



STATUS OF ENERGY EFFICIENCY PROGRAM & PAT & PAT SCHEME IN UTTAR PRADESH

Presented By

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About UPSDA

Under the provisions of the Energy Conservation Act-2001, Uttar Pradesh New and Renewable Development Agency (UPNEDA) under the Department of Additional Sources of Energy, Government of Uttar Pradesh have been nominated as State Designated Agency of Uttar Pradesh by Bureau of Energy Efficiency, New Delhi (statutory body under Ministry of Power).

The Government of Uttar Pradesh has notified UPNEDA as the State Designated Agency (SDA) 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.

Activities of UPNEDA as SDA

- Perform Achieve and Trade (PAT) Scheme
- Energy Saving Campaign through UPSDA website www.upsavesenergy.com
- Demonstration Projects: Showcase initiatives and projects
- Capacity Building of DISCOMs, Industries and other stakeholders
- Development of DSM Plan and Energy Policy
- Demand Side Management
- Mu-DSM
- Ag-DSM
- Replacement of inefficient Agricultural Pumps of Farmers by Energy Efficient Pump
- Developed Energy Conservation Curriculum for Three Years Diploma Courses, Courses, Training of Faculty of Government Polytechnics
- Schools Awareness Programs
- Energy Conservation Building Code (ECBC)
- Awareness Campaign for Energy Conservation
- Painting Competition
- Energy Conservation Workshops and Training programs
- Other activities related EC/EE

PAT Status in UP

PAT scheme is a market-based compliance mechanism to accelerate improvements in energy efficiency in energy intensive industries. The energy savings achieved by notified industries is converted into tradable instruments called Energy Saving Certificates (ESCerts). The ESCerts after issuance by Bureau of Energy Efficiency are traded at Power Exchanges. The key goal of the PAT scheme is to mandate specific energy efficiency improvements for the most energy intensive industries. A total of 8 PAT cycles have been notified till date, with 74 active Designated Consumers (DC) in Uttar Pradesh.

DC's Summary

Sr. No.	Sector	No. of DCs
1	Aluminium	1
2	Cement	9
3	Commercial Buildings	7
4	Chlor-Alkali	1
5	DISCOMs	6
6	Fertilizer	8
7	Iron & Steel	1
8	Pulp & Paper	13
9	Petroleum Refineries	1
10	Petrochemical	1
11	Railways	4
12	Textile	2
13	Thermal Power Plant	20
Total		74

