



Developing Monitoring & Evaluation Framework for UPSAPCC 2021-2030: Energy Efficiency and Green Energy Mission

Environment, Forest and Climate Change Department
Government of Uttar Pradesh

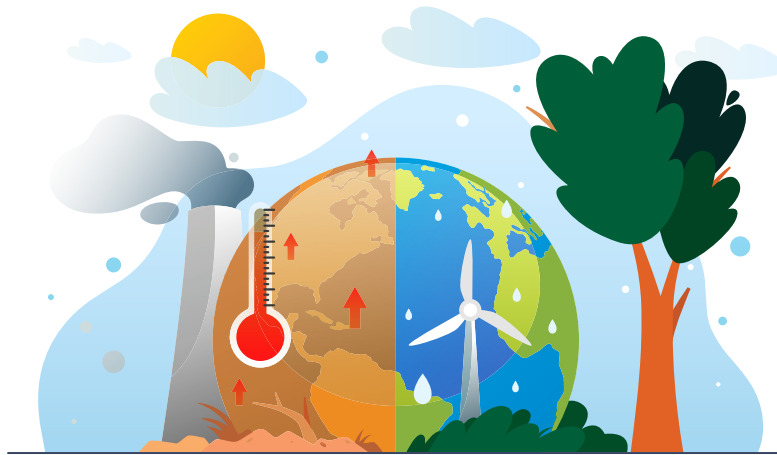
Introduction

The threat of climate change has become more and more real by every passing day. It is a challenge that humanity has to face as one and that is why international treaties like the Paris agreement 2015 and the pathway to sustainable development, as envisaged under Sustainable Development Goals (SDGs)- Agenda 2030 have been shaped.

The Indian government too had framed the the National Action Plan on Climate Change (NAPCC) of India in 2008. Over time each state has adapted these and framed their own State Action Plan on Climate Change (SAPCC) - twice, earlier in 2009 and an updated one in more recent years. In case of the state of Uttar Pradesh, this was done in 2021.

There are eight consolidated missions under the UPSAPCC 2.0 namely Green UP Mission, Sustainable Agriculture Mission, Jal Mission, Human Health Mission, Enhanced Energy Efficiency and Green Energy Mission, Sustainable Habitat Mission, Disaster Management Mission and Strategic Knowledge Mission.

But to successfully implement each of these missions, one needs a system to monitor and evaluate the various actions being taken under them.



About the Enhanced Energy Efficiency and Green Energy Mission

UP has seen an incremental growth in total electricity consumption, more than doubling from 43,742 consumers in 2010-11 to 91,355 consumers by 2018-19 (Ministry of Power, 2020)⁴. As of FY 2016-17, the state accounted for the highest primary energy consumption amongst all states in India. Despite the steady rate of growth and perennial demand, the state was still required to import about 6,232 (Gwh) of electricity in FY 2018-19 (Ministry of Power, 2020)⁴. While 100% villages have been electrified, less than 50% households have been electrified (Ministry of New and Renewable Energy, 2021)⁴. The mission has derived its mandate from the National Mission for Enhanced Energy Efficiency and the National Solar Mission of the NAPCC. The mission's priorities are spread across six strategies and broken down into 38 action points. The priority areas are:

- Implementation of Energy Conservation Building Code (ECBC)/Eco Niwas Samhita
- Continued star labelling of appliances
- Mandatory district cooling in commercial and industrial townships
- Promotion of energy efficient and low Global Warming Potential (GWP) refrigerants
- Universalisation of smart metering
- Light of day tariffs
- Solar roof tops
- Solarisation of pumps and pumping stations

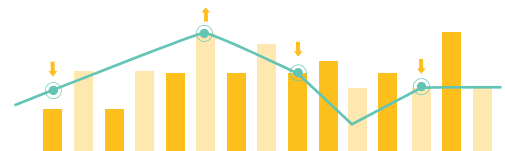


An oversight of the nature of actions and strategies across the eight missions of UPSAPCC 2.0

