sectors in India. The workshop also facilitated discussions on the state-of-the-art technologies and know-how, as well as opportunities for deployment within India.

7. National Workshop on Energy Efficiency in the Indian Residential Sector

Bureau of Energy Efficiency, under the guidance of the Ministry of Power, organized a National Workshop on Energy Efficiency in the Indian Residential Sector on December 10, 2021, under Azadi ka Amrit Mahotsav. During the workshop, Secretary Power, Shri Alok Kumar, in the presence of Secretary BEE and other dignitaries launched four Knowledge Products. These products have been developed with support from the Indo-Swiss Building Energy Efficiency Project (BEEP) and are intended to contribute to achieving India's Intended Nationally Determined Contributions (INDC's).

National Workshop on Energy Efficiency in the Indian Residential Sector

The Knowledge Products launched are:

- A book on "Understanding Heat Transfer in Buildings through Numerical Examples" to train undergraduate and postgraduate engineering students in the basics of building heat transfer and in the design of energy-efficient buildings. The book has been developed in partnership with IIT Bhilai.
- Building Envelope Solution Sets, a ready reckoner for building designers to design energy-efficient residential buildings and help achieve compliance with the energy conservation building code for residential buildings or Eco -Niwas Samhita, 2018
- A manual on External Movable Shading Systems (EMSyS), a compilation of external shading solutions available in the country, to help reduce heat ingress into buildings and keep buildings cooler.

- Vayu Pravah: an open-source computational fluid dynamics (CFD) tool to help building designers improve natural ventilation in buildings and make them cooler and healthier.

8. National Workshop on Role of Energy Efficient Appliances in Market Transformation

BEE organised a National Workshop on the Role of Energy Efficient Appliances in Market Transformation on 10th December 2021. The workshop was attended and supported by various agencies and associations like Refrigeration and Air Conditioning Manufacturers Association (RAMA), Consumer Electronics and Appliances Manufacturers Association (CEAMA) and Collaborative Labeling and Appliance Standards Program (CLASP).

National Workshop on Role of Energy Efficient Appliances in Market Transformation

9. National Workshop Event on Energy Efficiency Plans for the MSME Sector

The Bureau of Energy Efficiency (BEE) organized an Interactive Workshop on Outcomes of Energy and Resource Mapping of Ministry of Micro, Small & Medium Enterprises (MSME) Clusters at India Habitat Centre on December 11, 2021. A presentation on findings of 'Energy and Resource Mapping of MSME clusters in India' was given by BEE official, regarding 8 sectors and 40 clusters.

The workshop was aimed at discussing the findings of the work being undertaken by BEE in 9 select sub-sectors in terms of energy and resource mapping. The Bureau of Energy Efficiency and the Ministry of MSME have together taken a number of initiatives to ensure the growth of this sector in an energy-efficient and environmentally-friendly way. To ensure synergy among various players in the MSME sector, BEE and the Ministry of MSME have also promoted a collaborative platform--"SAMEEEKSHA" (Small and Medium Enterprises Energy Efficiency Knowledge Sharing).

2. International Co-operations

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).

The first meeting of Joint Working Group on "Energy Efficiency, Smart Grids and Electricity Markets" with the EU was held on 15.03.2019 in New Delhi.

The second meeting of Joint Working Group on "Energy Efficiency, Smart Grids and Electricity Markets" with the EU was held virtually on 04.12.2020. The meeting was chaired by Additional Secretary (Internal Co-operation), Ministry of Power, Govt. of India and Head of Unit International Relations (ENER) from EU side.

Bureau of Energy Efficiency, Ministry of Power and EU successfully organized the second virtual meeting of the Common Implementation Forum (knowledge exchange forum between BEE, EU, Indian states, EU Member States) on 17.11.2021 as part of EU-India Clean Energy and Climate Partnership (CECP).

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 was discussed with relevant stakeholders from various ministries, think tanks and industry associations in a webinar.

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 CO_2 emissions and GHG data for tracking global emissions for INDCs.

After several rounds of discussions between BEE and ADEME officials, a draft Terms of Reference for Cooperation between BEE & ADEME on the implementation of a national energy efficiency monitoring system in India were developed.

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.

The ADEME team along with ENERDATA (Enerdata is an independent research and consulting firm specializing in the analysis and modelling of the global energy markets and its drivers assisting in development of Energy Efficiency Indicators.

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 and 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.

Secretary Power meet Govt. of Germany officials to discuss Indo-German Energy Cooperation

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.
- 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).
- Various workshops and seminars on topics such as CO_2 markets, energy efficient brick manufacturing (E3 mark), ESCO business models and Energy Efficiency in Buildings were organized under IGEF collaboration.

- **Indo German Energy Programme (IGEN)**

- On behalf of Federal Ministry for Economic Affairs and Climate Action of the Federal Government of Germany in association with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is supporting Bureau of Energy Efficiency in developing

District Cooling Guidelines. Technical committee constituted for finalization of District Cooling Guidelines. 1st Technical Committee meeting for Adoption & implementation of District Cooling Systems (DCS) held on 3rd December, 2021. Stakeholders Consultation were held in June 2021 to discuss Policy and regulations for an energy-efficient cold chain in India and to discuss Adoption & implementation of Cooling System in India.

Energy Efficiency in Industry and Data Management

The Indian and German Government, in their Government-to-Government negotiations in 2019, agreed to provide technical assistance up to EUR 4 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:

I. Capacity building of selected SDA's to promote energy efficiency in Non-PAT industries

ii. Providing Non-PAT secondary steel and pulp and paper industries with access to information on key energy efficiency processes and technologies

iii. Institutionalization of peer-to-peer learning among SDAs and Non-PAT secondary steel and pulp and paper industry clusters

iv. National Energy Efficiency dialogue for secondary steel and pulp and paper sector between policy makers, research institutions and business associations.

4. India — US Collaboration

The Indo-US Energy Dialogue was launched in May, 2005 and has the following objectives:

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

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 areas for collaboration to enhance energy efficiency and energy savings in the industrial sector by advancing a comprehensive energy management system in accordance with ISO-50001, waste heat recovery, industry deep-decarbonization and use of hydrogen.

BEE and US Department of Energy collaborated to enhance energy efficiency and energy savings in the industrial sector by advancing a comprehensive energy management system in accordance with ISO 500001. Two Webinar session organized on Industrial Efficiency: ISO 50001 Energy Management System highlighting the Textile, Pulp & Paper and Thermal Power Plant sectors.

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.

A Preliminary Project Report of India-UK new partnership programme of Technical Assistance Collaboration on Power Sector was approved by the Screening Committee of Department of Economic Affairs. Accordingly, a DPR has been submitted by the UK side for further taking up the project.

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:

- Industrial Energy Efficiency; and
- Electric mobility charging infrastructure

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.

Bureau of Energy Efficiency (BEE) and the British High Commission (BHC) is working on Rejuvenation of Knowledge Exchange Platform which was launched on 26th February 2015 for promoting industrial energy efficiency. The objective of the KEP was to promote Energy Efficiency (EE) measures among industries through sharing of best practices, sectoral learnings and EE technologies adopted by other industries. The KEP primarily covered nine large energy intensive industries under the Perform, Achieve and Trade (PAT) scheme of BEE and enabled them to develop strategies and solutions that can enhance their energy productivity and performance.

India with UK is exploring opportunities to work in the area of Industrial Energy Efficiency and Decarbonization Knowledge and Technology Partnerships.

India along with Govt. of United Kingdom launched new workstream to promote industrial energy efficiency under the Clean Energy Ministerial's (CEM) – Industrial Deep Decarbonization Initiative (IDDI) co-ordinated by UNIDO, at the 12th Chief Energy Ministerial (CEM).

The IDDI initiative has been supported by Germany and Canada, with more countries expected to join. The objective is to infuse green technologies and stimulate demand for low-carbon industrial material

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.

Consequent to the Cabinet Approval by the Govt. of India, an MoU for a five-year joint project with an overall objective to reduce energy consumption in new buildings in India was signed between the two governments on 8th November 2011 and was valid till 7th November 2016. The successful implementation of the project during 2011-2016, resulted in the two governments agreeing to extend the MoU for 5 years. Hence, the extension of the MoU for a follow-up phase of BEEP (8th November 2016 – 7th November 2021) was signed in the month of November 2016. The MoU's for the follow-up phase were exchanged between the two countries on 28th November 2016 at the BEEP International Conference in the presence of Mr. Piyush Goyal, the then Minister of State (IC) for Power, Coal, New & Renewable Energy, Mines, Govt. of India. The project is also in the process of seeking an extension till December 2022 to complete the activities delayed due to the COVID-19 pandemic.

Activities completed under the bilateral (FY 2020-21):

- Eco-Niwas Samhita Implementation: BEEP is providing technical support to BEE with the implementation of Energy Conservation Building Code for Residential Buildings or Eco-Niwas Samhita (ENS). Over 1500 participants attended the National Training Program on ECBC and ENS as part of the Azadi Ka Amrit Mahotsav event on 18th – 19th July, 2021. The NEERMAN awards were launched on 16th July, 2022 under the Amrit Mahotsav event organized by BEE by the Hon'ble Minister of Power. BEEP assisted BEE with the conceptualization and implementation of the NEERMAN awards which aims to recognize and award exemplary commercial and residential buildings which comply with ECBC and ENS.
- BEEP developed the document "Building Envelope Solution Sets (v 1.0) for Eco Niwas Samhita, 2018". The publication was released by the Secretary, Ministry of Power during the "National Workshop on Energy efficiency in Residential Buildings" under Bharat ki Azadi ka Amrit Mahotsav on 10th December 2021 at New Delhi.
- Tools and Technologies: BEEP has developed a simulation software "Vayu Pravah" to analyze the natural ventilation potential in buildings through Computational Fluid Dynamics (CFD). The CFD tool "Vayu Pravah" along with its user manual was released by the Secretary, Ministry of Power during the "National Workshop on Energy efficiency in Residential Buildings" under Bharat ki Azadi ka Amrit Mahotsav on 10th December 2021 at New Delhi. The tool will help building designers in designing better naturally ventilated buildings. Two online training programmes were organised for building professionals and were attended by 200 professionals.
- BEEP has also developed a manual for building designers on the External Movable Shading Systems (EMSyS), used to shade windows, available in the Indian market. The project also undertook a study to measure the reduction in room temperature and savings in electricity used for air-conditioning through the use of EMSyS products. The manual was released by Secretary, Ministry of Power during the "National Workshop on Energy efficiency in Residential Buildings" under Bharat ki Azadi ka Amrit Mahotsav on 10th December 2021 at New Delhi.
- Architecture & Engineering Student Education & Training: BEEP is focusing on training under-graduate and post-graduate Architecture & Engineering students in integrated energy-efficient building design. BEEP organised the 3rd edition of its flagship BEEP Student Camp (originally a 1-week residential program) as a 2-week online program due to the COVID-19 pandemic. The program was attended by

60 participants pan India, comprising of both students and young professionals from architecture and engineering backgrounds. A book on "Building Heat Transfer: Understanding through Numerical Examples" was developed in collaboration with IIT Bhilai. The publication was released by the Secretary, Ministry of Power during the "National Workshop on Energy efficiency in Residential Buildings" under Bharat ki Azadi ka Amrit Mahotsav on 10th December 2021 at New Delhi. Two online training programme for faculty members was organized, which was attended by around 50 faculty members.