PAT Cycles Overview



PAT Cycle 1

27 units notified, 2 units closed. Saved 0.69 million TOE,



PAT Cycle 2

45 units notified, 1 unit closed. Energy Saved 1.33 million TOE,



PAT Cycles 3

2 units notified, Energy Saved 0.06 million TOE



PAT Cycles 4

2 units notified, Energy Saved 0.083 million TOE



PAT Cycles 5

6 new DCs notified,. Energy Saved 0.08 million TOE,



PAT Cycles 6

11 DCs notified, Energy Saved 0.250 million TOE.



PAT Cycles 7

36 DC's notified (2New +34 Old DC)

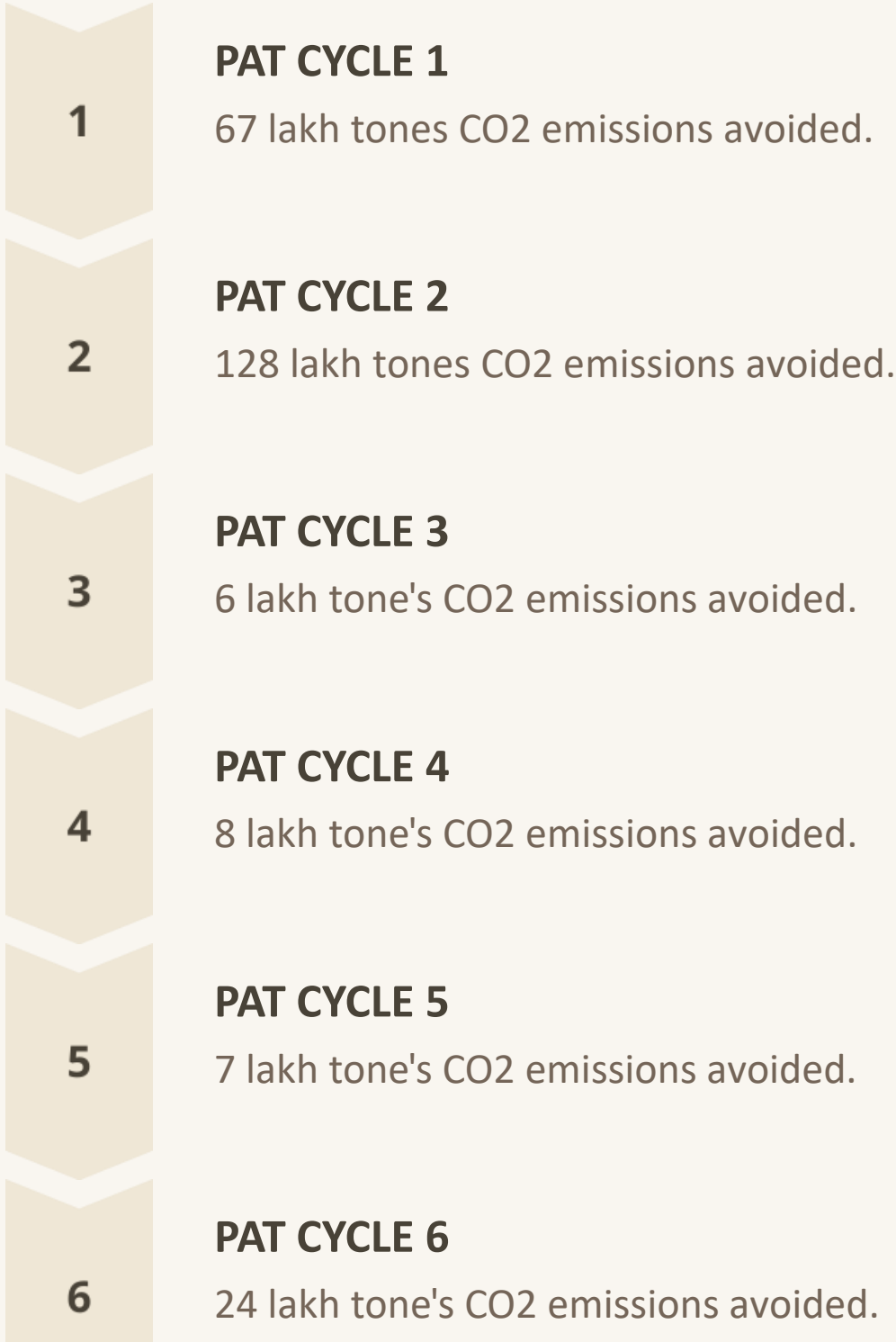


PAT Cycles 8

8 DC's notified (All News DC's)



Impacts on Emissions



Energy Efficiency Financing



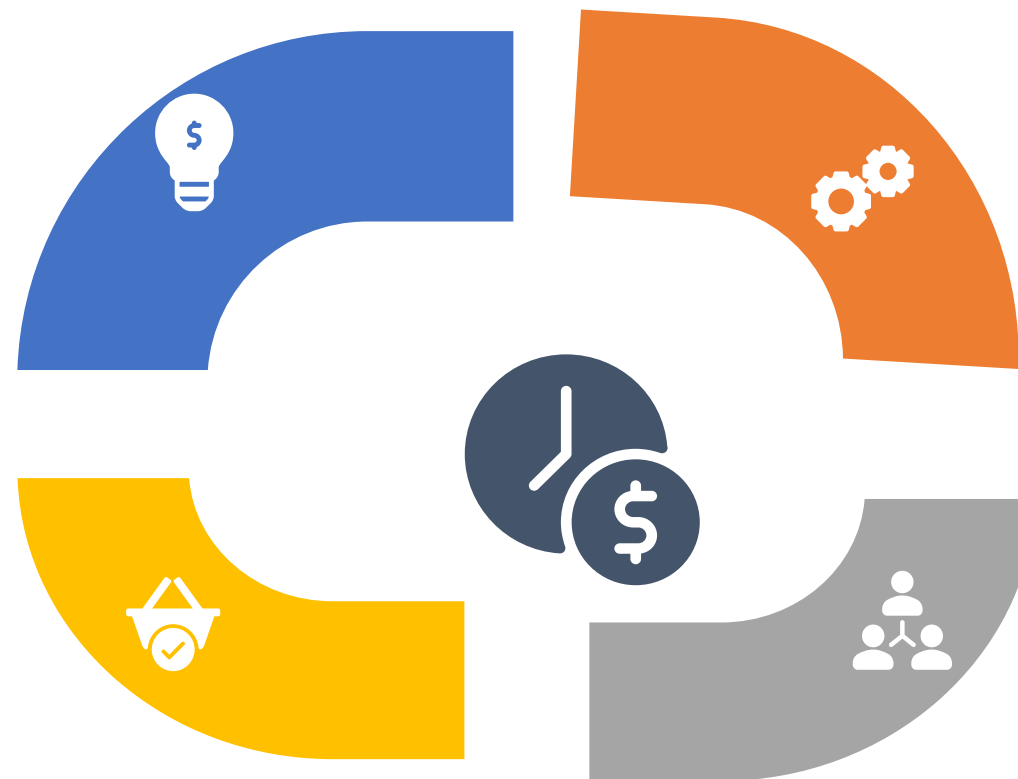
Energy Efficiency Financing

Energy Efficiency Financing Platform (EEFP)

Energy Efficiency Financing Platform(EEFP) was launched as one of the initiatives under National Mission for Enhanced Energy Efficiency to provide a platform to interact with Financial Institutions (FIs) and project developers for implementation of energy efficiency projects.

Training Program

Under this program, UPSDA has organized 02 days training program for Financial Institutions in Lucknow & Varanasi.



Capacity Building

For capacity building of FIs, BEE signed MoU with Indian Banks' Association for the Training Program on Energy Efficiency Financing.

Financial Committee

A Financial Committee has been constituted on 24th Oct 2019. After the merger of many Financial Institutions, the Constituted Financial Committee has been revived on 15 Sep 2022. Members of the committee are: State Bank of India, Punjab National Bank, Bank of Maharashtra, Indian Overseas Bank, Indian Bank, Union Bank of India, Yes Bank, Ujjivan Small Finance Bank as member of Committee

Investment Bazar

- In order to promote financing in energy efficiency and eradicating the financing barriers in Energy Efficiency, UPSDA (UPNEDA) engaged Knowledge Partner for Energy Efficiency Financing Projects who can identify various energy efficiency projects which can be financed by Financial Institutions (Banks).
- One day conferences as 'Investment Bazar conference for Energy Efficiency' has been organized at 5 (five) locations of Uttar Pradesh.
- Lucknow
- Varanasi
- Kanpur
- Ghaziabad/NOIDA
- Agra

WHY RETAIL SALES TRAINING

Retailers' Training Program for S&L

1

During 2022-23, UPSDA organized 20 training programs for retailers.