No	Mission	Strategies	Action Points	Adaptation	Mitigation	Both
1	Sustainable Agriculture Mission	5	19	18	-	1
2	Jal Mission	5	25	21	-	4
3	Green UP Mission	5	20	6	10	4
4	Enhanced Energy Efficiency and Green Energy Mission	6	37	1	32	4
5	Sustainable Habitat Mission	9	35	15	9	11
6	Human Health Mission	5	31	24	-	1
7	Disaster Management Mission	2	10	10	-	-
8	Strategic Knowledge Mission	4	10	10	-	-
lk	TOTAL	41	187	104	51	25



Why an M&E Framework for the revised UP SAPCC?



Meet the Goals

Monitoring and evaluation (M&E) frameworks are essential for ensuring that climate change action plans are effective in achieving their intended goals.

Keep track of Plans

It is crucial because it guarantees better evidence-based planning and tracking and aids in the identification of pertinent activities through the creation and operationalization of a framework.

Course Correction for the path ahead

Moreover, M&E is critical since gaps identified over time reveal mistakes, offer paths for learning and improvements, and provide opportunities to build on expertise and knowledge. A comprehensive M&E framework also allows policymakers and implementers to identify successes and challenges and make data-driven decisions to adjust their strategies accordingly.

Align with other state plans

With an eye on the goal, the metrics developed in the M&E framework also helps define roles and responsibilities better. The framework also leverages existing monitoring systems under other programmes in the state such as the UP SDG Vision 2030 and UP DEMP.

A foolproof system for the future

Once deployed, it will facilitate the creation of a data collection, flow, and management system through coordinated efforts by all relevant line departments



Vision for a dynamic Management Information System (MIS)

The M&E framework that has been developed should give way to a dynamic Management Information System (MIS) wherein data from various line departments will be collated, leading to effective monitoring of the targets set for various activities in the UP SAPCC 2.0. This system can continue to be adapted and used to for other future programmes.



The Method in brief

The M&E framework was created with the understanding that existing monitoring and data systems should be utilized rather than constructing a separate parallel data gathering mechanism. All relevant documents including the UP DEMP , UP SDG Vision 2030, NITI Aayog SDG index, and the MoSPI documents were studied along with various state and national schemes and programmes that overlap with a particular mission and the indicators within them were collated.

After this the indicators were shortlisted. As a first step only the intermediate and outcome-level indicators were shortlisted. Another criteria was whether they mapped to the strategies within a certain mission or not. Finally, the indicator or a set of indicators were chosen if they gave a holistic perspective of the strategy. Each criteria had a score attached to it and based on this scoring mechanism, the indicators were ranked and chosen.

To finalize the process, consultative workshops were held with various line departments and the indicators were further refined along with identifying or assigning the data sources for these indicators, the periodicity of their collection, who would be responsible for the job, etc.

What is notable is that some of the indicators are relevant to more than one strategy and based on this and other criteria such as data availability, relevance to strategy/ies, holistic perspective, these indicators have been defined as high-priority or not.



How can one use this book?

This book compiles the different indicators that the various line departments need to gather information about in order to successfully monitor the strategies of UPSAPCC 2021-2030. The finalized list of indicators for the Energy Efficiency and Green Energy Mission are presented below in Table 1A.

Table 1A: Indicators for the Energy Efficiency and Green Energy Mission

Blue text: Vulnerability indicators (from SAPCC)

Pink Text: These indicators are not from any current scheme since they are part of an action point, which is a recommendation for something that needs to happen in future.