- Media Engagement on Energy Efficient Buildings: BEEP is supporting BEE in increasing media engagement on the issue of energy efficiency in buildings. BEEP has partnered with the Centre for Media Studies (CMS) to conduct a series of workshops on the topic for journalists. A 2-week training for journalism students was conducted during October 2021 in collaboration with the Centre for Media Studies (CMS). Hon'ble Union Minister for Power, New & Renewable Energy launched the media manuals developed under BEEP at the Energy Conservation Day event held at Vigyan Bhawan on 14th December 2021.

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. The sides noted the interest in cooperation in the field of energy audits and participation in international Energy Efficiency festivals.

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.

iii. BEE and REA are preparing an elaborated roadmap of joint events for 2022 and a more detailed calendar plan for the Q1-Q2 of the year 2022. The roadmap will include topics of the future events taking into account the mutually decided proposals as well as the report provided by BEE.

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**

A meeting was organized at Bureau of Energy Efficiency on 17th November, 2016 to discuss about the Energy Conservation Guidelines and Energy Management Manual that are being used by the Industries in Japan having the participation of officials of Bureau of Energy Efficiency (BEE), The Energy Conservation Centre, Japan (ECCJ), The Energy and Resources Institute (TERI) and Designated Consumers (DCs) representing various industry sub-sectors. 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 form various PAT sectors were selected.

As per the current Covid situation, ECCJ and BEE agreed to disseminate the EM Manuals through web meetings and webinars. Thus, the activities were divided into Plan A, B and C are as below:

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)

Created in 2010, the Clean Energy Ministerial (CEM) is a global forum where major economies and forward leaning countries work together to share best practices and

promote policies and programmes that encourage and facilitate the transition to a global clean energy economy.

- As of March 2022, there are 29 member countries in CEM: 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.
- 18 wide ranging CEM work-streams (initiatives and campaigns) help drive the global clean energy transition. These are year-long activities which are led by one or more CEM members with coordination with one or more departments within the countries.
- **As of March 2022, 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
  - Super-efficient Equipment and Appliance Deployment (SEAD) Initiative: Co-lead
  - Bio future Platform Initiative: Co-lead
  - Power System Flexibility Campaign (PSF) Campaign: Co-lead
  - Electric Vehicles Initiative (EVI)
  - Carbon Capture, Utilization and Storage Initiative (CCUS) Initiative
  - Hydrogen Initiative (H2I)
  - Clean Energy Solutions Center Initiative
  - Clean Energy Education and Empowerment Initiative
  - CEM Investment and Finance Initiative
  - Long-term Energy Scenarios (LTES) Initiative
  - EV30@30 Campaign
- 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.
- CEM12 was hosted by the Government of Chile under the theme "We work together to move the world towards a clean energy future". The 12th Clean Energy Ministerial (CEM12), was hosted by the Republic of Chile. CEM12 focused on the theme of "ambition into action – turning a year of clean energy ambition into a decade of delivery" bringing CEM's global clean energy community together to show leadership through insight, inspiration, and impact.

12th Clean Energy Ministerial Meeting

- 13th Clean Energy Ministerial (CEM-13) will be hosted by USA in 2022, as India is scheduled to host the 14th Clean Energy Ministerial (CEM-14) in 2023. 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 Decarbonization, Super-efficient Equipment and Appliance Deployment, International Smart Grid Action Network.

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). This successful interaction led to the decision that the dialogue was to be carried out at the level of Heads of State and Government in annual Summits. At the First Summit, held in Yekaterinburg in 2009, the depth and scope of the dialogue among the Members of BRIC – which became BRICS in 2011 with the inclusion

of South Africa – was further enhanced. More than an acronym that identified countries emerging in the International economic order, BRICS became a new and promising political-diplomatic entity, far beyond the original concept tailored for the financial markets.

India has been the active member of the BRICS forum and enjoys very special status in its agenda and dialogue undertaken by the BRICS member countries. India assumes BRICS presidency in 2021.

Russia after assuming the Presidency of BRICS in April, 2015 proposed to initiate cooperation in the field of energy, efficiency and sustainable development. In this regard, a representative from member countries met at the BRICS High-Level Meeting on Energy Efficiency in Merida, Mexico, on 26th May, 2015 to coordinate their actions in response to increasingly unfair competition in international energy markets and artificial restrictions on the free movement of capital and energy-efficient technology trade. As part of meeting, the Russian side circulated copy of the Memorandum of Understanding (MoU) in Energy Savings and Energy Efficiency promotion for consideration of BRICS member countries.

The MoU was signed on 20th November, 2015 at Russia during the first meeting of the Energy Ministers of BRICS member countries. Under the framework of this MoU, a Working Group on Energy Savings and Energy Efficiency was established. The first Working Group meeting on “Energy Savings and Energy Efficiency” was held in Vizag on 5th July, 2016.The second meeting of Energy Ministers was held in Beijing China on 7th June, 2017.

As a pe-cursor to the 3rd Ministerial Meeting, a Third Working Group meeting on Energy Savings and Energy Efficiency was held at Cape Town, South Africa on 17th and 18th May, 2018.The purpose of the meeting was to engage into high level (ministerial) discussions and endorsements towards the outcome of Energy Efficiency Working Group actions and deliberations. The high-level engagements by the ministers of member countries pushed forward joint collaboration and the knowledge sharing in the field of energy efficiency as well as Renewable energy programmes.

In continuation to the first and second meeting of Energy Ministers held earlier, the 3rd Ministers meeting was hosted by South Africa in Gauteng Province in the city of Johannesburg during 28-29th June, 2018.

Further, the Senior Officers meeting in connection with 4th meeting of BRICS Energy Ministers was held on 8th November, 2019 in Brasilia, Brazil.

Thereafter a BRICS Senior Officials Meeting (SOM) was held at Moscow, Russia on 20th – 21st February, 2020 under Russian Presidency to take forward the BRICS Energy Research Cooperation (ERCP) Terms of Reference (ToR) which was finalised during the last BRICS Energy Ministers meeting held at Brasillia, Brazil on 11th November, 2019.

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.

6th Meeting of BRICS Ministers of Energy

Accordingly, India under its Chairship organized several meetings/workshops over the course of it's Presidency, namely the Workshop on Energy Efficiency & Clean Energy, First and Second Senior Energy Officials' Meeting, Working Group meeting on Energy Efficiency.

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 an in accordance with the Road map for BRICS energy cooperation up to 2025.

4. G20 (Group-20) Energy Transition working Group

The G20, or Group of 20, is the main international forum for economic, financial and political cooperation: it addresses the major global challenges and seeks to generate public policies that resolve them. It is made up of the European Union and 19 countries: Germany, Saudi Arabia, Argentina, Australia, Brazil, Canada, China, South Korea, United States, France, India, Indonesia, Italy, Japan, Mexico, United Kingdom, Russia, South Africa and Turkey. Together, the G20 members represent 80% of the global GDP, 60% of the world population and 75% of global exports.

Italy assumed the rotating Presidency of the G20 for the period of 1st December, 2020 to 30th November, 2021. The approach of the G20 Italian Presidency hinges around “3 Ps”: People, Planet, and Prosperity, underlining, at the same time, the strategic nexus between energy and climate sectors, to accelerate the clean energy transition and to halt the climate change The Energy Transition Working Group and the Climate Sustainability Working Group work side by side with an objective to capitalise on the clear synergies existing between the agendas of the two Working Groups, allowing for both common meetings and parallel streams. The G20 presidency outlines priority areas and accordingly the Italian presidency has circulated the following priority areas prior to the first meeting:

- foster the role played by sustainable, resilient and smart cities, for a future with net-zero emissions,
- advance towards a sustainable and green recovery, seizing the opportunities offered by innovative energy technological solutions,
- make use of the opportunities offered by the COVID-19 crisis to accelerate the alignment of global capital flows towards a green transition and energy inclusivity.

G20 Indonesia Presidency in 2022 is eager to set its priorities through three pillars on global health, digital economic transformation, and energy transitions envisaging more actionable results. These intentions are translated from the Presidency's main theme "Recover Together, Recover Stronger." Energy transition pillars acknowledges several emerging and challenging situations. As the world is progressing towards a more sustainable mindset and behaviors in its development pathways, energy transitions play a key role for efforts in climate mitigation and reducing carbon emission. The international communities have also addressed larger attentions for scaling up clean power generation and energy efficiency to achieve sustainable recovery.

The COVID-19 pandemic has significantly impacted a wide range of sectors and even caused the global economic recession, as well as shaking up the global energy market. The needs to accelerate the progress on global target of energy access, mainly clean cooking and electricity, always be in place. The pandemic also creates a massive setback to the progress made in achieving the goals of the 2030 Agenda. The UN Tracking 5067 Report (2021) has predicted that global population without adequate access to clean cooking will rise to around 2.6 billion, while 750 million of people will be living without electricity, unless progressive policy actions are made to reverse it.

5. United Nations Development Program (UNDP)

The United Nations Development Programme (UNDP) is the United Nations' global development network. It advocates for change and connects countries to knowledge, experience and resources to help people build a better life for themselves. It provides

expert advice, training and grants support to developing countries, with increasing emphasis on assistance to the least developed countries. It promotes technical and investment cooperation among nations.

The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. The GEF unites 183 countries in partnership with international institutions, civil society organizations (CSOs), and the private sector to address global environmental issues while supporting national sustainable development initiatives. An independently operating financial organization, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, persistent organic pollutants (POPs), mercury, sustainable forest management, food security, sustainable cities.

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.

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. 1st 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 ₹2.28 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 2021-22. The total of BEE Corpus Fund along with this addition stands to ₹ 95.00 crore as on 31.0 3.2022.

3.2 Summary of the Financial Results

During the financial year 2021-22, Bureau had earned ₹424.00 lakhs as interest on Corpus Fund of ₹50 crore invested with M/s. NTPC Ltd. and ₹227.60 lakhs as interest on additional Corpus Fund of ₹45.00 crore invested with Nationalized Bank. Further, the Bureau also earned ₹76.82 lakhs from the fee charged from the candidates for the 21st National Certification Examination for Energy Managers & Energy Auditors. The expenditure of the BEE on Establishment, Administration expenses, Non-Recurring and Project expenses had been ₹1,207.23 lakhs, ₹159.51 lakhs, ₹43.38 lakhs and ₹1.62 lakhs respectively. Further, an expenditure of ₹246.84 lakhs was incurred towards the 21st National Certification Examination for Energy Managers & Energy Auditors. The excess expenditure over income of ₹442.04 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

02 Joint Directors appointed w.e.f. 30.12.2021, 01 Accountant appointed w.e.f. 17.09.2021, 01 Steno appointed w.e.f. 29.12.2021. 04 Consultants appointed during Financial Year 2021-22: 01 Consultant (Petrochemical), 01 Consultant (Petroleum), 01 Consultant (Banking including loan & investment) and 01 Consultant at MoP.