2

Locations for R.T.P. :

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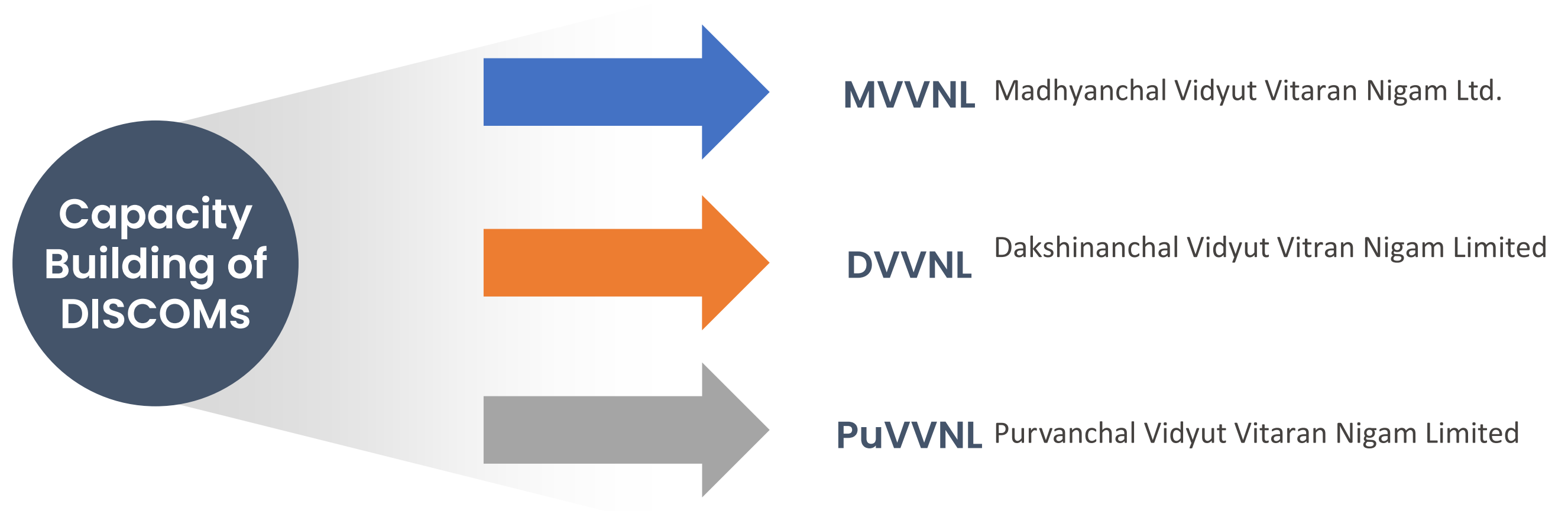
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|--------------|-------------|---------------|-------------------|
| 1. Lucknow . | 6. Mirzapur | 11. Agra | 16. Noida |
| 2. Prayagraj | 7. Gonda | 12. Aligarh | 17. Saharanpur |
| 3. Ayodhya | 8. Basti | 13. Moradabad | 18. Muzaffarnagar |
| 4. Gorakhpur | 9. Kanpur | 14. Bareilly | 19. Meerut |
| 5. Varanasi | 10. Jhansi | 15. Ghaziabad | 20. Shahjahanpur |

Demand Side
Management



Capacity Building of DISCOMs

1. UPSDA have prepared DSM plan for all the 5 DISCOMs
2. In 2023, three capacity-building programs were organized for MVVNL, DVVNL, and PuVVNL.



Municipal Demand Side Management:

Mu-DSM

During 2022-23

UPSDA organized 12 MuDSM programs in different Municipal corporations at following locations.

1. Lucknow,
2. Kanpur,
3. Varanasi,
4. Gorakhpur,
5. Prayagraj
6. Ayodhya,
7. Agra
8. Meerut,
9. Ghaziabad,
10. Bareilly,
11. Aligarh,
12. Moradabad

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Agriculture Demand Side Management: Ag-DSM

1

Various workshops/ training programs

Various workshops/ training programs were organized for capacity building of farmers on energy conservation.

2

PCRA Workshops

Through PCRA 506 workshops organized in various villages of UP during 2018 and 2019 with 50% contribution of UPNEDA and 50% by PCRA.