Brown Text: Indicators from NITI Aayog SDG Index 2020

Green text: Dashboards and Reports

S. No	Indicators(13)	Mapping to Strategy
1	AT&C Loss	1
2	ACS - ARR Gap	1
3	Percentage of metered connections	1
4	Solar pumping capacity installed	1,4
5	No. of technicians trained	2
6	No. of technicians trained	3
7	Grid-connected solar power generated	5
8	RE grid capacity set under PM-KUSUM	5
9	Decentralised off-grid renewable energy systems/devices in both rural and urban areas	5
10	Commissioned/ Installed off-grid capacity	5

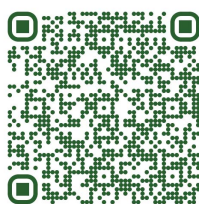
Table 1A: Indicators for the Energy Efficiency and Green Energy Mission (Contd.)

S. No	Indicators(13)	Mapping to Strategy
11	Renewable energy share in the total installed electricity generation	5
12	No. of electric vehicles registered	6
13	No. of charging points on highways and in public places (residential towns, petrol stations, and railway and bus terminals)	6

In Table 2: Operationalized M & E Framework for the Energy Efficiency and Green Energy Mission, you will find a detailed look at the individual indicators, their definitions, the strategies they have been mapped to the measurement unit, their data sources, the department or agency responsible for their collection and the period during which this has to be done. Thus this is the most comprehensive table for the indicators and offers the Operationalized M & E Framework for the Energy Efficiency and Green Energy Mission.



Since all these indicators have been derived from different schemes, one can refer to the schemes under Table 3: Various State Schemes and their alignment with the Energy Efficiency and Green Energy Mission and its strategies. If one is working on certain projects under UP DEMP or has to see the alignment of the indicators with a specific programme or the UP SDG Vision 2030, one can refer to the tables in the annexure online using the QR code given below.



To understand the detailed process behind these tables one can refer to Developing Monitoring & Evaluation Framework for UPSAPCC 2021-2030 : a process documentation.



Reference Text for Table 2: Operationalized M & E Framework for the Energy Efficiency and Green Energy Mission

The Uttar Pradesh State Action Plan on Climate Change (UP SAPCC) 2021-2030 presents climate change–related mitigation and adaptation strategies to address regional and state-specific climate risks. The table below puts together the operationalized M&E Framework for the Energy Efficiency and Green Energy Mission. This Framework was developed after several rounds of deliberations and discussions between DoEFCC, GIZ and Sambodhi, and presents the final short-listed indicators for this mission.

Instructions for reading the mission spreadsheet	Legends
Column 2, Indicator , presents the indicators selected for this mission.	** Indicators derived from schemes, programmes, NITI Aayog SDG Index, SAPCC Vulnerability Indicators, Dashboards and reports
Column 3, Definition , provides a definition of the indicator.	Blue text: Vulnerability indicators (from SAPCC)
Column 4, Mapping to Strategy , presents the strategy or strategies to which each indicator is being mapped.	Pink Text: These indicators are not from any current scheme since they are part of an action point, which is a recommendation for something that needs to happen in future.
Column 5, Measurement Unit , is the unit (e.g., kg, hectares, INR, number, etc.) at which indicator is being measured.	Brown Text: Indicators from NITI Aayog SDG Index 2020
Column 6, Data Source , is the relevant national or state level schemes, programmes, projects, and/or dashboards mapped to the indicators [Source: secondary research].	Green text: Dashboards and Reports
Column 7 presents the Department/ Agency responsible for collecting data.	
Column 8, Periodicity , is the frequency at which data is available from the said source. Eg., Annual, bi-annual, quarterly, monthly, etc.	
Column 9, Notes , contains additional relevant information,	

Strategy 1	Minimize AT&C losses in transmission and distribution of electricity
Strategy 2	Make SME clusters energy efficient
Strategy 3	Create enabling environment for market penetration of efficient cooling systems
Strategy 4	Solarize conventional energy-based private and public water-pumping works
Strategy 5	Set up off-grid solar power plants on wasteland in rural UP, thus increasing farmers income
Strategy 6	Enable significant transition to EVs in cities by 2030

Table 2: Operationalized M & E Framework for the Enhanced Energy Efficiency and Green Energy Mission

