PRESS INFORMATION BUREAU
(Research Unit)
Ministry of Information and Broadcasting
Government of India

National Energy Conservation Day (December 14)

36.78 crore LEDs distributed across the country under UJALA

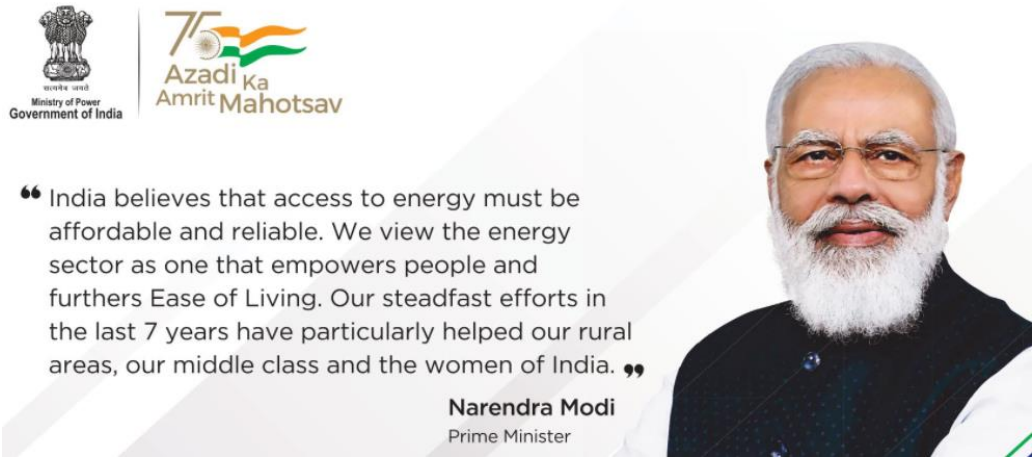
New India takes charge in renewable energy promotion at a global platform

(Ministry of Power)

December 14, 2021
(**Updated on December 13, 2022)**

NATIONAL ENERGY CONSERVATION DAY

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 National Energy Conservation Day is to drive mass awareness about the importance of energy efficiency and conservation.[1]



BACKGROUND

National Energy Conservation Day in India is celebrated to aware people about the importance of energy as well as saving or conserving more energy by using less energy. The exact means of energy conservation is using less energy by avoiding unnecessary uses of energy. Using energy efficiently is very necessary to save it for future usage. Energy conservation should be rooted in the behaviour of every human being to get more effect towards the plan of energy conservation.[2]

[1] https://vikaspedia.in/energy/database/national-energy-conservation-day
[2] http://orienvis.nic.in/index1.aspx?lid=921&mid=5&langid=1&linkid=4915

OBJECTIVES OF NATIONAL ENERGY CONSERVATION DAY [3]

- National energy conservation day is celebrated every year using a particular theme of the year by keeping in mind some goals and objectives to make it more effective all over the country among people. Some of the important goals are:
- It is celebrated to send the message of the importance of conserving energy in every walk of life among people.
- Promoting the way of process of energy conservation by organizing a lot of events such as discussions, conferences, debates, workshops, competitions and etc., all through the country.
- Promote people for less energy usage by neglecting excessive and wasteful uses.
- Encourage people for efficient energy use in order to decrease energy consumption and prevent energy loss.

NATIONAL ENERGY CONSERVATION AWARDS

The Ministry of Power, Government of India, launched a scheme in 1991, to give national recognition through awards to industries and establishments that have taken special efforts to reduce energy consumption while maintaining their production. The awards were given away for the first time on December 14, 1991, which was declared as 'National Energy Conservation Day'. These awards are given by eminent dignitaries holding very high positions in the Government of India in a function organized on 14th December every year.

The President of India will felicitate the winners of the **National Energy Conservation Award 2022**, the **National Energy Efficiency Innovation Awards**, and the **National Painting Competition Prizes** on December 14, 2022.[4]

On the occasion, the Hon'ble President will also launch the **'EV-YATRA PORTAL' and Mobile App.**

The Bureau of Energy Efficiency has developed a **Mobile Application** to facilitate in-vehicle navigation to the nearest public EV charger, a **website** to disseminate information on various central and state-level initiatives to promote e-mobility in the country, and a **web portal** to enable CPOs to register their charging details securely into the National Online Database.