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 2022

1. We have audited the attached Balance Sheet of Bureau of Energy Efficiency (BEE), New Delhi as at 31 March 2022, the Income & Expenditure Account/Receipts & 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 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 Report/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, evidences supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principals 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 & Expenditure Account/Receipts & 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. Income and Expenditure Account

Other Administrative Expenses (Schedule-21): ₹159.50 lakh

BEE has booked an amount of ₹77.88 lakh paid a consultancy charges under S&L scheme in respect to EV Charging Infrastructure and Electric Vehicles which is not related to the S&L scheme. This should have been accounted for as under:

- ₹12.98 lakh pertaining to the period from February 2021 to March 2021, as Prior Period expenses.
- ₹64.90 lakh pertaining to the period from April 2021 to January 2022, as current year expenses.

Thus, it has resulted into understatement of 'Earmarked/Endowment Funds' (Schedule-3) by an amount of ₹77.88 lakh apart from understatement of 'Other Administrative Expenses' (Schedule-21) by ₹64.90 lakh, 'Other Administrative Expenses etc.' (Prior Period) by ₹12.98 lakh.

B. Grants-in-Aid

Out of Grants-in-aid of ₹155.82 crore for the period 2021-22 BEE utilized and amount of ₹98.44 crore leaving an unutilized amount of ₹57.38 crore as on 31 March 2022.

C. Management Letter

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

v. Subject to our observation 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 explanation given to us, the said financial statements read together with the Accounting Policies and Notes to Accounts and subject to matters stated above and other matter mentioned in the Annexure-I to this Separate Audit Report give a true and fair view in conformity with accounting principals generally accepted in India.

a) In so far as it relates to the Balance Sheet, of the state of affairs of Bureau of Energy Efficiency, New Delhi as at 31 March 2022 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

Sd./-
(Sai Ahlladini Panda)
Principal Director of Audit (Energy),
New Delhi

Place: New Delhi
Date: 31 October, 2022

Annexure-I

1	Adequacy of Internal Audit System	BEE is not having Internal Audit Wing. Internal Audit of BEE is being conducted by the Principal Accounts Office of the Ministry of Power (MoP). However, Internal Audit of BEE for the year 2021-22 has not yet been conducted. Further, various old observations are pending for settlement since long.
2	Adequacy of Internal Control System	Internal Financial Control mechanism for monitoring receipts and making payments and accounting thereof is commensurate with the size and nature of activities of BEE. However, Internal Control System in BEE needs to be strengthened for the submission of Utilization Certificates by State Designated Agencies.
3	Systems of Physical Verification of Assets	Physical verification of the Fixed Assets for the year 2021-22 has been carried out.
4	System of Physical Verification of Inventory	There was no inventory of consumable items of store held in stock as on 31st March, 2022.
5	Regularity in payment of Statutory dues	BEE is regular in payment of Statutory Dues.
6	Significant risk to financial reporting observed during the course of audit	As per observation included in SAR.
7	Details of loss of cash or government property due to theft, misappropriation, fraud and embezzlement etc. during the year	Management certified that no such case was noticed/reported during the year.

Principal Director of Audit (Energy)

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

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

BALANCE SHEET AS AT 31ST MARCH, 2022

(Amount - ₹)

CORPUS FUND AND LIABILITIES	Schedule	Current Year	Previous Year
ENERGY CONSERVATION FUND	1A	6,24,17,67,746	5,60,54,89,087
OTHERS - PRGFEE & VCFEE FUND	1B	-	1,72,32,76,254
RESERVES AND SURPLUS	2	-	-
EARMARKED/ENDOWMENT FUNDS	3	65,88,82,104	85,63,63,726
SECURED LOANS AND BORROWINGS	4	-	-
UNSECURED LOANS AND BORROWINGS	5	-	-
DEFERRED CREDIT LIABILITIES	6	-	-
CURRENT LIABILITIES AND PROVISIONS	7	23,93,91,818	17,01,46,736
TOTAL		**7,14,00,41,668**	**8,35,52,75,803**
ASSETS			
FIXED ASSETS	8	1,60,74,602	1,66,97,399
INVESTMENTS - FROM EARMARKED/ENDOWMENT FUNDS	9	95,00,00,000	6,42,98,47,600
INVESTMENTS - OTHERS	10	-	-
CURRENT ASSETS, LOANS, ADVANCES ETC.	11	6,17,39,67,066	1,90,87,30,804
MISCELLANEOUS EXPENDIUTRE		-	-
(to the extent not written off or adjusted)			
TOTAL		**7,14,00,41,668**	**8,35,52,75,803**
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

Date : 21st June, 2022
Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Rakesh Kumar Rai
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, 2022

(Amount - ₹)

	Schedule	Current Year	Previous Year
INCOME			
Income from Services	12	-	-
Grants/Subsidies	13	-	-
Fees/Subscriptions	14	80,65,217	2,61,84,423
Income from Investments (Income on Invest from earmarked/endow. Funds transferred to Funds)	15	6,51,60,239	6,93,25,134
Income from Royalty, Publication etc.	16	-	-
Interest Earned (Net)	17	4,49,48,654	5,07,18,241
Other Income	18	9,10,780	9,58,447
Increase/(decrease) in stock of Finished goods and works-in-progress	19	-	-
TOTAL (A)		**11,90,84,890**	**14,71,86,245**
EXPENDITURE			
Establishment Expenses	20	12,07,23,508	9,88,19,705
Other Administrative Expenses etc.	21	1,59,50,953	1,14,91,225
Other Expenses (Project Expenses)	21	2,48,47,073	56,70,419
Expenditure on Grants & Subsidies etc.	22	-	-
Interest	23	-	-
Depreciation	8	16,36,157	18,91,683
Loss on Sale of Fixed Assets	8	1,32,022	29,325
TOTAL (B)		**16,32,89,713**	**11,79,02,357**
Balance being excess Income over Expenditure (A-B)		**-4,42,04,823**	**2,92,83,888**
Transfer to Special Reserve		-	-
Transfer to/from General Reserve		-	-
BALANCE BEING (DEFICIT) CARRIED TO CORPUS/ CAPITAL FUND		**-4,42,04,823**	**2,92,83,888**
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT, LIABILITIES AND NOTES ON ACCOUNTS	25		

Date : 21st June, 2022
Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Rakesh Kumar Rai
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, 2022

RECEIPTS	Details	Current Year	Previous Year	PAYMENTS	Details	Current Year	Previous Year
			(Amount - ₹)				(Amount - ₹)
I. Opening Balances				**I. Expenses**			
a) Cash in Hand	-		2,430	a) Establishment Expenses (Schedule 20)	11,97,86,381		9,95,25,548
b) Bank Balances (Schedule - 11)				b) Administrative Expenses (Schedule 21)	1,85,21,265	13,83,07,646	1,18,02,573
i. Savings Accounts	2,38,86,01,039		12,54,37,744				
ii. Deposit Accounts	4,00,63,66,176		76,65,70,803				
iii. Savings Accounts - Plan Scheme	80,58,02,106	7,20,07,69,321	1,18,29,61,713	**II. Payments made against funds for various projects** (Schedule 21)		1,86,65,69,027	1,09,78,96,374
II. Grants Received (Schedule - 3)				**III. Investments and deposits made**			
From Government of India (Continued Scheme 2017-20)				i) Saving A/c - (PRGFEE) (Schedule - 9)			15,94,29,502
BEE				ii) Saving A/c - (VCFEEE) (Schedule - 9)			2,08,54,160
i. Energy Conservation Building Codes (ECBC)	25,00,00,000		10,00,00,000	iii) Saving A/c - (Standard & Labelling Fee) (Sch. - 9)	-	-	76,14,83,024
ii. Strengthening of State Designated Agencies (SDA)	55,00,00,000		30,00,00,000				
iii. State Energy Conservation Fund (SECF)	6,00,00,000		6,00,00,000				
iv. Designated Consumers and Small Medium Enterprises (SME)	5,00,00,000		5,00,00,000	**IV. Expenditure on Fixed Assets & Capital Work in Progress**			
v. Agriculture Demand Side Management (Ag DSM)	7,82,00,000		5,00,00,000	Purchase of Fixed Assets including S&L		66,30,077	56,15,488
vi. Municipal Demand Side Management (Mu DSM)	7,00,00,000		-	Check Testing Equipments (Schedule - 8)			
vii. Capacity Building of DISCOMs	10,00,00,000		-				
				V. Refund of surplus money/loans			
EC				i) Surplus/Interest of Grants refunded to MOP/GOI	5,60,04,640		2,06,43,390
i. Energy Conservation Awareness	20,00,00,000		5,00,00,000	ii) Unspent Grant refunded to MOP/GOI	4,06,66,114		
ii. National Mission on Enhanced Energy Efficiency	20,00,00,000	1,55,82,00,000	-	(BLY, SEEP & WB) (Schedule - 3 & 7)			
OTHERS (Schedule - 3)				iii) PRGFEE (Schedule - 1)	1,17,60,96,977		
i. Standard & Labeling (S&L)	-	-	6,76,25,017	iv) VCFEEE (Schedule - 1)	51,21,79,276	1,78,49,47,007	
III. Income on Investments/Other Receipts				**VI. Other Payments**			
a) i. Earmarked Funds (Corpus-BEE) (Schedule - 15)	4,24,00,000		4,24,00,000	i) PRGFEE (Schedule - 1)	-		4,39,352
ii. Earmarked Funds (Corpus-NMEEE) (Schedule - 15)	2,53,05,855		3,12,53,815	ii) Standard & Labeling Programme(S&L) (Sch.-1)	-	-	6,76,25,017
iii. PRGFEE (Schedule - 1)	-		5,01,58,604				
iv. VCFEE (Schedule - 1)	-		2,08,54,160				
v. E-Certs Fee (Schedule - 3)	75,28,349	7,52,34,204	-	Deposits (Assets) (Schedule - 11)			
b) Earmarked Funds				New Delhi Municipal Council		-	1,09,600
BEE							
i. Energy Conservation Building Codes (ECBC)	10,06,867		46,80,281				
ii. Strengthening of State Designated Agencies (SDA)	7,76,442		25,91,127				
iii. State Energy Conservation Fund (SECF)	98,926		14,29,056	Other Advances (Assets) (Schedule - 11)			
iv. Small Medium Enterprises (SME)	17,23,028		24,02,402	Assistant Director of Estates	-		4,18,200
v. Agriculture Demand Side Management (Ag DSM)	-		24,037	ITDC Ltd., Ashok Hotel	-		33,26,270
vi. Municipal Demand Side Management (Mu DSM)	15,139		86,001	National Productivity Council	-	-	94,36,436
vii. Capacity Building of DISCOMs	3,11,563	39,31,965	30,28,447				
C/F		**8,83,81,35,490**	**2,91,15,05,637**	**C/F**		**3,79,64,53,757**	**2,25,86,04,934**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

