



विद्युत मंत्रालय
MINISTRY OF
POWER



State Energy Efficiency Index (SEEI) 2023

Date: May 07, 2024



→ State Energy Efficiency Index (SEEI)

- Initiative by the Bureau of Energy Efficiency in association with the Alliance for an Energy Efficient Economy (AEEE)
- A tool designed to track energy efficiency initiatives in the states and UTs
- It assumes importance given that energy efficiency is the cheapest, fastest, and cleanest solution to address climate change and achieve energy security.

Objectives



Help drive EE policies and programmes implementation at the state and local level



Highlight best practices and encourage healthy competition among states and UTs



Track progress in managing the states' and India's energy footprint

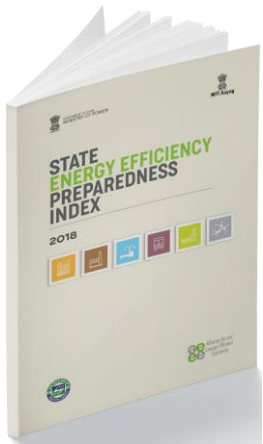


Institutionalise state-level data capture and monitoring of EE activities by the State Designated Agencies (SDAs)

→ SEEI Journey

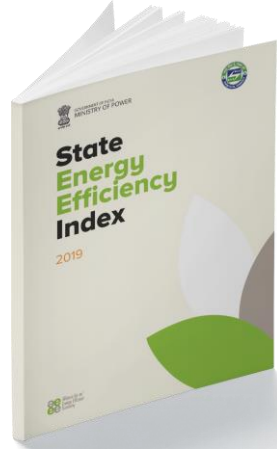
2018

State Energy Efficiency
Preparedness Index
2018



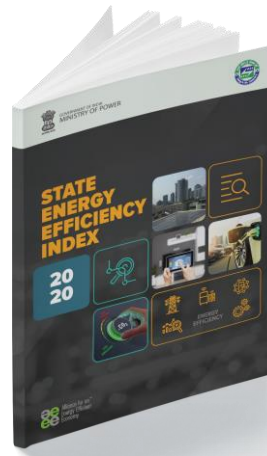
2020

State Energy
Efficiency Index
2019



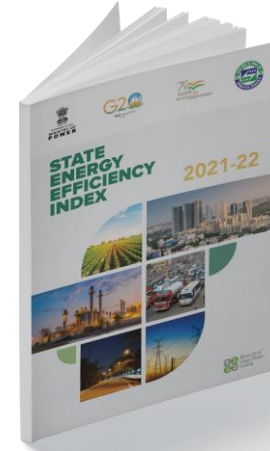
2021

State Energy
Efficiency Index
2020



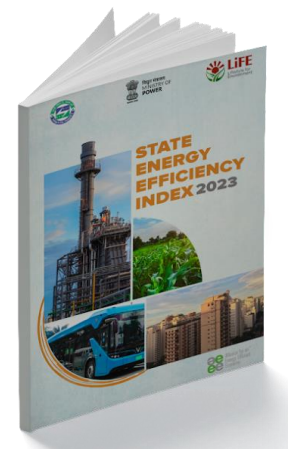
2023

State Energy
Efficiency Index
2021-22



2024

State Energy
Efficiency Index
2023





March 1, 2024: Union Minister of Power and New & Renewable Energy, Shri R. K. Singh released the State Energy Efficiency Index (SEEI) 2023 report during the celebration of the 22nd Foundation Day of Bureau of Energy Efficiency in New Delhi.

Results of SDA feedback survey on SEEI 2021-22 conducted in August 2023*



Improving EE data collection and data management



Tracking States' progress



Enabling the overall coordination with other state departments to gather information



Developing ideas for EE programmes



Influencing the State government/ departments to secure more budget for EE



Enabling better relationship private sector for collaboration in EE products & services

*Based on the survey in August 2023
25/36 SDAs responded*

→ SEEI 2023 framework

Categories		Sectors							
Policy		Cross-sector	Buildings	Industries	Municipal Services	Transport	Agriculture	DISCOM	Total
Finance									
Institutional Capacity									
Adoption of EE Measures									
Energy Savings									
State Programmes									
		Programme-specific Indicators							
		Common Indicators							
Sector weights		15	22	17	11	16	8	11	100
Indicator Weights	Common	15	9	6	2	7	3	6	48
	Programme		13	11	9	9	5	5	52

SEEI 2023 is based on data for FY 2022-23

SEEI 2023 Data Sources

- State Agencies**
- **SDAs**
 - State Depts
 - DISCOMs
 - Municipalities

- Central Agencies**
- BEE
 - NITI AYOOG
 - MoRTH Vahan portal
 - CEA General Review
 - MoPNG statistics
 - RBI Handbook

- Other Agencies**
- EESL
 - CII
 - IGBC
 - GBCI
 - GRIHA

Scores have been allocated only for indicator data with valid references

References provided by SDAs, BEE or collected by AEEE from external sources

All data and references reviewed and approved by BEE

Quantitative and outcome-based indicators are scored on a graded scale

→ State's grouping

- ❖ States are grouped based on their Total Final Energy Consumption (TFEC).
- ❖ TFEC grouping helps states compare performance and share best practices within their peer group.