3

Energy Efficiency Workshops

During 2022 total 86 energy efficiency workshops organized for farmers. Venue for these workshop were Krishi Vigyan Kendras (KVKs) of UP. 17 more Training Programme for Farmers are planned for this year.

17 more Training Programme for Farmers are being conducted this year.



Energy Audits

Energy Audit

1

Energy Audit Conducted

- Energy audit was conducted at various organizations by UPSDA, including NBRI Building, Sachivalaya Building, Jal Nigam Rural Drinking Water Pumps in Unnao,
- Energy audit is conducted in 12 Engineering Institutions during 2023-24.

2

Walk Through Energy Audit

Walk through energy audit was conducted for Sachivalaya building, Sugar Federation Building, and UP Council of Sugarcane Research – various buildings, among others.

Energy Audit

M&V of Agricultural Pumps

M&V was done for 80 agricultural pumps of farmers, ensuring efficient energy usage in the agricultural sector.

Government Hospitals

Walk through Energy Audit of 5 government hospitals was done, with an order placed for the implementation of recommendations to EESL.

Empanelment of Energy Auditing Firm

UPSDA empanelled various energy audit firms for industries and building categories, ensuring high-quality auditing services.

Demonstration Projects

1 Sachivalaya Building

Lights and fans were replaced by energy-efficient lights (LED) and fans in Sachivalaya buildings.

2 Street lights Replacement

- Total 822 street lights were replaced by LED lights with CCMS in Ghaziabad.
- Afterwards street lights are replaced by EESL in all the municipalities of Uttar Pradesh.

3 Pumping Sets Replacement

- 9 nos submersible pump sets were replaced by energy-efficient pumping sets in Unnao.
- 8125 electric pumps of farmers are replaced by energy efficient pumps with smart panel

4 Kasturba Gandhi Balika Vidyalaya

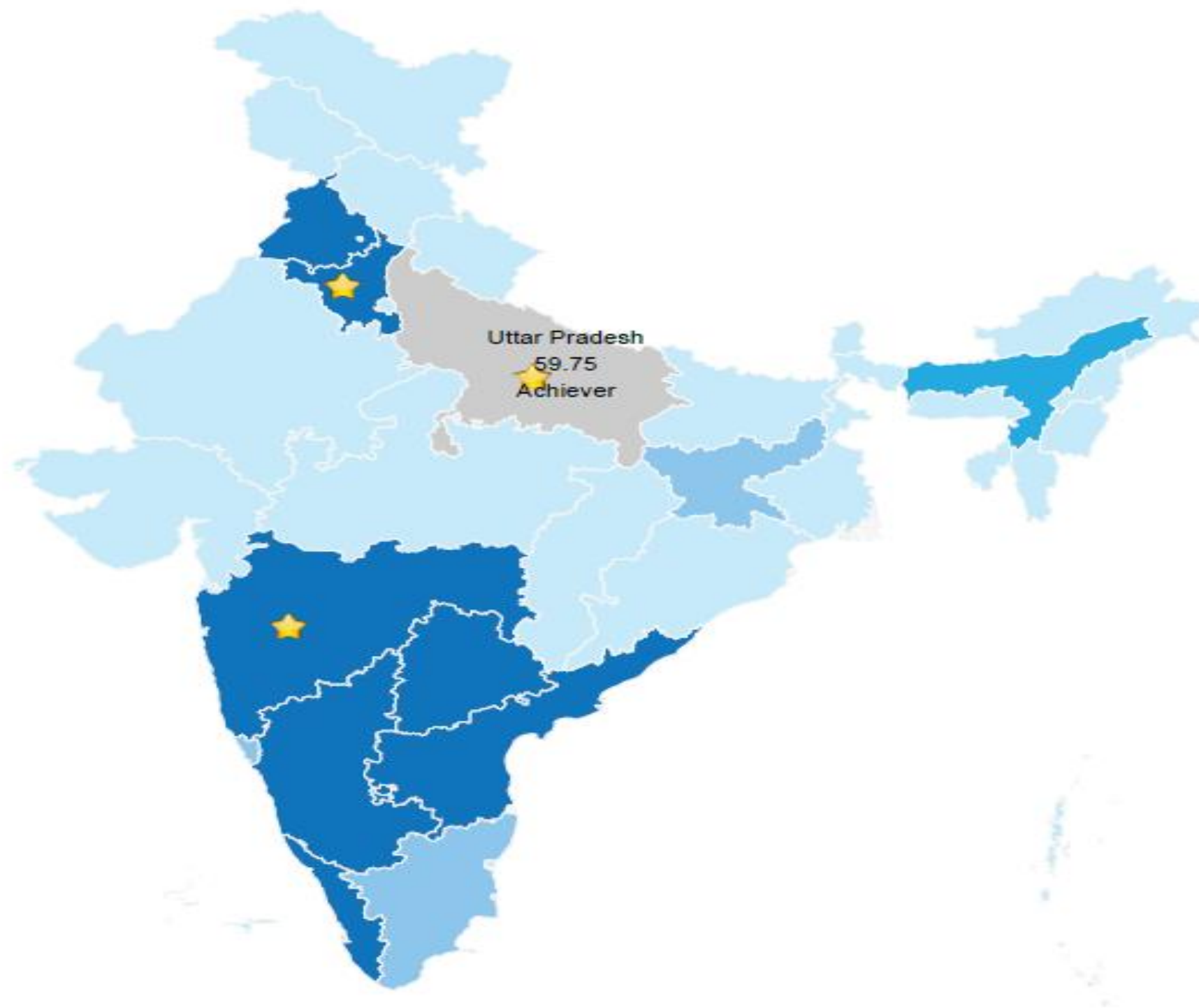
Lights and fans are being replaced by energy-efficient lights and fans in 722 KGBVs through EESL.