[3] http://orienvis.nic.in/index1.aspx?lid=921&mid=5&langid=1&linkid=4915

[4] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1882997

The **Mobile application titled "EV Yatra"** has been designed and developed to facilitate in-vehicle navigation to the nearest public EV charger. This Mobile application can be easily downloaded on both iPhone and Android smartphones from Google play store and Apple Store and installed conveniently.

ENERGY CONSERVATION ACT & BUREAU OF ENERGY EFFICIENCY (BEE)

The Energy Conservation Act (EC Act) was enacted in 2001 with the goal of reducing the energy intensity of the Indian economy. The Bureau of Energy Efficiency (BEE) was set up as the statutory body on March 01, 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 the 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 the widespread adoption of energy efficiency measures. [5]

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

ACHIEVEMENTS OF ENERGY EFFICIENCY SCHEME / PROGRAMMES (2020-21)

- Electrical energy savings of 239.77 Billion Units, worth Rs. 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 Rs. 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 Rs. 1,52,241 crores approximately
- Total reduction in CO_2 emission is around 267.98 Million Tonnes

IMPLEMENTATION OF ENERGY EFFICIENCY MEASURES IN INDIA

The Ministry of Power is implementing measures to save energy with an objective to reduce CO_2 emission levels in the environment from industries, establishments and by using equipment/ appliances.

[5] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1596314

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 the 13 most energy-intensive sectors in the country, including Cement, Iron and Steel, fertilizers, 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 in the mitigation of about 87 million tonnes of CO_2 per year, a figure close to the total CO_2 emissions of country like Bangladesh.[6]

Progress (2020-21):

- Total energy (thermal) saved equals to 21.05 MTOE
- Total electricity saving of 40.09 BU worth Rs. 55,004 crores
- Contributed in reduction of 105.86 Million Tonne of CO_2.

STANDARDS & LABELLING PROGRAMME

It is one of the major thrust areas of BEE. A key objective of this scheme is to provide the consumer with an informed choice about energy saving and, thereby, the cost-saving potential of the relevant marketed product. The scheme targets the display of energy performance labels on high energy end-use equipment & appliances and lays down minimum energy performance standards.[7]

Progress (2020-21):

- 28 appliances covered
- Energy (electrical) savings of 61.39 BU (For FY 2020-21) worth Rs. 36,835 crores
- Contributed in reduction of 50.52 Million Tonne of CO_2.

ENERGY CONSERVATION BUILDING CODE

The rapid increase in the residential building stock, coupled with an increase in electricity use for space conditioning, is resulting in the 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.[8]

Thus, the **Eco Niwas Samhita, Part – I Building Envelope (Energy Conservation Building Code for Residential Sector)** was developed and launched on December 14, 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

[6] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1725448
[7] https://www.beeindia.gov.in/content/standards-labeling
[8] https://www.beeindia.gov.in/content/ecbc-residential

ventilation and day lighting. The code is applicable to all residential use building projects built on plot area ≥ 500 m2.

Progress (2020-21):

- Total energy (electrical) saving of 0.390 BU worth Rs. 61.74 crores
- Contributed in reduction of 0.31 million Tonne of CO_2.

PROGRESS IN OTHER ENTERPRISES (2020-21)

Small & Medium Enterprises:

- Total energy (thermal) saved – 9.695 ktoe.
- Total cost savings – Rs. 69.54 crores
- Total CO2 reduction – 0.14 Million Tonne of CO_2.

Agriculture

- Total energy (electrical) saving of 7.511 BU worth Rs. 4506 crores
- Contributed in reduction of 5.93 Million Tonne of CO_2.

Transport

- Total energy (thermal) saving of 0.33 Mtoe worth INR 2,906 crores
- Contributed in reduction of 0.97 Million Tonne of CO_2.

UNNAT JYOTI BY AFFORDABLE LIGHT EMITTING DIODE (LED) FOR ALL (UJALA) (as on 12.12.2022)

UJALA [Unnat Jyoti by Affordable Light Emitting Diode (LED) for All] was launched on 5th January, 2015 to provide energy efficient LED bulbs to domestic consumers at an affordable price. The programme was successful in bringing down the retail price of the LED bulbs from Rs. 300-350 per LED bulb in the year 2014 to Rs 70-80 per bulb.