No.	Indicator (I3)	Definition	Mapping to strategy
1	AT&C Loss	<p>The concept of Aggregate Technical & Commercial losses provides a realistic picture of loss situation in the context it is measured. It is combination of energy loss (technical loss + theft + inefficiency in billing) & commercial loss (default in payment + inefficiency in collection)</p> <p>Higher value means lower performance (-)</p>	1
2	ACS-ARR Gap	<p>The term ACS means average cost of supply per unit of power and ARR means average revenue realized. The government has taken various steps to minimize the difference between ACS and ARR. The gap between ACS and ARR should be as low as possible.</p> <p>Higher value means lower performance (+)</p>	1
3	Percentage of metered connections	<p>This means the ratio of the number of connections that have meters installed to the total number of connections, expressed as a percentage</p> <p>Higher value means better performance (+)</p>	1
4	Solar-pumping capacity installed	<p>Irrigation load connected to the grid is not a remunerative category of load and solarizing the irrigation pumps will improve the financial health of DISCOMs. Progress in this area can be measured by the quantum of solar pumping capacity that is installed</p> <p>Higher value means better performance (+)</p>	1,4

Measurement unit	Data source	Department/Agency responsible for collection of data	Periodicity	Notes
Percentage	UDAY Dashboard	UPPCL	Monthly	
INR/unit	UDAY Dashboard	UPPCL	Monthly	
Percentage	Uttar Pradesh Power Corporation Limited (UPPCL)	UPPCL	Monthly	
MW	PM KUSUM - Components A, B and C. Although Component B is for off-grid pumpsets	UPPCL and UPNEDA; Department of Horticulture for Component B	Yearly	

Table 2: Operationalized M & E Framework for the Enhanced Energy Efficiency and Green Energy Mission

No.	Indicator (13)	Definition	Mapping to strategy
5	No. of technicians trained in SME clusters	Technicians in SME clusters need to be adequately trained so that they can implement/execute energy efficient interventions in the clusters Higher value means better performance (+)	2
6	No. of technicians trained in star-labelled appliances	Technicians involved in the installation, repair and maintenance of star-labelled appliances need to be adequately trained so that they undertake their role effectively Higher value means better performance (+)	3
7	Grid-connected solar power generated	Total electricity generated by all the grid connected solar power plants Higher value means better performance (+)	5
8	RE grid capacity set under PM-KUSUM	Total capacity of solar power plants set up under PM KUSUM programme Higher value means better performance (+)	5
9	Decentralized off-grid renewable energy systems/devices in both rural and urban areas	Total number of decentralized off-grid systems and devices set up in the state Higher value means better performance (+)	5

Measurement unit	Data source	Department/Agency responsible for collection of data	Periodicity	Notes
Number	Department of MSME; UPNEDA - SDA	Department of MSME; UPNEDA - SDA	Yearly	
Number	UPNEDA, [UP Saves Energy web- site platform -(http:// upsavesenergy.com/)]	UPNEDA - SDA	Yearly	In order to capture prog- ress under these indicators, focus should be on number of star-labelled products/ appliances sold (data from the industry) and training of retailers should be captured
MWh	Department of Additional Sources of Energy, UP gov- ernment Uttar Pradesh New & Renewable Energy Develop- ment Agency [PM KUSUM Component A]	UPNEDA, UPPCL	Yearly	
MW	Department of Additional Sources of Energy, UP gov- ernment Uttar Pradesh New & Renewable Energy Develop- ment Agency [PM KUSUM]	UPNEDA, UPPCL	Yearly	
Number	Department of Additional Sources of Energy, UP gov- ernment Uttar Pradesh New & Renewable Energy Develop- ment Agency [PM KUSUM Component B]	1. UPNEDA, 2. Department of Horticulture	Yearly	

Table 2: Operationalized M & E Framework for the Enhanced Energy Efficiency and Green Energy Mission