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

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST MARCH, 2022

RECEIPTS	Details	Current Year	(Amount - ₹) Previous Year	PAYMENTS	Details	Current Year	(Amount - ₹) Previous Year
B/F		**8,83,81,35,490**	**2,91,15,05,637**	**B/F**		**3,79,64,53,757**	**2,25,86,04,934**
EAP				Other Receivables (Assets) (Schedule - 11)			
I. BEE-GEF-WB-MSME Project	-		1,28,966	Confederation of India Industry	-		55,000
EC				Indialdeas.com Limited (Bill Desk)	138		
i. Energy Conservation Awareness	22,19,723		1,31,15,599	National Project Construction Corporation (NPCC)	1,25,419	1,25,557	
ii. National Mission on Enhanced Energy Efficiency	74,81,943	97,01,666	2,76,98,735				
				Security Deposit & Performance Security (Schedule - 7)			
IV. Interest Received				AEEE Consultancy	1,48,900		-
a) On Bank deposits (Schedule - 11 & 17)	5,14,61,284		5,91,51,599	Bhagwati Technologies & Energy Conservation Pvt. Ltd.	45,600		-
b) On Bank deposits (Standard & Labelling) (Schedule - 1 & 11)	14,08,87,957		22,19,04,822	Confederation of India Industry	-		2,50,000
c) Saving Account (Schedule - 17)	8,88,725		1,51,690	Darashaw & Co.	-		1,00,000
d) PRGFEE (Schedule - 1)	76,38,619		-	Dolphine Printo-Graphics	-		5,000
e) VCFEE (Schedule - 1)	46,60,760	20,55,37,345	-	Energy Auditor Services	59,500		-
				Federation of Indian Chambers of Commerce & Industry (FICCI)	-		2,40,000
V. Other Income				Global Canesugar Service	-		75,000
Miscllaneous Income (Processing Fee & RTI Fee) (Sch - 18)	9,10,780		10,26,769	K.P.Pest	-		13,000
Examination Fund-2020/21st Exam. (Schedule - 14)	76,82,477		2,61,45,423	Lloyd Insulation India Ltd.	56,160		-
RECPDCL - PRGFEE (Schedule - 1)	-		3,28,24,310	MCJ Energy Engineers	-		3,00,000
Energy Auditor Accreditation fee (Schedule - 14)	3,82,740	89,75,997	39,000	Munjal Trading	-		97,299
				Narinder Kumar & Sons	-		3,56,480
				National Productivity Council	1,15,000		1,80,000
VI. Any other receipts				National Council for Cement & Building Materials	42,000		-
Buliding Labeling Fee - ECBC (Schedule - 3)	1,00,000		2,00,000	NIN Energy India Pvt. Ltd.	80,000		-
Bid Processing, Application Fee & Others - PRGFEE (Sch - 1)	-		2,68,022	NITCON	53,100		-
TDS Refund on Escerts Registeration	-		3,53,056	Operative Save Urja	73,077		-
Sale of Fixed Assets	79,200		-	PGS Energy Services Pvt. Ltd.	1,10,663		-
Standard & Labelling (Regd./Label.Fee) (Schedule - 1 & 11)	70,74,64,165		60,72,03,219	Pricewaterhouse Coopers Pvt. Ltd. (Pwc)	1,84,055		1,84,055
RECPDCL - PRGFEE (Schedule - 9)	-	70,76,43,365	7,66,17,918	SCS Enterprises	-		5,00,000
				Steag Energy Service	-		1,63,100
Cheques Write Back due to Expiry				Tuv Sud South Asia Pvt. Ltd.	-		2,54,300
Unpaid Cheques (Schedule-7)				Vishal Taxi Service	-		4,50,000
Kajal Kumari Rajendra Prasad Lodhi	-		15,000	Standard & Labelling	2,50,000	12,18,055	19,25,000
PAO (Boc etc.)	9,27,947		4,99,401				
SDA-Jammu & Kashmir	55,45,940		2,57,004				
Senior Post Masters, Sarojini Nagar	14,921	64,88,808	-				
				EMD Refund (Other Current Liabilities-Schedule - 7)			
				Active Energy OPC Private Limited	-		50,000
Security Deposit & Performance Security (Schedule - 7)				Alaknanda Advertising Pvt. Ltd.	-		10,000
Active Energy OPC Private Limited	-		56,400	ARS Energy Auditors	1,78,900		-
Administrative Staff College of India (ASCI)	4,53,600		-	Atria Energy Services Pvt. Ltd.	50,000		-
AEEE Consultancy	-		1,48,900	Audittech Industrial Service Pvt. Ltd.	1,58,350		-
All India Institute of Local Self Government (AIILSG)	16,91,278		-	Confederation of India Industry	-		3,50,000
Amity Software Systems	4,77,000		-	Cyfuture India Pvt. Ltd.	7,50,000		-
ASSOCHAM	71,820			Deloitte Touche Tohmatsu India	-		5,00,000
Audittech Industrial Services Pvt. Ltd.	31,200		-	Earthood Services Pvt. Ltd.	50,000		-
Bhagwati Technologies & Energy Conservation Pvt. Ltd.	-		45,600	Environmental Design Solutions Pvt. Ltd.	-		5,00,000
Crayons Advertising Pvt. Ltd.	2,91,450			Federation of Indian Chambers of Commerce & Industry (FICCI)	-		5,50,000
Crux Management Services Pvt. Ltd.	-		5,00,000	Global Canesugar Service	-		50,000
D2O Services LLP	7,61,145		-	ICF Consulting India Pvt. Ltd.	-		4,40,000
Design 2 Occupancy Services LLP	26,460		-	IDBI Intech	-		50,000
Deloitte Touche Tohmatsu India	5,69,247		-	Invicta Advertising	-		10,000
Development Energy Services Ltd. (DESL)	1,86,650		-	Kerala State Productivity Council	94,500		-
ELA Green	2,38,080		-	KPMG Advisory Services Pvt. Ltd.	-		2,00,000
Energy Auditor Services	-		59,500	Lloyd Insulation India Ltd.	1,00,000		-
Energy Solution Company	94,848		1,24,080	MCJ Energy Engineers	-		50,000
Ernst & Young	-		6,60,000	MITCON	-		1,00,000
Federation of Indian Chambers of Commerce & Industry (FICCI)	45,000		-	MSME Technology Development	-		1,00,000
GEED	5,79,840		-	Munjal Trading Company	-		25,000
Green Tree Building Energy	7,25,855		-	National Institute of Secondary Steel Technology (NSST)	1,00,000		-
Green Tree Global	2,36,700	64,80,173	-	National Productivity Council	50,000	15,31,750	6,00,000
C/F		**9,78,29,62,844**	**3,98,07,00,650**	**C/F**		**3,79,93,29,119**	**2,26,73,38,168**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

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

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST MARCH, 2022

			(Amount - ₹)				(Amount - ₹)
RECEIPTS	**Details**	**Current Year**	**Previous Year**	**PAYMENTS**	**Details**	**Current Year**	**Previous Year**
B/F		**9,78,29,62,844**	**3,98,07,00,650**	**B/F**		**3,79,93,29,119**	**2,26,73,38,168**
Security Deposit & Performance Security (Schedule - 7) (B/F)				EMD Refund (Other Current Liabilities-Schedule - 7) (B/F)			
Katyani Energy Solution	-		53,673	National Council for Cement & Building Materials (NCCBM)	50,000		-
Legacy Law Offices	14,725		-	NIN Energy India Pvt. Ltd.	50,000		-
Lloyd Insulation India Ltd.	-		56,160	Nirman Advertising Pvt. Ltd.	-		10,000
LEAD Consultancy & Engineering Services	5,59,440		-	NITCON	-		1,00,000
MCJ Energy Engineers	1,35,000		-	NITRA	-		1,00,000
Mitcon Consultancy & Engineering Services Ltd. (MITCON)	50,243		-	Pricewaterhouse Coopers Pvt. Ltd. (Pwc)	50,000		-
Munjal Trading Company	20,000		-	Space 4 Business Solutions	-		50,000
Namdhari ECO Energies	-		1,07,638	The Energy Research Institute (TERI)	-		6,00,000
National Council for Cement & Building Materials	-		42,000	Tuv India Pvt. Ltd.	50,000	2,00,000	50,000
National Productivity Council	-		1,00,000				
NIN Energy India Pvt. Ltd.	-		80,000				
NITCON	59,400		53,100				
NITRA	-		2,45,000				
Operative Save Urja	1,16,511		1,79,522				
Padmashtdal Energy Services Pvt. Ltd.	36,900		-				
Pest Control Advisers	-		2,550				
PGS Energy Services Pvt. Ltd.	-		1,10,663				
Pricewaterhouse Coopers Pvt. Ltd. (Pwc)	9,01,026		3,59,055				
RV Solutions Pvt. Ltd.	-		76,346				
SIRI Energy	17,640						
The Energy Research Institute (TERI)	5,93,446		12,49,600				
Vishal Taxi Service	-	25,04,331	3,00,000				
Security Deposit (Liabilities)				Other Payments			
Standard & Labeling (S&L) (Schedule - 7)		81,00,000	86,25,000	Unpaid Cheques (Schedule-7)			
				Rana Motors Pvt. Ltd.	-		18,936
EMD Deposit (Other Current Liabilities-Schedule - 7)				SDA-Jammu & Kashmir	-	-	40,49,760
ARS Energy Auditors	-		50,000				
Central Power Research Institute	-		25,000				
Confederation of India Industry	1,00,000		50,000				
Delhi Test House Sonipat	-		25,000				
Earthood Services Pvt. Ltd.	-		50,000				
Enzen Global Solutions Pvt. Ltd. (EGSPL)	50,000		-				
Electrical Research & Development Association (ERDA)	-		25,000				
Federation of Indian Chambers of Commerce & Industry (FICCI)	1,00,000		-				
ICF Consulting India Pvt. Ltd.	50,000		-				
Intertek India Pvt. Ltd.	-		25,000				
KPMG Advisory Services Pvt. Ltd.	50,000		-				
Lloyd Insulation India Ltd.	-		1,00,000				
Mitcon Consultancy Services	50,000		-				
National Council for Cement & Building Materials	-		50,000				
Novelty Flowerist	3,800		-				
Pricewaterhouse Coopers Pvt. Ltd. (Pwc)	-		1,50,000				
Rina Consulting SPA	50,000		-				
Rolleract Press Services	-		5,000				
Saicom Infotech Pvt. Ltd.	3,000		-				
Shiva Printers	2,000		-				
Siri Energy & Carbon Advisory Services Pvt. Ltd.	50,000		-				
S.S. Traders	2,000	5,10,800	-				
C/F		**9,79,40,77,975**	**3,99,31,20,957**	**C/F**		**3,79,95,29,119**	**2,27,23,16,864**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

