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Ministry of Information and Broadcasting
Government of India

National Energy Conservation Day

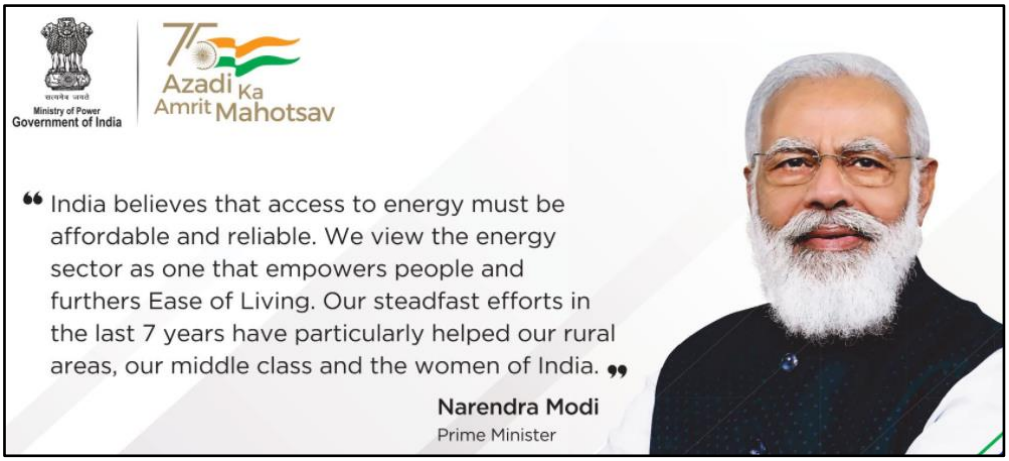
43 Lakh LED bulbs distributed under Gram UJALA programme in Bihar, UP, Karnataka, Telangana and Andhra Pradesh

New India takes charge in renewable energy promotion at a global platform

(Ministry of Power)

December 14, 2021

The National Energy Conservation Day is being celebrated every year on December 14 since 1991. The Bureau of Energy Efficiency (BEE), under Ministry of Power spearheads the celebrations every year. The objective to celebrate the National Energy Conservation Day is to drive mass awareness about the importance of energy efficiency and conservation.[1]



This year, Ministry of Power is celebrating the Energy Conservation Week from December 8-14, 2021[2] under "Azadi ka Amrit Mahotsav".

Celebrations by Bureau of Energy Efficiency include three major activities:

- National Painting Competition for school children
- National Energy Conservation Awards (NECA) for Industries and establishments
- National Energy Efficiency Innovation Awards (NEEIA) to recognize innovative energy efficiency technologies.

[1] https://vikaspedia.in/energy/database/national-energy-conservation-day
[2] https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1779550 accessed on Dec 13, 2021 at 16.38 hrs.

The week-long celebration included the following below mentioned activities:

- Virtual launch of Certificate Course on Home Energy Audit Program – 8th December
- Webinar on Technology Transfer for Decarbonization of Industry – 9th December
- National Workshop on Energy Efficiency in the Indian Residential Sector – 10th December
- National Workshop on the Role of Energy Efficient Appliances in Market transformation – 10th December
- National Workshop Event on Energy Efficiency Plans for the MSME Sector – 11th December
- Amrit Utsav Celebration for Designated Consumers under PAT Cycle II – Interaction with Dignitaries. – 13th December

National Energy Conservation Awards

The National Energy Conservation Awards (NECA) Programme[3] identifies the energy efficiency achievements in 56 sub-sectors across industry, establishments and institutions such as thermal power stations, office and BPO buildings, hotels, hospitals, shopping malls, zonal railways, railway workshops and stations, municipalities, State Designated Agencies and manufacturers of BEE Star labelled appliances or equipment and electricity distribution companies.