No.	Indicator (13)	Definition	Mapping to strategy
10	Commissioned/installed off-grid capacity	Total capacity of all solar power plants that are not connected to the grid, i.e., off-grid Higher value means better performance (+)	5
11	Renewable energy share in the total installed electricity generation	This means the ratio of total renewable energy generated to the total electricity generated (or consumed) in the state Higher value means better performance (+)	5
12	No. of electric vehicles registered	No. of electric vehicles registered Electric vehicles includes: Bus + e-rickshaw with cart (G) + e-rickshaw (P) + goods carrier + M cycle/scooter + M cycle/scooter with side car + moped + motor cab + motor car + motorized cycle (CC > 25cc) + three-wheeler goods + three-wheeler passenger Higher value means better performance (+)	6
13	No. of charging points on highways and in public places (residential towns, petrol stations, railway and bus terminals)	No. of charging points on highways and in public places (residential towns, petrol stations, railway and bus terminals) Higher value means better performance (+)	6

Measurement unit	Data source	Department/Agency responsible for collection of data	Periodicity	Notes
MW	UPNEDA and Department of Horticulture	1. UPNEDA, 2. Department of Horticulture	Yearly	
Percentage	UPPCL, UPNEDA	UPPCL, UPNEDA	Yearly	
Number	Transport Department [Uttar Pradesh Electric Vehicle Manufacturing Policy 2019]	Transport Department	Annual	
Number	Invest UP - Investment, Promotion and Facilitation Agency [FAME India]	Invest UP	Annual	https://e-amrit.niti.gov.in/charging-map



Schemes for the Enhanced Energy Efficiency and Green Energy Mission

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
1	Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	The objective is to provide uninterrupted power supply to rural India. The initiative targets the separation for feeders for agriculture and household purposes. It always aims to strengthen the transmission and distribution system.
2	Ujwal Discom Assurance Yojana (UDAY) (Dashboard)	The objectives are: <ul style="list-style-type: none">• Financial Turnaround• Operational improvement• Reduction of cost of generation of power• Development of Renewable Energy• Energy efficiency & conservation
3	Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyaan (PM-KUSUM)	The scheme aimed at providing 10,000 MW of Decentralized Ground Mounted Grid Connected to Renewable Power Plants of individual plant size up to 2 MW.
4	National Mission for Enhanced Energy Efficiency (NMEEE)	The Perform, Achieve and Trade (PAT) scheme aims at reducing Specific Energy Consumption (SEC), i.e., energy use per unit of production for Designated Consumers (DCs) in energy-intensive sectors, with an associated market mechanism to enhance cost-effectiveness through certification of excess energy saving which can be traded. The Sector-wise Designated Consumers (DCs) under PAT Scheme (Cycle -I to Cycle -VI) along with energy-saving targets.
5	National Smart Grid Mission (Dashboard)	It was established to accelerate Smart Grid deployment in India. NSGM has been in operational since January 2016. It has its own resources, authority, functional and financial autonomy to plan and monitor implementation of its policies and programmes.

Geography	Timeline	Notes
National	2014 - ongoing	Link - https://www.ddugjy.gov.in/comxivillage-wisede-tails/?villc-d=01001300&estc-d=02&edtcd=06&blkcd=0002&elect_status=&elect_status1=&elect_status2=E&t=1 https://byjus.com/free-ias-prep/ddugjy/
National	2015 - ongoing	Link - https://www.uday.gov.in/home.php
National	Ongoing	Link - https://www.india.gov.in/spotlight/pm-ku-sum-pradhan-mantri-ki-san-urja-suraksha-evam-ut-thaan-mahabhiyan-scheme https://mnre.gov.in/img/documents/uploads/-file_f-1632204688401.pdf
National	PAT Phase-III started in 2017, On-going	Link - https://www.pib.gov.in/Press-ReleasePage.aspx?PRID=1744431
National	2016-ongoing	Link - https://www.nsgm.gov.in/ https://www.nsgm.gov.in/en/sm-stats-all