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

RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST MARCH, 2022

			(Amount - ₹)				(Amount - ₹)
RECEIPTS	**Details**	**Current Year**	**Previous Year**	**PAYMENTS**	**Details**	**Current Year**	**Previous Year**
B/F		**9,79,40,77,975**	**3,99,31,20,957**	**B/F**		**3,79,95,29,119**	**2,27,23,16,864**
EMD Refund				**VII. Closing Balances (Schedule - 11)**			
(Other Current Liabilities-Schedule - 7) (B/F)							
Steag Energy Service	-		50,000				
The National Industries Corporation Ltd.	-		25,000	a) Cash in Hand	-	-	-
TUV SUD	-		1,00,000	b) Bank Balances			
URS Verification	-	-	50,000	i) Savings Accounts	67,76,87,785		6,08,65,091
				ii) Deposit Accounts	4,69,98,83,771		85,42,54,524
				iii) Savings Accounts - Plan Scheme	61,70,55,720	5,99,46,27,276	80,58,02,106
Other Receivables (Assets) (Schedule- 11)							
Confederation of India Industry	55,000		-				
Hemendra Kumar	-		1,17,628				
Milind B. Deore	10,500		-				
Senior Post Masters, Sarojini Nagar	12,920	78,420	-				
TOTAL		**9,79,41,56,395**	**3,99,32,38,585**	**TOTAL**		**9,79,41,56,395**	**3,99,32,38,585**

Date : 21st June, 2022
Place : New Delhi

Hemendra Kumar
Finance & Accounts Officer

Rakesh Kumar Rai
Secretary

Abhay Bakre
Director General

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST March, 2022

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		45,00,00,000	
	95,00,00,000		95,00,00,000	
Add: Addition during the year	-	95,00,00,000	-	95,00,00,000
2. Standard & Labeling Fee (S&L)				
Opening balance brought forward	3,85,27,50,772		3,15,21,11,652	
Less: Fund transferred to Scheme during the year	17,40,93,826		6,76,25,017	
Add: Addition during the year	70,74,64,165		60,72,03,219	
Add: Interest during the year	15,94,13,131	4,54,55,34,242	16,10,60,918	3,85,27,50,772
3. Building Labeling Fee				
Opening balance brought forward	56,00,000		54,00,000	
Addition during the year	-		2,00,000	
Transfered to Schedule-3	56,00,000	-	-	56,00,000
(Refer S.No.11 of Schedule-25)				
4. E-Certs Trading Fee				
Opening balance brought forward	66,99,988		63,46,932	
Addition during the year	-		3,53,056	
Transfered to Schedule-3	66,99,988	-	-	66,99,988
(Refer S.No.11 of Schedule-25)				
5. Opening Balance of Excess of Income over Expenditure	79,04,38,327		76,11,54,439	
Balance transferred from the Income & Expenditure Account	-4,42,04,823	74,62,33,504	2,92,83,888	79,04,38,327
Total - 1A		**6,24,17,67,746**		**5,60,54,89,087**
B. OTHERS - PRGFEE & VCFEE FUND				
1. PRGFEE				
Opening balance brought forward	1,21,10,96,978		1,04,15,80,981	
Less: Expenditure during the year	-		4,39,352	
Less: Amount refunded to MoP	1,17,60,96,977		-	
Add: Addition during the year	-		7,68,85,940	
Add: Interest during the year (previous year interest includes interest received from RECPDCL)	76,38,619		9,30,69,409	
Less: Amount refundable to MoP	4,26,38,620	-	-	1,21,10,96,978
(Refer S.No.7 of Schedule-25)				
2. VCFEE				
Opening balance brought forward	51,21,79,276		48,78,44,225	
Less: Amount refunded to MoP	51,21,79,276		-	
Add: Interest during the year	46,60,760		2,43,35,051	
Less: Amount refundable to MoP	46,60,760	-	-	51,21,79,276
(Refer S.No.7 of Schedule-25)				
Total - 1B		**-**		**1,72,32,76,254**

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, 2022

SCHEDULE 3

(Amount - ₹)

EARMARKED FUNDS (Government Grants)	Promoting Energy Efficiency Activities in different sectors of India Economy																BEE-GEF-WB MSME Project (External Aided Project)		National Mission on Enhanced Energy Efficiency (NMEEE)		Total	
	Strengthening of State Designated Agencies for Energy Efficiency				Demand Side Management (Agriculture, Municipal & SME)						Energy Efficiency in Small and Medium Enterprises (SMEs)		Standards, Codes & Labelling for Appliances, Buildings & Energy Efficiency Research Centre		Energy Conservation Awareness, Awards & Painting Competition Scheme							
	SDA Strengthening Programme (SDA)		Contribution to State Energy Conservation Fund (SECF)		Contribution to State Energy Conservation Fund (SECF)		Municipal Demand Side Management (Mu DSM)		Capacity Building of DISCOMS				Energy Conservation Codes Existing Buildings (ECBC)									
	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	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
a) **Opening balance**	11222198	15511074	1429056	20223775	350626	1079766	1346148	1679125	5319761	96923122	81787595	43581433	89245867	157161188	208929610	274376005	1885010	2661745	411527566	561691517	813043437	1174888750
b) **Additions during the year:**																						
i. Donations/grants	550000000	300000000	60000000	60000000	78200000	50000000	70000000	-	100000000	-	50000000	50000000	250000000	100000000	200000000	50000000	-	-	200000000	-	1558200000	610000000
ii. Income from investments made on account of funds	751620	2591127	95764	1429056	-	24037	14655	86001	301603	3028447	1667945	2402402	828505	4680281	2148760	13115599	-	128966	7824779	28518724	13633631	56004640
iii. Other additions (sale of assets)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21546	-	21547	-
TOTAL (a+b)	**561973819**	**318102201**	**61524820**	**81652831**	**78550626**	**51103803**	**71360803**	**1765126**	**105621364**	**99951569**	**133455540**	**95983835**	**340074372**	**261841469**	**411078370**	**337491604**	**1885010**	**2790711**	**619373891**	**590210241**	**2384898615**	**1840893390**
c) **Utilisation/Expenditure towards objectives of funds**																						
i. **Capital Expenditure**																						
- Fixed Assets	-	-	-	-	-	-	-	-	-	-	46873	-	24987	-	-	-	-	-	3804401	1653498	3876261	1653498
- Check Testing Equipments (Stock in Hand)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	46873	-	24987	-	-	-	-	-	3804401	1653498	3876261	1653498
ii. **Revenue Expenditure**																						
- Salaries, Wages and allowances etc.	2613931	2300947	-	-	1229220	1120080	-	-	424222	360254	1091417	914503	998040	910440	4399752	3764919	-	164386	6019497	4618372	16776079	14153901
- Other Administrative/Project expenses	486717540	301791905	20000000	80000000	77255524	49264655	70927783	15229	43167870	94001199	67597317	12229675	325839737	170588438	244061414	119635626	-	491534	332427277	163380903	1667994462	991399164
- Income from investments refunded to MOP	2591127	2787135	1429056	223775	24037	368442	86001	403749	3028447	270355	2402402	1052062	4680281	1096724	13115599	5161449	128966	249781	28518724	9021640	56004640	20635112
- Others (unspent Grant refunded to MoP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1756044	-	38910070	-	40666114	-
- Others (Sale of Assets - Refund to MOP)	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8262	-	8278
Total	491922598	306880003	21429056	80223775	78508781	50753177	71013784	418978	46620539	94631808	71091136	14196240	331518058	172595602	261576765	128561994	1885010	905701	405875568	177029177	1781441295	1026196455
TOTAL (c)	491922598	306880003	21429056	80223775	78508781	50753177	71013784	418978	46620539	94631808	71138009	14196240	331543045	172595602	261576765	128561994	1885010	905701	409679969	178682675	1785317556	1027849953
NET BALANCE AS AT THE YEAR END (a+b-c) (A)	70051221	11222198	40095764	1429056	41845	350626	347019	1346148	59000825	5319761	62317531	81787595	8531327	89245867	149501605	208929610	-	1885010	209693922	411527566	599581059	813043437
a) Income from fee																						
Opening Balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer from Schedule - 1	-	-	-	-	-	-	-	-	-	-	-	-	5600000	-	-	-	-	-	6699988	-	12299988	-
Additions during the year	-	-	-	-	-	-	-	-	-	-	-	-	100000	-	-	-	-	-	7751500	-	7851500	-
Total (a)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5700000**	**-**	**-**	**-**	**-**	**-**	**14451488**	**-**	**20151488**	**-**
b) Assets under Grant																						
i. **Opening balance of the assets**	32055	53415	-	-	-	-	22967	38278	22937	38228	22939	38232	-	-	-	-	-	-	3666884	2821807	3767782	2989960
ii. **Additions to the assets:**																						
Donations/grants	-	-	-	-	-	-	-	-	-	-	46873	-	24987	-	-	-	-	-	3804401	1653498	3876261	1653498
TOTAL (b)	**32055**	**53415**	**-**	**-**	**-**	**-**	**22967**	**38278**	**22937**	**38228**	**69812**	**38232**	**24987**	**-**	**-**	**-**	**-**	**-**	**7471285**	**4475305**	**7644043**	**4643458**
c) **Utilisation/Expenditure**																						
- Sale/ Loss on sale of fixed assets	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	737952	-	737969	-
- Other Administrative expenses (Depreciation)	12815	21360	-	-	-	-	9186	15311	9174	15291	27924	15293	4997	-	-	-	-	-	1928527	808421	1992623	875676
Total (c)	**12832**	**21360**	**-**	**-**	**-**	**-**	**9186**	**15311**	**9174**	**15291**	**27924**	**15293**	**4997**	**-**	**-**	**-**	**-**	**-**	**2666479**	**808421**	**2730592**	**875676**
NET BALANCE AS AT THE YEAR END (a+b-c) (B)	**19223**	**32055**	**-**	**-**	**-**	**-**	**13781**	**22967**	**13763**	**22937**	**41888**	**22939**	**5719990**	**-**	**-**	**-**	**-**	**-**	**19256294**	**3666884**	**25064939**	**3767782**
GRAND TOTAL (A+B)	**70070444**	**11254253**	**40095764**	**1429056**	**41845**	**350626**	**360800**	**1369115**	**59014588**	**5342698**	**62359419**	**81810534**	**14251317**	**89245867**	**149501605**	**208929610**	**-**	**1885010**	**228950216**	**415194450**	**624645998**	**816811219**

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, 2022

SCHEDULE 3

(Amount - ₹)