Every year, on the National Energy Conservation Day, Bureau of Energy Efficiency (BEE) recognizes and encourages endeavours of industries and other establishments in reducing energy consumption by felicitating them with National Energy Conservation Awards. For NECA (2021), online applications were called from Industry, Transport, Building, Institution and Appliance category, which were further divided in 30 Sectors. A total of 408 applicants participated for NECA 2021 till the closing date. The award committee - chaired by Secretary, Power - has finalized the awardees who would be felicitated with National Energy Conservation Awards on 14th December 2021.[4]

This year, apart from National Energy Conservation Award (NECA), the Ministry

[3] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1596314 accessed on 13:22 dated 13th Dec 2021
[4] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1777979 accessed on Dec 13, 2021 at 17.05 hrs.

of Power has also initiated National Energy Efficiency Innovation Award (NEEIA). It aims to recognize "Innovative Energy Efficiency Technologies" and instil a sense of competition to motivate industries & sectors to develop innovative energy efficiency efforts in their units. The online applications were invited from Category A (Industry, Transport, Building) & Category B (Students & Research Scholars). A total of 149 applicants participated for NEEIA 2021 by the due date.[5] Apart from this, BEE also felicitates the winners of National Painting Competition on Energy Conservation.

Energy Conservation Act & Bureau of Energy Efficiency (BEE)

The Energy Conservation Act (EC Act) was enacted in 2001 with the goal of reducing energy intensity of Indian economy. Bureau of Energy Efficiency (BEE) was set up as the statutory body on 1st March 2002 at the central level to facilitate the implementation of the EC Act. The Act provides regulatory mandate for: standards & labelling of equipment and appliances; energy conservation building codes for commercial buildings; and energy consumption norms for energy intensive industries.

The Ministry of Power through Bureau of Energy Efficiency (BEE) is implementing various policies and schemes viz Perform Achieve Trade (PAT) Scheme, Standard and Labelling, Energy Conservation Building Codes and Demand Side Management. These programmes are helpful in achieving significant energy savings and also, in promotion of the efficient use of energy across society.

In order to realize the development goals**,** India's energy demand is expected to double between 2013 and 2030**,** to approximately 1500 million tons of oil equivalent. The mission of BEE is to assist in developing policies and strategies that will help reduce this energy demand by promoting widespread adoption of energy efficiency measures. [6]

More details about **Energy Efficiency** scenario may be found here:
https://powermin.gov.in/en/content/energy-efficiency

Implementation of Energy Efficiency measures in India

The Ministry of Power is implementing measures to save energy with an objective to reduce CO2 emission levels in the environment from industries, establishments and by using equipment/ appliances.

Perform Achieve and Trade (PAT): It is a key programme for large industries and establishments. This scheme aims to enhance the cost-effectiveness of energy savings by upgrading technologies or by taking in-house actions to minimize energy consumption. By the year 2020, the scheme coverage has been extended to 13 most energy intensive sectors in the country including Cement, Iron and Steel, Fertilizer, Thermal Power Plants, Refineries, Petrochemicals, Railways and others. This initiative is currently leading to energy savings of about 17 MTOE (Million Tonnes of Oil Equivalent) and has resulted into mitigation of about 87 million tonnes of CO2 per year, a figure close to total CO2 emissions of country like Bangladesh.[7]

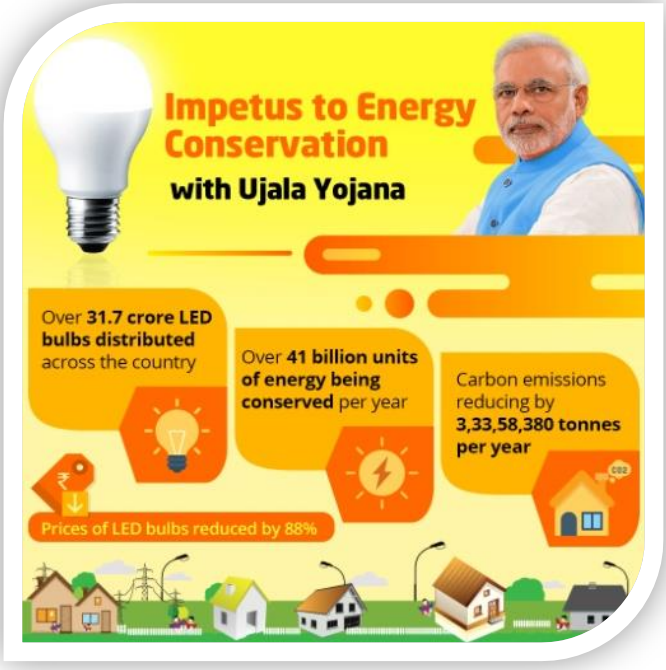
Standards & Labelling Programme: It is one of the major thrust areas of BEE. A key objective of this scheme is to provide the consumer an informed choice about the energy

