



# UPSavesEnergy News Letter

UPSDA's Energy Efficiency endeavors towards achieving a Net Zero status for Uttar Pradesh

Quarterly Newsletter

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## Background

Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) under the provisions of the Energy Conservation Act-2001, have been nominated as State Designated Agency to coordinate, regulate and enforce the provision of the Energy Conservation Act-2001 and implement schemes under the said Act within the State of Uttar Pradesh. UPNEDA is working as UPSDA since July 2015.

The 28th Conference of Parties (COP-28) was held in Dubai, from 30th Nov-12th Dec 2023, where the representatives from 197 countries showcased their efforts to limit global warming and held discussions to prepare for future climate change. India's engagements at COP-28, led by Prime Minister Shri Narendra Modi, showcase a comprehensive and proactive approach to tackling climate change. Emphasizing the urgency of accessible climate finance for developing nations, Prime Minister Modi highlighted the need to implement Nationally Determined Contributions

(NDCs) and voiced concerns on behalf of the Global South. The initiatives launched, including LeadIT 2.0 for industry transition, the Green Credits Programme incentivizing pro-environment actions, and the focus on the Himalayan region's vulnerability, demonstrate India's commitment to diverse strategies for sustainable development. Furthermore, India's involvement in the Quad Climate Working Group and the Mangrove Alliance illustrates a recognition of the pivotal role played by local communities and regional governments in fostering sustainable lifestyles and holistic conservation efforts. Overall, India's active participation at COP-28 positions the country as a proactive and influential player in the global fight against climate change, showcasing a commitment to collaborative, innovative, and localized solutions.



## Vision :

To make a long-term commitment to energy efficiency and conservation through harnessing the vast energy saving potential in Uttar Pradesh by exploring all possible pathways for minimizing overall carbon footprints



## Mission :

The mission of the UPNEDA as State Designated Agency is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 with the primary objective of reducing energy intensity of the Indian Economy.



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## Significant Energy Efficiency Programs in Uttar Pradesh

### EC Day Celebration

The Energy Conservation Week 2023 (EC Week 2023) commenced on December 8, 2023, and concluded with EC Day 2023 on December 14, 2023. As part of this initiative, UPNEDA, the Uttar Pradesh State Designated Agency, organized the Energy Conservation Day celebration on December 14, 2023, at the UPNEDA head office in Vibhuti Khand, Gomtinagar. Active participation was observed from Designated Consumers of the state, educational institutes and various other stakeholders. The inauguration of the program was carried out by Shri Anupam Shukla (IAS), Director of UPNEDA, and Shri Gaurav Shukla (PCS), Secretary of UPNEDA. The session commenced with a presentation on the best practices for conserving energy in everyday life. Stakeholders also took the opportunity to present their most noteworthy case studies during the session.



EC Day celebration on December 14, 2023, at the UPNEDA head office in Vibhuti Khand

### Achievements of UP Industries in National Energy Conservation Award 2023: -

To promote awareness about energy efficiency and conservation, the Bureau of Energy Efficiency (BEE) acknowledges and applauds the efforts of industrial units, institutions, and establishments in reducing energy consumption. This recognition is manifested through the conferment of Energy Conservation Awards on the occasion of National Energy Conservation Day, observed annually on December 14th. In the current year, Hindalco Industries Limited, situated in Renukoot, secured the 1st Prize in the Aluminium Sector. In the fertilizer sector, the 1st award was bestowed upon KRIBHCO Fertilizer Ltd, Shahzadapur. Additionally, Certificate of Merit accolades were presented to TATA Motors Ltd (Lucknow), UFlex Ltd.- Chemical Business (Noida), and Bajaj Energy Ltd. (Utraula).

### Workshop on State Energy Efficiency Action Plan (SEEAP):

Following the Stakeholder Workshop of SEEAP held on May 31, 2023, the subsequent stakeholder meeting took place on December 1, 2023, in the conference room of UPNEDA, Uttar Pradesh. The meeting was chaired by Sh. Mahesh Gupta, ACS, Department of Energy and Additional Sources of Energy, GoUP. During the workshop, ASSOCHAM presented the Draft Energy Efficiency Action Plan.



## PAT Cycle 2 Escerts Trading:

The trading of PAT Cycle-2 ESCerts concluded on October 30, 2023. Following the completion of the trading, 39 out of the 43 active DCs successfully submitted their forms D on the PATNET Portal.

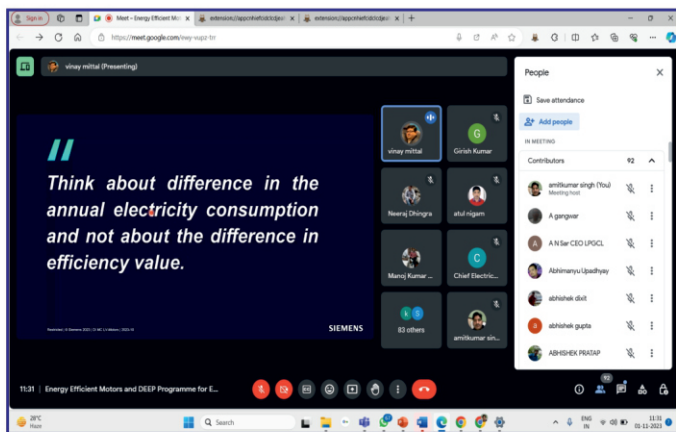
## Webinar on "Enhancing Energy Efficient Motors, VFD and DEEP Programme for Capacity Building of Designated Consumers:

A comprehensive 3-hour webinar titled "Enhancing Energy Efficient Motors, VFD and DEEP Programme for Energy Saving in Industries" was successfully conducted on November 1st, 2023. This collaborative effort was organized by UPSDA and PMA PAT Cell. The event garnered active participation from approximately more than 110 individuals representing diverse sectors, including various DCs and the Sugar sector in Uttar Pradesh. In the session, the presenters delved into a comprehensive examination of the classification of energy-efficient motors, namely IE3, IE4, and IE5, elucidating the subtle differences that distinguish them and outlining the varied benefits they offer across different applications. The discussions

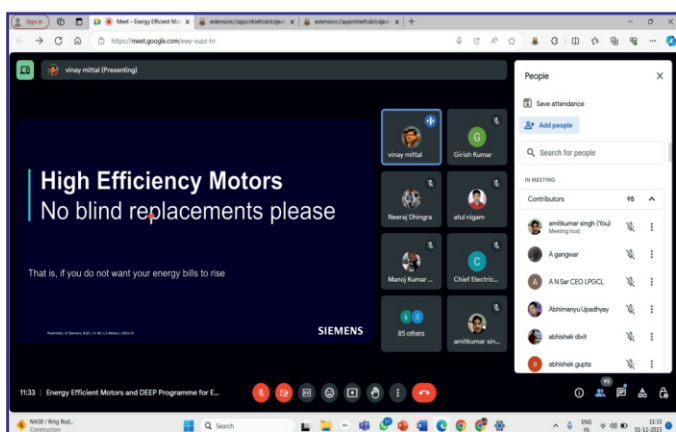
included a thorough exploration of the rationale behind selecting IE3, IE4 and IE5 motors over IE2 motors, supported by real-world case studies. Additionally, the session covered various energy efficiency opportunities in the utilities section, such as Pumps & Fans, Compressors, Cooling Towers, HVAC, Chiller Compressors, providing insights into optimizing energy consumption in these specific areas.

## BUILDING ENERGY EFFICIENCY (ECBC):

ECBC cell has been established at UPSDA/UPNEDA for supervising the implementation of UPECBC-2018, offering technical guidance for government stakeholder departments to showcase implementation of UPECBC in building projects, conducting training sessions for both government and private stakeholders on the ECBC code and Eco Niwas Sanhita for residential structures, and overseeing the



Training Programme in Mathura Vrindavan Development Authority, UP



Star Rating program for energy-efficient buildings, encompassing both commercial and residential structures. During this quarter, a total of six physical training programs were conducted. These programs were designed for officers from various Development Authorities, building sector professionals, as well as students. Notably, these sessions collectively trained more than 300 participants.

## Energy Audit in Institutions

UPNEDA, implement projects aimed at supplementing energy requirements of the State by harnessing solar energy, bio energy, wind energy and other renewable sources as well as Conservation of Energy. It is to mention here that Honorable Prime Minister have committed to make India Net Zero by 2070, for which it is necessary that organizations beside maximizing use of Renewable Energy, should





focus on Efficient Energy Utilization. Sometimes the Institutes are worried by rising electricity expenditure of the Institute and want to reduce it but are not aware of the ways of energy reduction. By Energy Audit the Institute will also know about Energy saving potential, expenditure and pay-back period etc. In the view of above UPNEDA (UPSDA) has initiated Energy audit work of 11 Govt. Educational Institutes of Uttar Pradesh through Empaneled Energy Auditing Agencies.

### Stakeholder Consultation Meeting on Deploying Low Carbon Levers

AEEE is conducting a study in the state of Uttar Pradesh on the MSME sector to identify the clusters where low carbon levers such as electrification of thermal processes, energy efficiency, alternate fuels, carbon capture, and other cleaner technologies, can be deployed. In line with these objectives, AEEE organized stakeholder consultation meetings in Moradabad and Varanasi in September 2023, specifically addressing the brass foundries and brick sector, respectively. Building on this momentum, AEEE conducted another workshop for the paper manufacturing cluster in Muzaffarnagar on October 19, 2023, with active participation from more than 25 attendees.

### Case Study:

Kribhco Fertilizers Limited (KFL), a wholly owned subsidiary of Krishak Bharati Cooperative Limited (KRIBHCO), is operating an ammonia-urea complex at Shahjahanpur in Uttar Pradesh since 1995. Ammonia plant is based on Steam Reforming of Natural Gas and adopted the technology of HTAS, Denmark, while urea plant is based on ammonia stripping technology of Snamprogetti, Italy. The design/reassessed capacities of ammonia and urea plants are 1350/1520 MTPD & 2200/2620 MTPD respectively.



### Energy Conservation Measures

1. Replacement / Retrofit of Synthesis Gas Compressor's Turbine: By replacement of BHEL Make synthesis gas turbine with Siemens Make new high efficiency turbine in Ammonia Plant, the steam consumption in synthesis gas turbine has come down by 14.114 MT for same compressor output, which has reduced Ammonia SEC by 0.137 Gcal/MT reducing Urea SEC by 0.078 Gcal/MT. This also resulted in cut down 50000 MT per Year of Carbon Emissions. Expenditure incurred in this scheme was Rs. 29.91 Crores.



2. Replacement of Reciprocating Compressor by Energy Efficient Centrifugal Instrument Air Compressor: Installation of FS Elliot design high-capacity energy efficient centrifugal air compressor in Offsites Plant provided saving of electrical energy by stopping existing reciprocating compressors. This also resulted in cut down 1100 MT per Year of Carbon Emissions. Expenditure incurred in this scheme was Rs. 1.84 Crores

## Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA)

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