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
6	Integrated Power Development Scheme (IPDS)	IPDS envisages strengthening of sub-transmission and distribution network including metering at all levels in urban areas. Earlier scheme of Restructured Accelerated Power Development and Reforms Programme (R-APDRP) is subsumed in the new scheme of IPDS
7	National Solar Mission (NSM)	Ambitious targets necessitate development of Human Resources in adequate numbers to both install and maintain RE capacities. In the last six years, the Ministry has taken a number of initiatives for this purpose. Short term training is imparted. This includes training for maintaining solar installations (the trained technicians are called Suryamitra), and solar water pumps (the trained technicians are called Varunmitra).
8	Global Environment Friendly (GEF) Scheme	MNRE project is an innovative financing scheme to significantly promote the adoption of the Concentrated Solar Thermal (CST) Technologies for the process of heat applications in the industrial sectors. It also aims at creating the necessary environment for increasing penetration and the scaling up of CST Technology in India through this innovative financing mechanism.
9.	NATIONAL INSTITUTE OF SOLAR ENERGY (NISE) on National Solar Mission (NSM)	NISE is maintaining NABL accredited Solar Photovoltaic module testing laboratory, lighting system test laboratory, battery testing facility and solar water pumping system test rig and outdoor test facilities. The Institute has fully developed testing facility for small and large size Solar Thermal Systems and Solar Resource Assessment and collaborating with other institutes to achieve the planned targets of R&D.
10	Atal Mission for Rejuvenation and Urban Transformation (AMRUT) Scheme	The objective is providing basic services (e.g. water supply, sewerage, urban transport) to households and build amenities in cities which will improve the quality of life for all, especially the poor and the disadvantaged is a national priority. Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).

Geography	Timeline	Notes
National	2014-ongoing	Link - https://www.ipds.gov.in/ https://powermin.gov.in/sites/default/files/uploads/Integrated_Power_Development_Scheme_Monthly_updated_for_Aug_2021.pdf
National	2014 - ongoing	Link - https://mnre.gov.in/solar/current-status/ https://www.iea.org/policies/4916-jawaharlal-nehru-national-solar-mission-phase-i-ii-and-iii https://www.seci.co.in/upload/static/files/mis-sion_document_JNNSM(1).pdf
National	Ongoing	Link - https://www.indiafilings.com/learn/global-environment-friendly-gef-scheme/
State	Ongoing	Link - https://nise.res.in/ https://mnre.gov.in/solar/current-status/
National (61 cities of the state of Uttar Pradesh are covered in this scheme)	2015 - ongoing	Link - http://amrut.gov.in/upload/597047f43791a05TemplateforSLIP-Stormwaterdrainage14082015.pdf http://www.amrut.gov.in/upload/upload-files/-files/AMRUT%20Guidelines%20(1).pdf http://amrut.gov.in/content/Dashboard.php

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
11	Uttar Pradesh Electric Vehicle Manufacturing Policy 2019	Electrification of automotive industry aims at achieving the set objectives by decarbonising the transport system.
12	SDG Goals: Progress Report 2021 Uttar Pradesh (Based on NIF Progress Report 2021 by MoSPI).	The "SDGs National Indicator Framework Progress Report, 2021" highlights the progress made so far in the journey of SDGs monitoring/achievement at the national level and identifies the gaps. Based on the report, the Department of Planning, Govt of Uttar Pradesh prepared the report for the state to present the achievements vis-a-vis achievement at the country level for each of the indicators.
13	Jawaharlal Nehru National Solar Mission Scheme	To significantly promote the adoption of the Concentrated Solar Thermal (CST) Technologies for the process of heat applications in the industrial sectors. It also aims at creating the necessary environment for increasing penetration and the scaling up of CST Technology in India through this innovative financing mechanism.
14	Saubhagya: Household Electrification Status (Dashboard)	To ensure uninterrupted electrification of rural as well as urban households