Progress:

- 36.86 crore of LED bulbs and 72.18 lakhs of LED Tube lights distributed and 23.59 lakh Energy Efficient Fans
- Energy (electrical) savings of 47.88 BU (Saving of LED tube light and fans are considered under S&L programme)
- Savings worth Rs. 19,152 crores
- Contributed in reduction of 38.78 Million Tonne of CO_2.

DEMAND SIDE MANAGEMENT (DSM)

It has been traditionally recognized as one of the major interventions 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.[9]

Progress under Municipal Demand Side Management (2020-21):

- 1.28 crore of LED street lights were replaced.
- Energy (electrical) savings of 7.40 BU worth Rs. 5069.27 crores
- Contributed in reduction of 6.0 Million Tonne of CO2.

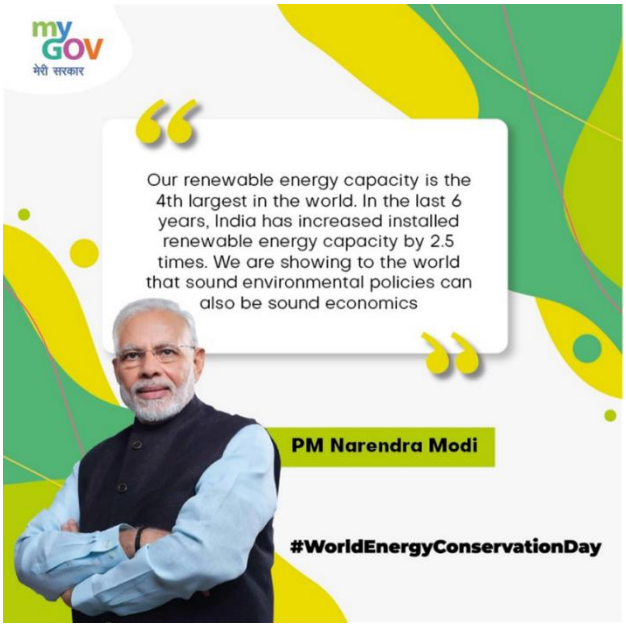
INDIA'S ENERGY DEMAND & INTERNATIONAL SOLAR ALLIANCE

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.[10] 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.[11]

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 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.[12]

[9] https://www.beeindia.gov.in/content/dsm , accessed on Dec 14 at 12.08 hrs.
[10] https://mopng.gov.in/files/TableManagements/2020-12-08-115045-xyd7b-AR_2019-20E.pdf , accessed on Dec 13 at 17.35 hrs.
[11] https://www.niti.gov.in/writereaddata/files/document_publication/NEP-ID_27.06.2017.pdf , accessed on Dec 13, 2021 at 17.39 hrs.
[12] https://isolaralliance.org/about/background , accessed on Dec 13, 2021 at 17.45 hrs.

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.[13]



ONE SUN ONE WORLD ONE GRID (OSOWOG) INITIATIVE

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."[14]

ENERGY CONSERVATION (AMENDMENT) BILL, 2022

The Energy Conservation (Amendment) Bill, 2022 has been passed on December 12, 2022[15]. The Bill seeks to amend the Energy Conservation Act, 2001. The following provisions in the Bill have been included to support to energy transition activities: -

[13] https://pib.gov.in/PressReleasePage.aspx?PRID=1765671 , accessed on Dec 13, 2021 at 17.50 hrs.
[14] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1769062 , accessed on Dec 13, 2021 at 17.55 hrs.
[15] https://newsonair.gov.in/News?title=Parliament-passes-Energy-Conservation-(Amendment)-Bill%2C-2022&id=452181

- Specify minimum share of consumption of non-fossil sources by designated consumers as energy or feedstock;
- Specify the carbon credit trading scheme;
- Coverage of large residential buildings within the fold of Energy Conservation regime; and Enhance the scope of Energy Conservation Building Code to include sustainability aspects.

Reference:

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