SCHEDULE 3 - EARMARKED FUNDS (OTHERS)	UNIDO-GEF-BEE PROJECT		STANDARD & LABELING PROGRAMME		Total	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
a) **Opening balance of the funds**	2,49,52,798	3,15,70,030	-	-	2,49,52,798	3,15,70,030
b) **Additiions to the Funds:**						
i. Donations/grants	-	-	17,40,93,826	6,76,25,017	17,40,93,826	6,76,25,017
ii. Prior period adjustment (add back)	52,73,730	-	-	-	52,73,730	-
iii. Other additions (Sale of assets)	666	-	326	-	992	-
TOTAL (a+b)	**3,02,27,194**	**3,15,70,030**	**17,40,94,152**	**6,76,25,017**	**20,43,21,346**	**9,91,95,047**
c) **Utilisation/Expenditure towards objectives of funds**						
i. **Capital Expenditure**						
- Fixed Assets	-	-	15,704	80,000	15,704	80,000
- Check Testing Equipments (Stock in Hand)	-	-	23,01,940	32,53,404	23,01,940	32,53,404
Total	**-**	**-**	**23,17,644**	**33,33,404**	**23,17,644**	**33,33,404**
ii. **Revenue Expenditure**						
- Salaries, Wages and allowances etc.	52,97,496	65,51,164	71,36,715	62,65,302	1,24,34,211	1,28,16,466
- Other Administrative/Project expenses	1,67,020	66,068	13,03,43,724	5,80,26,311	13,05,10,744	5,80,92,379
Expenditure as per MAC/GC Approval						
- Electric Vehicles	-	-	77,88,000	-	77,88,000	-
- CEM Voluntary Contribution	-	-	2,65,08,069	-	2,65,08,069	-
Total	54,64,516	66,17,232	17,17,76,508	6,42,91,613	17,72,41,024	7,09,08,845
TOTAL (c)	**54,64,516**	**66,17,232**	**17,40,94,152**	**6,76,25,017**	**17,95,58,668**	**7,42,42,249**
NET BALANCE AS AT THE YEAR END (a+b-c)	**2,47,62,678**	**2,49,52,798**	**-**	**-**	**2,47,62,678**	**2,49,52,798**
Assets under Grant						
a) **Opening balance of the funds**	80,920	1,19,663	1,45,18,789	1,16,98,181	1,45,99,709	1,18,17,844
b) **Additiions to the Funds:**						
i. Other additions/ Assets/ Funds transfer	-	-	15,704	1,20,000	15,704	1,20,000
ii. Check Testing Equipments (Stock in Hand)	-	-	23,01,940	32,53,404	23,01,940	32,53,404
TOTAL (a+b)	**80,920**	**1,19,663**	**1,68,36,433**	**1,50,71,585**	**1,69,17,353**	**1,51,91,248**
c) **Utilisation/Expenditure towards objectives of funds**						
i. **Capital Expenditure**						
- Fixed Assets	-	-	-	-	-	-
- Sale/ Loss on Sale of assets	22,805	-	11,153	77,986	33,958	77,986
Total	**22,805**	**-**	**11,153**	**77,986**	**33,958**	**77,986**
ii. **Revenue Expenditure**						
- Salaries, Wages and allowances etc.	-	-	-	-	-	-
- Other Administrative expenses						
Depreciation	23,245	38,743	3,48,245	4,74,810	3,71,490	5,13,553
Loss on revaluation of Check Testing Equipments	-	-	70,38,477	-	70,38,477	-
Total	**23,245**	**38,743**	**73,86,722**	**4,74,810**	**74,09,967**	**5,13,553**
TOTAL (c)	**46,050**	**38,743**	**73,97,875**	**5,52,796**	**74,43,925**	**5,91,539**
NET BALANCE AS AT THE YEAR END (B)	**34,870**	**80,920**	**94,38,558**	**1,45,18,789**	**94,73,428**	**1,45,99,709**
GRAND TOTAL (A+B)	**2,47,97,548**	**2,50,33,718**	**94,38,558**	**1,45,18,789**	**3,42,36,106**	**3,95,52,507**
				Schedule-3	**62,46,45,998**	**81,68,11,219**
				Others	**3,42,36,106**	**3,95,52,507**
				Total	**65,88,82,104**	**85,63,63,726**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST March, 2022

SCHEDULE 4

(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		**-**		**-**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST March, 2022

SCHEDULE 5 & 6 (Amount - ₹)

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	**-**	**-**

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

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2022

SCHEDULE 7 **(Amount - ₹)**

SCHEDULE 7 - CURRENT LIABILITIES AND PROVISIONS	Current Year		Previous Year	
A. CURRENT LIABILITIES				
Sundry Creditors				
Sundry Creditors (Others)		32,79,190		45,49,667
Security Deposit		2,61,44,316		1,81,27,867
Security Deposit (Standard & Labelling)				
Security Deposit (Standard & Labelling) - (Airconditioning)	1,39,50,000		1,33,50,000	
Security Deposit (Standard & Labelling) - (Lighting)	26,50,000		26,50,000	
Security Deposit (Standard & Labelling) - (Refrigeration)	1,07,00,000		1,01,00,000	
Security Deposit (Standard & Labelling) - (Transformers)	2,42,00,500		2,36,75,500	
Security Deposit (Standard & Labelling) - (Ballast)	2,25,000		2,25,000	
Security Deposit (Standard & Labelling) - (Ceiling Fan)	1,07,25,000		96,00,000	
Security Deposit (Standard & Labelling) - (Chiller)	8,50,000		7,50,000	
Security Deposit (Standard & Labelling) - (Computers)	16,00,000		14,25,000	
Security Deposit (Standard & Labelling) - (CTV)	1,13,50,000		1,00,75,000	
Security Deposit (Standard & Labelling) - (Deep Freezer)	4,25,000		2,00,000	
Security Deposit (Standard & Labelling) - (DG Set)	3,75,000		3,75,000	
Security Deposit (Standard & Labelling) - (Gas Stove)	20,05,000		20,05,000	
Security Deposit (Standard & Labelling) - (Geysers)	2,25,000		2,25,000	
Security Deposit (Standard & Labelling) - (Inverters - Acs)	1,08,000		1,08,000	
Security Deposit (Standard & Labelling) - (Inverters)	1,00,000		1,00,000	
Security Deposit (Standard & Labelling) - (LED Lamps)	76,00,000		66,25,000	
Security Deposit (Standard & Labelling) - (LPG Gas)	4,50,000		4,50,000	
Security Deposit (Standard & Labelling) - (Microwave Oven)	9,00,000		9,00,000	
Security Deposit (Standard & Labelling) - (Monoset Pump)	2,25,000		2,25,000	
Security Deposit (Standard & Labelling) - (Motors)	11,75,000		11,75,000	
Security Deposit (Standard & Labelling) - (Office Automation Products)	1,00,000		1,00,000	
Security Deposit (Standard & Labelling) - (Open Well Submersible Pump Set)	10,00,000		8,50,000	
Security Deposit (Standard & Labelling) - (Pump)	1,39,25,000		1,39,25,000	
Security Deposit (Standard & Labelling) - (Submersible Pump Set)	24,50,000		19,00,000	
Security Deposit (Standard & Labelling) - (TFL)	1,00,000		1,00,000	
Security Deposit (Standard & Labelling) - (TYRE)	2,00,000		-	
Security Deposit (Standard & Labelling) - (Washing Machine)	38,00,000		30,50,000	
Security Deposit (Standard & Labelling) - (Water Heater)	2,14,50,000	13,28,63,500	2,08,50,000	12,50,13,500
Duties & Taxes				
TDS Payabale	6,29,564		4,37,072	
GST Payabale	74,812	7,04,376	93,960	5,31,032
Other Current Liabilities				
Payabale to MoP (PRGFEE & VCFEE)	4,72,99,380			-
Payabale to Others	2,91,01,056	7,64,00,436		2,19,24,670
TOTAL (A)		**23,93,91,818**		**17,01,46,736**
B. PROVISIONS				
1. For Taxation		-		-
2. Gratuity		-		-
3. Superannuation/Pension		-		-
4. Accumulated Leave Encashment		-		-
5. Trade Warranties/Claims		-		-
TOTAL (B)		**-**		**-**
TOTAL (A+B)		**23,93,91,818**		**17,01,46,736**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2022

SCHEDULE 8 **(Amount - ₹)**

S. No.	SCHEDULE 8 - FIXED ASSETS DESCRIPTION	Rate of Depre-ciation	GROSS BLOCK					DEPRECIATION BLOCK					NET BLOCK	
			As on 01/04/21	Additions during the year	Sale	Adjustment	As on 31/03/22	As on 01/04/21	for the year	Sale	Adjustment	As on 31/03/22	As on 31/03/22	As on 31/03/21
BUREAU OF ENERGY EFFICIENCY														
(A)	**Tangible Assets**													
1	Land		-	-	-	-	-	-	-	-	-	-	-	-
2	Building		-	-	-	-	-	-	-	-	-	-		-
3	Furniture & Fixtures	10%	1,67,90,318	1,46,550	-	-	1,69,36,868	1,00,41,375	6,83,550	-	-	1,07,24,925	62,11,943	67,48,943
4	Office Equipments	15%	1,05,34,655	65,383	6,07,428	-	99,92,610	74,18,152	4,58,657	5,11,895	-	73,64,914	26,27,696	31,16,503
	Office Equipments	100%	-	87,249	-	-	87,249	-	87,249	-	-	87,249	-	-
5	Vehicle	15%	28,07,424	-	3,47,600	-	24,59,824	22,80,458	69,550	2,84,300	-	20,65,708	3,94,116	5,26,966
6	Computer/Peripherals	40%	1,90,07,487	94,908	1,30,19,436	-	60,82,959	1,83,33,884	2,77,599	1,29,92,377	-	56,19,106	4,63,853	6,73,603
	Computer/Peripherals	100%	-	52,028	-	-	52,028	-	52,028	-	-	52,028	-	-
(B)	**Intangible Assets**													
1	Computer - Software	40%	2,72,53,363	-	2,71,56,337	-	97,026	2,72,31,762	7,524	2,71,53,546	-	85,740	11,286	21,601
	TOTAL		**7,63,93,247**	**4,46,118**	**4,11,30,801**	**-**	**3,57,08,564**	**6,53,05,631**	**16,36,157**	**4,09,42,118**	**-**	**2,59,99,670**	**97,08,894**	**1,10,87,616**
	ASSETS UNDER GRANT													
(A)	**Tangible Assets**													
1	Land		-	-	-	-	-	-	-	-	-	-	-	-
2	Building		-	-	-	-	-	-	-	-	-	-	-	-
3	Furniture & Fixtures	10%	7,42,858	8,199	-	-	7,51,057	2,59,716	48,724	-	-	3,08,440	4,42,617	4,83,142
4	Office Equipments	15%	99,84,762	6,58,032	33,52,500	-	72,90,294	69,96,955	3,91,202	26,33,421	-	47,54,736	25,35,558	29,87,807
5	Vehicle	15%	-	-	-	-	-	-	-	-	-	-	-	-
6	Computer/Peripherals	40%	1,01,96,471	23,44,238	19,53,988	-	1,05,86,721	84,00,205	14,35,976	19,04,672	-	79,31,509	26,55,212	17,96,266
(B)	**Intangible Assets**													
1	Computer - Software	40%	1,08,23,178	8,81,496	85,55,949	-	31,48,725	1,04,80,610	4,88,211	85,52,417	-	24,16,404	7,32,321	3,42,568
	TOTAL		**3,17,47,269**	**38,91,965**	**1,38,62,437**	**-**	**2,17,76,797**	**2,61,37,486**	**23,64,113**	**1,30,90,510**	**-**	**1,54,11,089**	**63,65,708**	**56,09,783**
	GRAND TOTAL		**10,81,40,516**	**43,38,083**	**5,49,93,238**	**-**	**5,74,85,361**	**9,14,43,117**	**40,00,270**	**5,40,32,628**	**-**	**4,14,10,759**	**1,60,74,602**	**1,66,97,399**
	PREVIOUS YEAR		**10,28,74,147**	**62,15,906**	**9,49,537**	**-**	**10,81,40,516**	**8,89,24,431**	**33,32,891**	**7,62,226**	**51,979**	**9,14,43,117**	**1,66,97,399**	**1,39,49,716**