[5] ibid
[6] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1596314 accessed on 12:36 PM dated 13th Dec 2021
[7] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1725448 accessed on Dec 13 at 17.16 hrs.

saving and thereby the cost saving potential of the relevant marketed product. The scheme targets display of energy performance labels on high energy end use equipment & appliances and lays down minimum energy performance standards.[8]

Energy Conservation Building Code: 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 contributes to 30- 60 per cent of the annual electricity consumption.[9] Thus, the **Eco Niwas Samhita, Part – I Building Envelope (Energy Conservation Building Code for Residential Sector)** was developed and launched on 14th December, 2018 on the occasion of National Energy Conservation Day. 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) as well as for ensuring adequate natural ventilation and day lighting. The code is applicable to all residential use building projects built on plot area ≥ 500 m2.

Demand Side Management (DSM): It has been traditionally recognized as one of the major intervention to achieve reduction in energy demands while ensuring continuous development. In recent past, DSM has gained unprecedented importance and has become an integral part of almost all the central and state missions on promotion of Energy Efficiency. DSM interventions have helped utilities not only to reduce the peak electricity demands and but also to defer high investments in generation, transmission and distribution networks.[10]



Gram UJALA – An initiative

The government has taken multiple steps to create awareness about energy conservation and renewable energy promotion. One of them, Gram UJALA programme was launched in March 2021 by Union Minister of Power and New & Renewable Energy, Shri R K Singh at Varanasi, Uttar Pradesh.

Under this program Convergence Energy Services Limited (CESL), a wholly owned subsidiary of Energy Efficiency Services Limited (EESL), will distribute high quality LED bulbs, at an affordable cost of 10 rupees per bulb in rural areas of Varanasi. Under Phase 1 of GRAM UJALA programme 1.50 Crore LED bulbs will be distributed which will have a significant impact on India's climate change action and will result in energy savings of 2025

[8] https://www.beeindia.gov.in/content/standards-labeling , accessed on Dec 14, 2021 at 12.04 hrs.
[9] https://www.beeindia.gov.in/content/ecbc-residential , accessed on Dec 14, 2021 at 12.06 hrs.
[10] https://www.beeindia.gov.in/content/dsm , accessed on Dec 14 at 12.08 hrs.

million kWh/year and CO2 reductions of 1.65 million T CO2/year. The programme will enable better illumination at an affordable price of Rs 10/bulb. This will usher in a better standard of life, financial savings, more economic activity, and better safety for rural citizens.[11]

The programme has already achieved a distribution mark of more than 33 lakh LED bulbs in Bihar and Uttar Pradesh. Starting December 14, 2021, it has been activated in three more states - Telangana, Andhra Pradesh, and Karnataka and a landmark 10 lakh LED bulbs were distributed across all these states on this day.[12] CESL will continue to provide 7-Watt and 12-Watt energy-efficient LED bulbs that come with a guarantee period of three years, against submission of working incandescent bulbs.[13]

India's Energy Demand & International Solar Alliance

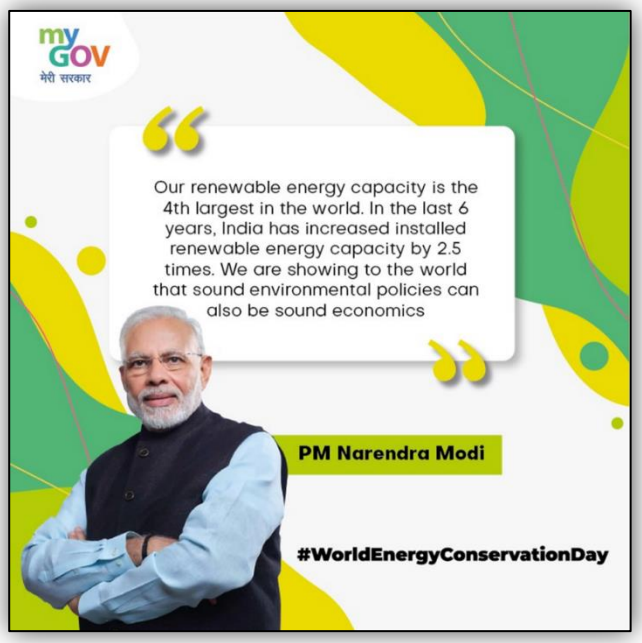
India is the third largest consumer of energy after USA and China. It is also the quickest growing energy consumer in the world consuming 813 million tonnes of oil equivalent in 2019.[14] India's energy needs are projected to increase at the rate of 4.2 per cent during 2017-40. Approximately, 30 per cent of India's energy needs are met by petroleum and natural gas, 55 per cent by coal, 10 per cent by hydropower, and only 6.5 per cent by renewable energy and less than 3 per cent by nuclear energy as per the Draft Energy Policy released by NITI Aayog.[15]