Geography	Timeline	Notes
State	2019-22	<p>Link – https://invest.up.gov.in/up-electric-vehicle-mftg-mobility-policy-2019/</p> <p>https://invest.up.gov.in/wp-content/uploads/2021/04/UP-EV_2019.pdf</p> <p>https://evreporter.com/uttar-pradesh-ev-policy/#:~:text=To%20phase%20out%20all%20conventional,segment%20of%20vehicles%2C%20by%202024.</p>
State	2019-22	<p>Link – https://planning.up.nic.in/Go/SDG/UP_SDG%20Progress%20MoSPI%203.1%2028-12-2021.pdf</p>
National	Phase III (2017-2022)	<p>Link - https://www.iea.org/policies/4916-jawaharlal-nehru-national-solar-mission-phase-i-ii-and-iii</p>
National	2017 -ongoing	<p>Link - https://www.drishtias.com/daily-updates/daily-news-analysis/saubhagya-scheme-1</p> <p>https://saubhagya.gov.in/</p>

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
15	FAME India	In order to boost the manufacturing of hybrid and electric vehicles in India, Government of India has launched The Faster Adoption and Manufacturing of (Hybrid & Electric Vehicles in India (FAME Scheme) in 2015, under National Electric Mobility Mission Plan (NEMMP) with an aim to promote eco-friendly vehicles in the country. It has set an ambitious target of 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards in India ⁴ , thereby creating wide opportunities in EV manufacturing.
16	16. Small Hydro Power Programme scheme	The objective of the SHP scheme is to encourage the State Government entities and Independent Private Producers (IPPs) to set-up new Small Hydro projects so as to realise the entire 21000 MW potential in phased manner.
17	Solar Park Scheme	Individual solar power projects of smaller capacity incur significant expenses in site development, drawing separate transmission lines to nearest substation, procuring water and in creation of other project developers to acquire land, get change of land project. To overcome these challenges, the scheme for "Power Projects" was rolled out
18	Standards and Labeling programme	To provide the consumer an informed choice about the energy saving and thereby the cost saving potential of the relevant marketed product

Geography	Timeline	Notes
National	2015-24	<p>Link - https://www.godigit.com/guides/govern-ment-schemes/fame-in-dia-scheme#:~:text=Features%20of%20Phase%20I%20of,charging%20stations%20during%20Phase%20I</p> <p>https://static.pib.gov.in/WriteReadData/specificdocs/documents/2022/jul/doc202271169601.pdf</p>
National	2017 - ongoing	<p>Link - https://www.indiascienceandtechnology.gov.in/programme-schemes/social-development/small-hydro-power-programme</p> <p>https://mnre.gov.in/img/documents/uploads/7691718d9194ab68b7d9638bb901a74.pdf</p>
National	2014 - ongoing	<p>Link - https://mnre.gov.in/img/documents/uploads/bcf7e95e88ae4f8dbfa8bd25d21e5e12.pdf</p>
National	2006 - ongoing	<p>Link - https://vikaspedia.in/energy/policy-support/energy-efficiency/standards-and-labeling-programme</p>

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
19	Energy Conservation Building Codes (ECBC)	ECBC sets minimum energy standards for new commercial buildings having a connected load of 100kW or contract demand of 120 KVA and above. While the Central Government has powers under the EC Act 2001, the state governments have the flexibility to modify the code to suit local or regional needs and notify them
20	Financial Support Scheme to Promote Innovative Industrial Organic Waste-to-Energy (IOWtE) Biomethanation Technologies and Business Models in India	The objective of the programme is to support the setting up of Waste to Energy projects for generation of Biogas/ BioCNG/ Power/ producer or syngas from urban, industrial and agricultural wastes/residues.
21	Off-grid Solar PV Applications Programme	Aimed at providing solar PV based applications in areas where grid power is either not available or is unreliable.
22	Atal Jyoti Yojana (AJAY) Phase I & II	To illuminate dark regions through the establishment of solar street lights.
23	Rooftop solar scheme	To generate solar power by installing solar panels on the roof of the houses. The government aims to achieve 100 GW of solar power capacity by 2022. Of this, 40 GW of energy will be obtained from solar rooftop systems