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

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2022

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		1,21,10,96,978
Bank of Baroda - VCFEE	51,21,79,276		51,21,79,276
Bank of Baroda - S&L Fee	3,75,65,70,969		3,75,65,71,346
	5,47,98,47,223		
Transferred to Schedule - 11	5,47,98,47,223	-	
TOTAL		**95,00,00,000**	**6,42,98,47,600**

(Amount - ₹)

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		**-**	**-**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2022

SCHEDULE 11 **(Amount - ₹)**

SCHEDULE 11- CURRENT ASSETS, LOANS, ADVANCES ETC.	Current Year		Previous Year	
A. CURRENT ASSETS:				
I. Cash-in-Hand	-	-	-	-
II. Bank Accounts				
a) With Scheduled Banks:				
- On Current Accounts				
BEE (UNIDO USD A/c - BoB, Delhi)	-		-	
- On Deposit Accounts				
FDRs with Scheduled banks - BEE	84,71,32,999		85,42,54,524	
FDRs with Scheduled banks - S&L {Transferred from Schedule-9}	3,85,27,50,772		-	
	4,69,98,83,771		85,42,54,524	
- On Savings Accounts				
BEE (Bank of Baroda Saving & Sweep A/c - BEE)	4,39,25,343		1,53,88,666	
BEE (Bank of Baroda Saving & Sweep A/c - S&L) {Transferred from Schedule-9}	57,80,78,732		-	
BEE (Bank of Baroda Saving & Sweep A/c - Plan Scheme)	61,70,55,720		80,58,02,106	
BEE (Bank of Baroda Saving & Sweep A/c - PRGFEE) {Transferred from Schedule-9}	4,26,38,620		-	
BEE (Bank of Baroda Saving & Sweep A/c - VCFEE) {Transferred from Schedule-9}	46,60,760		-	
BEE (Bank of Baroda Saving & Sweep A/c - Examination)	72,43,323		4,51,88,579	
BEE (Indian Overseas Bank , Chennai)	4,59,611		2,32,541	
BEE (Indian Overseas Bank Saving & Sweep A/c - Delhi)	6,81,396		55,305	1,72,09,21,721
	1,29,47,43,505	5,99,46,27,276		
III. Postage Stamps in hand		-		12,566
IV. Check Testing Equipment (S&L Project) {Refer S.No.12 of Schedule-25}		80,21,171		1,27,57,708
Total (11A)		**6,00,26,48,447**		**1,73,36,91,995**

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31ST MARCH, 2022

SCHEDULE 11 **(Amount - ₹)**

SCHEDULE 11- CURRENT ASSETS, LOANS, ADVANCES ETC.	Current Year		Previous Year	
B. LOANS, ADVANCES AND OTHER ASSETS:				
I. Other Advances				
Assitant Directorate of Estate	-		4,18,200	
Central Power Research Institute, Bangalore	6,76,872		6,76,872	
Conformity India International	10,00,000		10,00,000	
National Productivity Council, Chennai	-		94,36,436	
The Ashok - ITDC	-		33,26,270	
SGS India Pvt. Ltd.	10,00,000	26,76,872	10,00,000	1,58,57,778
II. Staff Advances				
Rashish Chauhan	-		27,420	
Shyam Sunder Goyal	-		200	
Vineeta Kanwal	5,89,856	5,89,856	-	27,620
III. Other Deposits (Security Deposits)				
Balmer Lawrie & Company Limited (Travel Agent)	2,00,000		2,00,000	
Bureau of Indian Standards (BIS - Membership Security Deposit)	10,000		10,000	
India Habitat Centre (Membership Security Deposit)	1,50,000		1,50,000	
Deposit with MTNL (PRI Connection)	21,000		21,000	
Deposit with Petrol-Pump (Luxmi Super Services)	10,000		10,000	
Deposit with NDMC (Go-Electric launch event)	-		1,09,600	
Security Deposit (Reliance Jio - 6 Nos. of Dongle)	6,000	3,97,000	6,000	5,06,600
IV. Income Accrued				
On Investments/Fixed Deposit Receipts				
i. BEE	3,81,50,681		4,55,52,036	
ii. NMEEE	1,37,80,589		1,63,26,205	
iii. S&L	11,46,20,920	16,65,52,190	9,60,95,746	15,79,73,987
V. Other Receivables				
BEE				
Confederation of India Industry	-		55,000	
Controller of Publications	3,47,000		-	
NPCC Ltd.	1,25,419			
Milind B. Deore	-		10,500	
POSOCO	1,00,540		1,00,540	
Senior Post Master	-		354	
TDS on E-Certs Fee	2,23,151		-	
TUV SUD	6,000		6,000	
	8,02,110		1,72,394	
Standard & Labeling (S&L)				
Bank of Baroda (Bill Desk)	138		-	
Future Retail Ltd.	500		500	
Johnson Electrical Appliances	1,000		1,000	
La Gajjar Machineries Pvt. Ltd.	59,470		59,470	
Oswal Pumps Pvt. Ltd.	2,000		2,000	
Rajeshwari Engineering Works	18,200		18,200	
Videocon Industries Ltd.	2,000		2,000	
Weather Makers	510		510	
	83,818	8,85,928	83,680	2,56,074
VI. Prepaid Expenses				
Prepaid Expenses (Airconditioner)	1,24,274		2,57,894	
Prepaid Expenses (Computer)	57,586		1,40,225	
Prepaid Expenses (Staff Car Insurance)	13,055		10,883	
Prepaid Expenses (Subscription - Swamy News)	1,003		1,003	
Prepaid Expenses (Telephone)	1,064		-	
Prepaid Expenses (Web Hosting Charges)	19,791	2,16,773	6,745	4,16,750
Total (11B)		**17,13,18,619**		**17,50,38,809**
Total (11A +11B)		**6,17,39,67,066**		**1,90,87,30,804**

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, 2022

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	**-**	**-**

(Amount - ₹)

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)

Name of Entity **BUREAU OF ENERGY EFFICIENCY**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2022

SCHEDULE 14 & 15 **Amount - ₹)**

SCHEDULE 14 - FEES/SUBSCRIPTION	Current Year	Previous Year
1. Entrance Fees	-	-
2. Annual Fees (National Level Certification Examination-2020 & 2021/21st Exam.)	76,82,477	2,61,45,423
3. Energy Auditor Accreditation Fees	3,82,740	39,000
Total	**80,65,217**	**2,61,84,423**

(Amount - ₹)

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	2,27,60,239	2,69,25,134	-	-
2. Dividends				
a) On Shares	-	-	-	-
b) On Mutual Fund Securities	-	-	-	-
3. Rents	-	-	-	-
4. Others	-	-	-	-
Total	**6,51,60,239**	**6,93,25,134**	**-**	**-**
TRANSFERRED TO EARMARKED/ENDOWMENT FUNDS	**-**	**-**		

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, 2022

SCHEDULE 16 & 17 **(Amount - ₹)**

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

(Amount - ₹)

SCHEDULE 17 - INTEREST EARNED		Current Year	Previous Year
1. On Term Deposits:			
a) With Scheduled Banks			
Interest Income - Bank of Baroda	4,23,32,300		4,86,13,624
Interest Income - Bank of Baroda (Examination - A/c)	17,27,629	4,40,59,929	18,84,605
b) With Non-Scheduled Banks		-	-
c) With Institutions		-	-
d) Others		-	-
2. On Saving Accounts:			
a) With Scheduled Banks			
Interest Received - IOB Bank, Chennai	10,166		6,707
Interest Received - IOB Bank, Delhi	6,13,652		35,328
Interest Received - Bank of Baroda, Delhi	2,51,021		1,03,686
Interest Received - Bank of Baroda, Delhi (Examination)	13,886	8,88,725	5,969
b) With Non-Scheduled Banks		-	-
c) Post Office Savings Accounts		-	-
d) Others		-	68,322
3. On Loans:			
a) Employees/Staff		-	-
b) Others		-	-
4. Interest on Debtors and Other Receivables		-	-
5. Interest on Gratuity Fund		-	-
Total		**4,49,48,654**	**5,07,18,241**

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, 2022

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	9,10,780	9,58,447
3. Others (Sundry balances write back)	-	-
Total	**9,10,780**	**9,58,447**

(Amount - ₹)

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]	**-**	**-**

(Amount - ₹)

SCHEDULE 20 - ESTABLISHMENT EXPENSES	Current Year		Previous Year	
	(I & E)	(R & P)	(I & E)	(R & P)
a) Salaries and Wages	10,20,31,275	10,20,09,225	7,95,49,883	7,93,79,649
b) Allowances and Bonus	44,41,236	49,22,986	33,36,805	33,36,805
c) EPF Charges	96,35,317	97,21,254	90,88,391	99,65,582
d) Others (Leave Salary)	4,36,157	4,36,157	3,59,478	3,59,478
e) Others (Pension Contribution)	9,56,754	9,56,754	8,96,115	8,96,115
f) Expenses on Employees' Retirement and Terminal Benefits (Gratuity)	7,45,151	2,14,091	14,53,049	14,53,049
g) Expenses on Employees' Retirement and Terminal Benefits (Leave Encashment)	10,38,062	1,76,211	18,53,162	18,53,162
h) Staff Welfare Expenses	14,39,556	13,49,703	22,82,822	22,81,708
Total	**12,07,23,508**	**11,97,86,381**	**9,88,19,705**	**9,95,25,548**

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, 2022

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	10,99,557	8,76,740	10,85,271	11,45,080
b) Vehicle Running and Maintenance	9,41,056	9,54,054	9,68,805	12,15,527
c) Postage, Telephone & Communication Charges	7,08,196	6,68,685	5,67,065	5,84,703
d) Printing & Stationery	9,87,639	9,88,350	7,28,328	7,32,028
e) Travelling and Conveyance Expenses	5,46,653	5,65,679	1,47,975	5,72,068
f) Expenses on Workshop, Seminar & Training Programme	8,21,716	7,59,048	2,23,364	2,18,806
g) Auditor Remuneration	12,12,640	2,90,880	6,86,400	6,06,000
h) Legal & Professional Charges	11,87,221	9,21,451	8,09,358	8,17,578
I) Advertisement and Publicty	8,38,390	9,02,613	2,16,053	1,51,830
j) Contribution to IEA (CEM)	-	20,08,853	20,08,853	-
k) Office Maintenance	9,54,460	9,22,635	7,83,244	7,67,474
l) Bank Charges	14,965	14,965	106	106
m) Prior Period Expenses	66,38,460	86,47,312	70,00,225	49,91,373
	1,59,50,953	**1,85,21,265**	**1,52,25,047**	**1,18,02,573**
Less: Expenditure claimed in previous year now corrected and transferred to fixed assets	-	-	37,33,822	-
TOTAL - A	**1,59,50,953**	**1,85,21,265**	**1,14,91,225**	**1,18,02,573**