The International Solar Alliance (ISA) is an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies as a means for bringing energy access, ensuring energy security, and driving energy transition in its member countries. The ISA was conceived as a joint effort by India and France to mobilize efforts against climate change through deployment of solar energy solutions. It was conceptualized on the side-lines of the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris in 2015. With the amendment of its

[11] https://pib.gov.in/Pressreleaseshare.aspx?PRID=1707220 accessed on Dec 13, 2021 at 16.38 hrs.
[12] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1781468 accessed on Dec 14, 2021 at 16.38 hrs
[13] https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=1780138 accessed on 13:20 dated 13th Dec 2021
[14] https://mopng.gov.in/files/TableManagements/2020-12-08-115045-xyd7b-AR_2019-20E.pdf , accessed on Dec 13 at 17.35 hrs.
[15] https://www.niti.gov.in/writereaddata/files/document_publication/NEP-ID_27.06.2017.pdf , accessed on Dec 13, 2021 at 17.39 hrs.

Framework Agreement in 2020, all member states of the United Nations are now eligible to join the ISA. At present, 101 countries are signatories to the ISA Framework Agreement, of which 80 countries have submitted the necessary instruments of ratification to become full members of the ISA.[16]

Delivering the Presidential address at the fourth general assembly of ISA held between 18th and 21st of October, 2021, Shri RK Singh, Minister of Power & Minister of New and Renewable Energy, India, said that it was time for all to get together to make energy access using solar and renewable energy available. We have successfully done this in India, and it can be replicated globally. Solving the problem of energy access is more important than the energy transition. The energy transition is meaningless for those without energy. The ISA can enable energy access for 800 million people worldwide. He emphasized that it is time for developed countries to direct the energy transitions funds they had committed at previous climate conferences.[17]



One Sun One World One Grid (OSOWOG) initiative was also discussed at the 4th Assembly. The concept of a single global grid for solar was first outlined at the First Assembly of the ISA in late 2018. It envisions building and scaling inter-regional energy grids to share solar energy across the globe, leveraging the differences of time zones, seasons, resources, and prices between countries and regions. OSOWOG will also help decarbonise energy production, which is today the largest source of global greenhouse gas emissions.

Emphasising the importance of OSOWOG at the session on 'Accelerating Clean Technology Innovation and Deployment' at COP26 Summit in Glasgow on Nov 02, 2021, Prime Minister Narendra Modi remarked: "The quantum of energy that the entire human race consumes in a year, the sun gives the same amount of energy to the earth in one hour. And this enormous energy is completely clean, sustainable. The only challenge is that solar energy is available only during the day and is also weather dependent. 'One Sun, One World, One Grid' is a solution to this challenge. Clean energy from a world-wide grid will be available everywhere at all times. This will also reduce the need for storage and increase the viability of solar projects."[18]

Reference:

- Annual Report 2020-21, Ministry of Power
- Annual Report 2019-20, Ministry of Petroleum & Natural Gas

[16] https://isolaralliance.org/about/background , accessed on Dec 13, 2021 at 17.45 hrs.
[17] https://pib.gov.in/PressReleasePage.aspx?PRID=1765671 , accessed on Dec 13, 2021 at 17.50 hrs.
[18] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1769062 , accessed on Dec 13, 2021 at 17.55 hrs.

- Annual Report 2020-21, Ministry of New & renewable Energy
- Draft National Energy Policy, NITI Aayog

Video reference:

- First Assembly of the International Solar Alliance - Full Event
- FULL EVENT: Welcome ceremony for #InternationalSolarAlliance at Rashtrapati Bhavan
- In Focus: 4th General Assembly of International Solar Alliance held | 23.10.2021
- India is devoting great importance to solar energy: PM Modi
- 'Solar energy is sure, pure and secure': PM Modi
- National Energy Conservation Day: Making India Energy Efficient
- BEE -Overview of National Energy Conservation Awards
- Energy Efficiency in India: Challenges and Initiatives

AG/HP/PPD/SS