Geography	Timeline	Notes
National	2007 – ongoing	Link – https://powermin.gov.in/en/content/energy-efficiency
National	2021-22 to 2025-26	Link – https://economictimes.indiatimes.com/industry/renewables/mnre-launches-interest-subvention-scheme-for-waste-to-energy-biomethanation-projects/article-show/85211001.cms?from=mdr https://mnre.gov.in/waste-to-energy/schemes
National	1992 - ongoing	Link – https://mnre.gov.in/img/documents/uploads/-file_f-1589864991781.pdf
National	Phase I was implemented during September 2016- March 2018. Phase II was implemented during 2018-19 and 2019-20.	Link – https://eeslindia.org/en/atal-jyoti-yojana/ https://vikaspedia.in/energy/policy-support/renewable-energy-1/atal-jyoti-yojana
National	2014-22	Link – https://www.drishtias.com/daily-updates/daily-news-analysis/rooftop-solar-scheme https://www.insightsonindia.com/2022/01/22/rooftop-solar-scheme/ https://www.jagranjosh.com/general-knowledge/solar-rooftop-yojana-1637735622-1

Table 3: Various State Schemes and their alignment with the Enhanced Energy Efficiency and Green Energy Mission and its strategies

No.	Scheme Name	Description
24	Suryamitra Skill Development Programme (SSDP)	To aim to develop the skills of youth, considering the opportunities for employment in the growing Solar Energy Power Project's installation, operation &
25	National Biogas and Manure Management Programme (NBMMP)/ Biogas Power (Off-grid) Generation Programme (BPGP)	Installation of Biogas Plants based on cattle dung and other mixed biodegradable wastes to meet cooking, heating, lighting & small power and thermal energy needs of the people of remote and rural areas of the country.
26	Super-Efficient Equipment Programme (SEEP)	SEEP is a program designed to bring accelerated market transformation for super efficient appliances by providing financial stimulus innovatively at critical point/s of intervention. Under this program, ceiling fans have been identified as the first appliance to be adopted. SEEP for ceiling fans aims to leapfrog to an efficiency level which will be about 50% more efficient than market average by providing a time bound incentive to fan manufacturers to manufacture super efficient (SE) fans and sell the same at a discounted price. Aims to stimulate technological upgradation and their accelerated introduction by manufacturers through an incentive mechanism which would motivate manufactures to manufacture such super efficient fans and sell at competitive price in a highly price sensitive fans market.
27	Uttar Pradesh Power Distribution Network Rehabilitation Project	The ADB-funded Uttar Pradesh Power Distribution Network Rehabilitation Project is aimed at improving the quality and reliability of electricity supply in Uttar Pradesh. The project involves conversion of 65,000 km of rural low-voltage distribution lines from bare conductors to aerial bundle conductors and construction of a parallel network of 11-kilovolt feeders to separate the distribution of electricity between residential consumers and agriculture consumers

Geography	Timeline	Notes
National	2018 – ongoing	Link – https://suryamitra.nise.res.in
National	1981-82 to ongoing	Link – https://pib.gov.in/newsite/PrintRelease.aspx?relid=175299 https://cag.gov.in/uploads/download_audit_report/2015/Union_-_Civil_Performance_Renewable_Energy_Report_34_2015_chap_8.pdf
National	2012 – ongoing	Link – https://www.iea.org/policies/2615-super-efficient-equipment-programme-seep
State	2020 - ongoing	Link – https://www.gktoday.in/topic/uttar-pradesh-power-distribution-network-rehabilitation-project-key-facts/

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