(Amount - ₹)

SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES ETC.	Current Year		Previous Year	
	(I & E)	(R & P)	(I & E)	(R & P)
Project Expenditure - (BEE)				
National Level Certification Examination	2,46,84,673	1,26,29,349	56,48,019	67,64,859
Energy Auditors Accreditation	1,62,400	1,62,400	22,400	22,400
	2,48,47,073	1,27,91,749	56,70,419	67,87,259
Grants-in-Aid Projects (Ministry of Power)				
BEE				
Energy Conservation Building Codes (ECBC)	-	33,18,65,058	-	17,14,98,878
State Designated Agencies (SDA)	-	49,19,00,376	-	30,43,87,852
State Energy Conservation Fund (SECF)	-	2,14,29,056	-	8,00,00,000
Agriculture & Municipal Demand Side Management (Ag.DSM)	-	7,85,08,781	-	5,03,84,735
Municipal Demand Side Management (Mu.DSM)	-	7,10,13,784	-	15,229
Small Medium Enterprises (SME)	-	7,10,91,136	-	1,41,76,678
Capacity Building of DISCOMS	-	4,66,20,539	-	9,86,34,511
EC				
Energy Conservation Awareness (Awareness Campaign)	-	25,77,22,695	-	12,46,06,231
Nation Mission on Enhanced Energy Efficiency (NMEEE)	-	36,69,05,095	-	17,38,62,085
EAP				
BEE-GEF-WB-Project	-	1,28,966	-	6,55,920
	-	1,73,71,85,486	-	1,01,82,22,119
Project Expenditure - (OTHERS)				
UNIDO Project	-	6,41,314	-	65,72,287
Standard & Labelling (S&L)	-	17,19,55,118	-	6,63,14,709
	-	17,25,96,432	-	7,28,86,996
TOTAL - B	**2,48,47,073**	**1,92,25,73,667**	**56,70,419**	**1,09,78,96,374**
TOTAL - A+B	**4,07,98,026**	**1,94,10,94,932**	**1,71,61,644**	**1,10,96,98,947**

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, 2022

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	**-**	**-**

(Amount - ₹)

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, 2022

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 and Fixed Assets representing Grant-in-Kind.

6) ACCOUNTING FOR GRANTS AND REVENUE

Grants and Revenue including labeling fee received under Standard & Labeling 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, 2022

SCHEDULE 25 – NOTES ON ACCOUNTS

1) CCONTINGENT LIABILIES

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.7,45,151/- towards premium paid to LIC of India on account of Gratuity and Rs.10,38,062/- 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 31.03.2022 are as follows:

i. Gratuity fund - Rs.1,45,55,847/- (Previous year - Rs.1,46,99,684/-)

ii. Group Leave Encashment Schemes - Rs.1,27,44,992/- (Previous year - Rs.1,19,95,412/-)

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) Management Advisory Committee of BEE Short-closed both the funds i.e., PRGFEE and VCFEE. Accordingly, BEE has returned both the funds amounting to Rs.168,82,76,253/- (PRGFEE – Rs.117,60,96,977/- & VCFEE - Rs.51,21,79,276/-) along-with interest to Ministry. The balance of Rs.4,72,99,380/- (PRGFEE – Rs.4,26,38,620/- & VCFEE - Rs.46,60,760/-) is payable to Ministry as on 31.03.2022. The same has been shown in Schedule-7 under 'Other Current Liabilities'.

8) During the year an amount of Rs.86,68,77,296/- (Schedule-1) (Previous year – Rs.76,82,64,137/-) has been received by the Bureau as labeling fee and interest thereon through the implementation of Standard & Labeling Programme under clauses (a), (b) and (d) of Section 14 of the EC Act. Bureau has considered the labeling fee under Standard & Labeling Programme (S&L) on receipt basis to maintain the uniformity.

9) The Standard & Labelling Programme proposed for 12th Plan was approved during the financial year 2014-15. In the EFC Meeting, it was decided that all expenditure pertaining to the scheme to be borne out of income generated in the scheme i.e., "Energy Conservation Fund". Accordingly, an amount of Rs.17,40,93,826/- (Previous year – Rs.6,76,25,017/-) was transferred from Energy Conservation Fund" (Shedule-1) to Schedule-3 to meet the expenditure of the Scheme during the year.

10) 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 27.05.2016. 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.

11) The fee received from POSOCO and the fee received under Building Labeling was being shown in Schedule-1. During the audit of 2020-21, CAG advised to shift this amount to Schedule-3 as the same is part of the Scheme. Accordingly, BEE has rescheduled both the above fees from Schedule-1 to Schedule-3.

12) Check Testing Equipments amounting to Rs.80,21,171/- (Previous Year Rs.1,27,57,708/-) under Standard & Labeling 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 Depreciation @ 15% per annum as per I-Tax Act subject to residual value of 5%. Product wise details of Check Testing Equipments as on 31.03.2022 are as follows:-

S. No.	Name of the Equipment	Value as on 01.04.2021	Additions during the year	Original Total Cost	Loss on revaluation	Revalued as on 31.03.2022
1	Air conditioners	44,30,777	11,81,822	56,12,599	24,42,709	31,69,890
2	Ceiling Fan	19,420	18,259	37,679	9,357	28,322
3	Induction Cooktop	38,138	--	38,138	14,717	23,421
4	Induction Motors	3,58,682	--	3,58,682	2,88,067	70,615
5	Pump Set	11,34,274	--	11,34,274	8,30,881	3,03,393
6	Refrigerators	34,72,811	5,07,914	39,80,725	19,97,866	19,82,859
7	Television	20,26,620	4,70,585	24,97,205	8,35,853	16,61,352
8	Tubular Fluorescent Lamp	2,05,867	40,273	2,46,140	81,715	1,64,425
9	Washing Machine	1,97,344	--	1,97,344	54,763	1,42,581
10	Water Heaters	8,73,775	83,087	9,56,862	4,82,549	4,74,313
	Total	**1,27,57,708**	**23,01,940**	**1,50,59,648**	**70,38,477**	**80,21,171**

The difference amounting to Rs.70,38,477/- 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.80,21,171/- in Schedule-11.

13) During current financial year BEE has sold un-serviceable items as per details below:

Particulars		**W.D.Value**	**Realized Value**	**Loss on Sale**
BEE's unserviceable assets	-	Rs.1,88,683/-	Rs.56,661/-	Rs.1,32,022/-
Unserviceable Assets under Grant	-	Rs.7,71,927/-	Rs.22,539/-	Rs.7,49,388/-
Total	**-**	**Rs.9,60,610/-**	**Rs.79,200/-**	**Rs.8,81,410/-**

Sales considerations and loss on sale of unserviceable assets under Grant has been shown in Schedule-3 under respective Schemes.

14) Prior Period Expenses of Rs.66,38,460/- shown under Schedule-21 includes Rs.52,73,730/- which was inadvertently booked under UNIDO Scheme during the financial years 2015-16 and 2018-19 instead of booking in BEE project expenses. The same has been rectified during current financial year i.e., 2021-22.

15) Bid Processing fee and RTI fee etc. Rs.9,10,780/- (Previous year – Rs.9,58,447/- including RTI fee) has been shown as "Fees for Miscellaneous Services" under the Schedule-18 – Other Income.

16) 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. The examination fee collected and expenditure thereon, is as follows:

Balance as on 01.04.2021	-	Rs.33,28,72,019/-
Additions during the year	-	Rs. 76,82,477/-
Less: Expenditure during the year	-	Rs. 2,46,84,673/-
Balance as on 31.03.2022	-	Rs.31,58,69,823/-

The above balance is included in "Excess of Income over Expenditure" under Schedule-1.

The 21st exam which was scheduled to be held in 2020-21 was postponed due to COVID and the same was held during current financial year i.e., 2021-22. Due to this postponement, the expenditure during 2021-22 is more than the receipts during the year as a major part of examination fee was collected during 2020-21.

17) Provision for the pay & allowances for the month of March, 2022 has not been made in the accounts for regular employees of BEE and NMEEE, as the same is payable in the next year.

As per GoI, M/o Finance, D/o Expenditure O.M.No.1/2/2022-E-II (B) dated 31st March, 2022 'The payment of arrears of Dearness Allowance shall not be made before the date of disbursement of salary of March, 2022'

18) The excess expenditure over income during current financial year has been met out from the cumulative balances of excess income over expenditure of earlier years.

19) Corresponding figures for the previous year have been re-grouped/re-arranged, wherever necessary.

20) Schedules 1 to 25 are annexed to and form an integral part of the Balance Sheet as at 31st March, 2022 and the Income and Expenditure Account for the year ended on that date.

4. Administration

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 2021-22, in all 30 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 2021-22, in all 157 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 03 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 31.03.2022	Representation					
		SCs	SC%	STs	ST%	OBC	OBC%
A	16	02		-	-	01	6.25%
B	08	-		-	-	02	25%
C	01	-		-	-	-	-
Total	**25**	**02**	**8%**	**-**	**-**	03	12%

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 31.03.2022	Representation of Minorities	Percentage of Minorities
A	16	01	6.25%
B	08	-	-
C	01	-	-
Total	**25**	**01**	**4%**

4.5 Implementation of Official Language

For the purpose of creating awareness towards progressive use of Hindi in official work, every year in the month of September, Hindi Pakhwara is observed in the Bureau of Energy Efficiency in which various Hindi competitions and Hindi workshops are organized to encourage and incentivize the officers/employees for doing their official work in Hindi as per the rules under the Official Language Act.

Hindi Pakhwara was organized in BEE during 14-28 September 2021. During the Pakhwara, various competitions like Essay writing, Hindi Poem Recitation and Slogan Competition on Energy Efficiency were organized through online mode. Eight prizes (1st prize, 2nd prize, 3rd prize and 5th consolation prizes) were given to the winners of the competitions. Apart this, Bureau organized Speech Competition for State Designated Agencies and eight number of prizes were given to the winners from different States/UTs. The essay competitions were organized on technical and non-technical subjects.

Hindi workshops were also organized during the year. Deeply knowledgable and experienced guest speakers not only shared their views and knowledge but also helped in addressing any concern being faced by the participants in doing their day-to-day official work in Hindi as per the requirement of the Official Language Act. Participation in these workshops had helped enormously in increasing the use of Hindi in the official work. After participating in such workshops, employees have started typing notes through Unicode in Hindi in the files. Number of letters sent to 'A' & 'B' regions in Hindi achieved 100% target in the month of February and March,2022. Besides this, Quarterly meetings to review the progressive use of Hindi were held regularly under the Chairmanship of Director General (BEE).

4.6 Vigilance

During the year 2021-22, 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	16	-	-	01	01	6.25%
B	08	-	-	-	-	-
C	01	-	-	-	-	-
Total	**25**	**-**	**-**	**01**	**01**	**4%**

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