4 Hospitals

Lights & fans are replaced by energy-efficient appliances in 5 Government Hospitals through EESL.

State Energy Efficiency Index (SEEI): 2023

Front Runner	≥ 60
Achiever	50-59.75
Contender	30-49.75
Aspirant	< 30



Capacity Building, Workshop
&
Webinar

WORKSHOPS ORGANIZED DURING 2022-23 & 2023-24

Sr. No.	Workshop/ Webinar Topic	SDA	Date	Audience	No. of Participants
1	Workshop for Financial Institutions on Energy Efficiency Financing	UPNEDA	20-04-2022	Bank Officials & ESCOs	22 Banks & 9 ESCOs
2	Webinar for Capacity Building of Designated Consumers on PAT Scheme: Thermal Power Plants	UPNEDA	25-08-2022	DCs	30
3	Webinar for Capacity Building of Designated Consumers on PAT Scheme: Cement Plants.	UPNEDA	31-01-2023	DCs	15
4	Webinar for ALL Sectors on Jet Fan less Cooling Tower	UPNEDA	29-04-2023	DCs	17
5	1.Energy Savings & Improvement of Efficiency in HVAC systems 2. Utilization of VAM Technology	UPNEDA	25-08-2023	DCs and Sugar	42
6	Physical Workshop on capacity Building on PAT Scheme and Various compliances for DC of PAT Cycle III toVIII	UPNEDA	12-09-2023	DCs and Sugar	126
7.	Webinar on Energy Efficient Motors (IE3 & IE4) , VFD, IE5 and DEEP Programme	UPNEDA	01-11-2023	DCs and Sugar	123
8	Awareness Program on Energy Efficiency Financing and Opportunities for Scale-up	UPNEDA	22-12-2023	DCs and Sugar	30
9	Webinar for thermal power plant DCs of North Zone	UPNEDA	07-03-2024	Power Plants	40
10	Workshop on Energy Efficient Innovative Technologies	UPNEDA	15-03-2024	Sugar and DCs	55



THANK YOU