State groups based on TFEC for FY 2020-21

Group 1 >15 MTOE

- Maharashtra (MH)
- Gujarat (GJ)
- Uttar Pradesh (UP)
- Tamil Nadu (TN)
- Karnataka (KA)
- Odisha (OD)
- Rajasthan (RJ)
- Madhya Pradesh (MP)
- West Bengal (WB)
- Haryana (HR)

Group 2 5-15 MTOE

- Telangana (TS)
- Andhra Pradesh (AP)
- Chhattisgarh (CG)
- Punjab (PB)
- Jharkhand (JH)
- Kerala (KL)
- Bihar (BR)
- Delhi (DL)

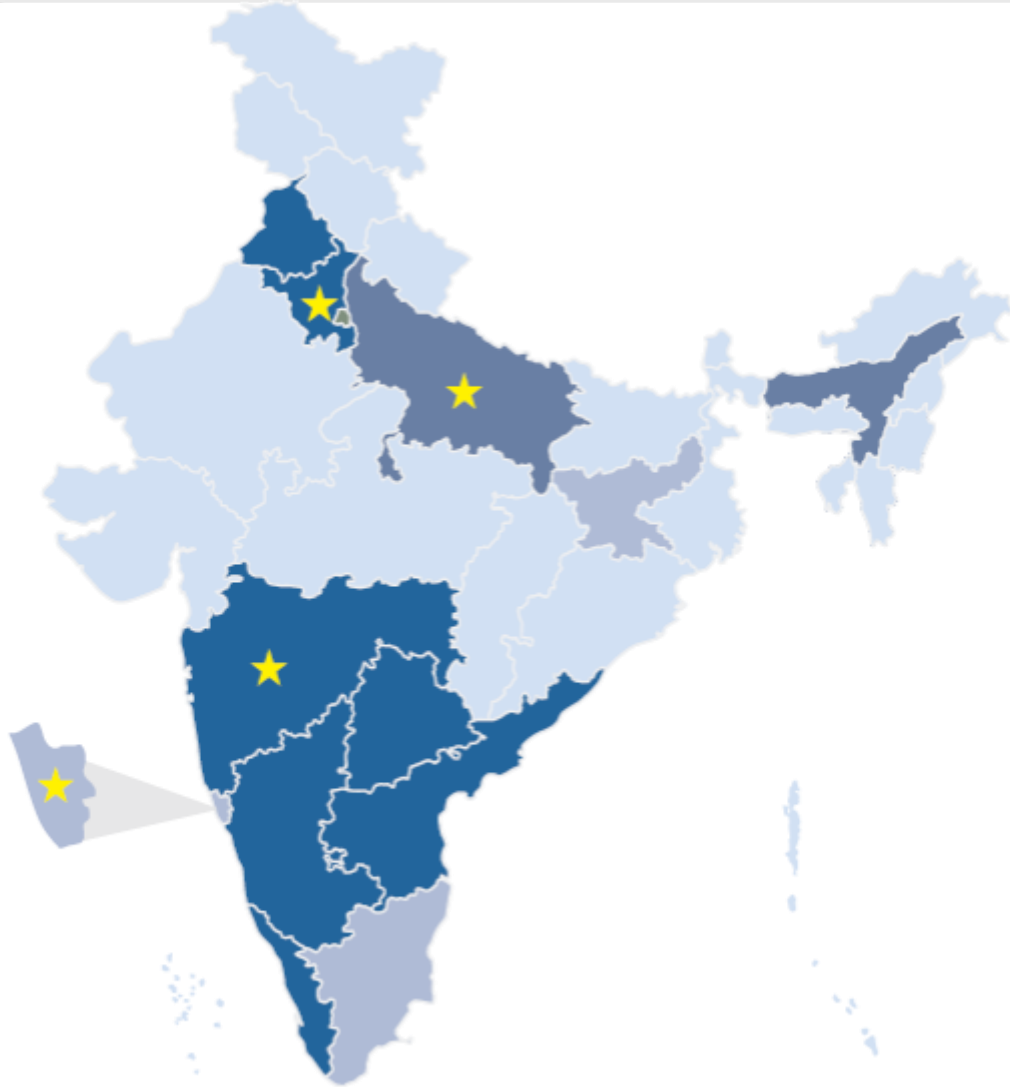
Group 3 1-5 MTOE

- Assam (AS)
- Uttarakhand (UK)
- Jammu and Kashmir (JK)
- Himachal Pradesh (HP)
- Goa (GA)
- Dadra & Nagar Haveli and Daman & Diu (DD)

Group 4 <1 MTOE

- Puducherry (PY)
- Meghalaya (ML)
- Chandigarh (CH)
- Manipur (MN)
- Tripura (TR)
- Arunachal Pradesh (AR)
- Nagaland (NL)
- Mizoram (MZ)
- Sikkim (SK)
- Andaman and Nicobar Islands (AN)
- Ladakh (LK)
- Lakshadweep (LD)

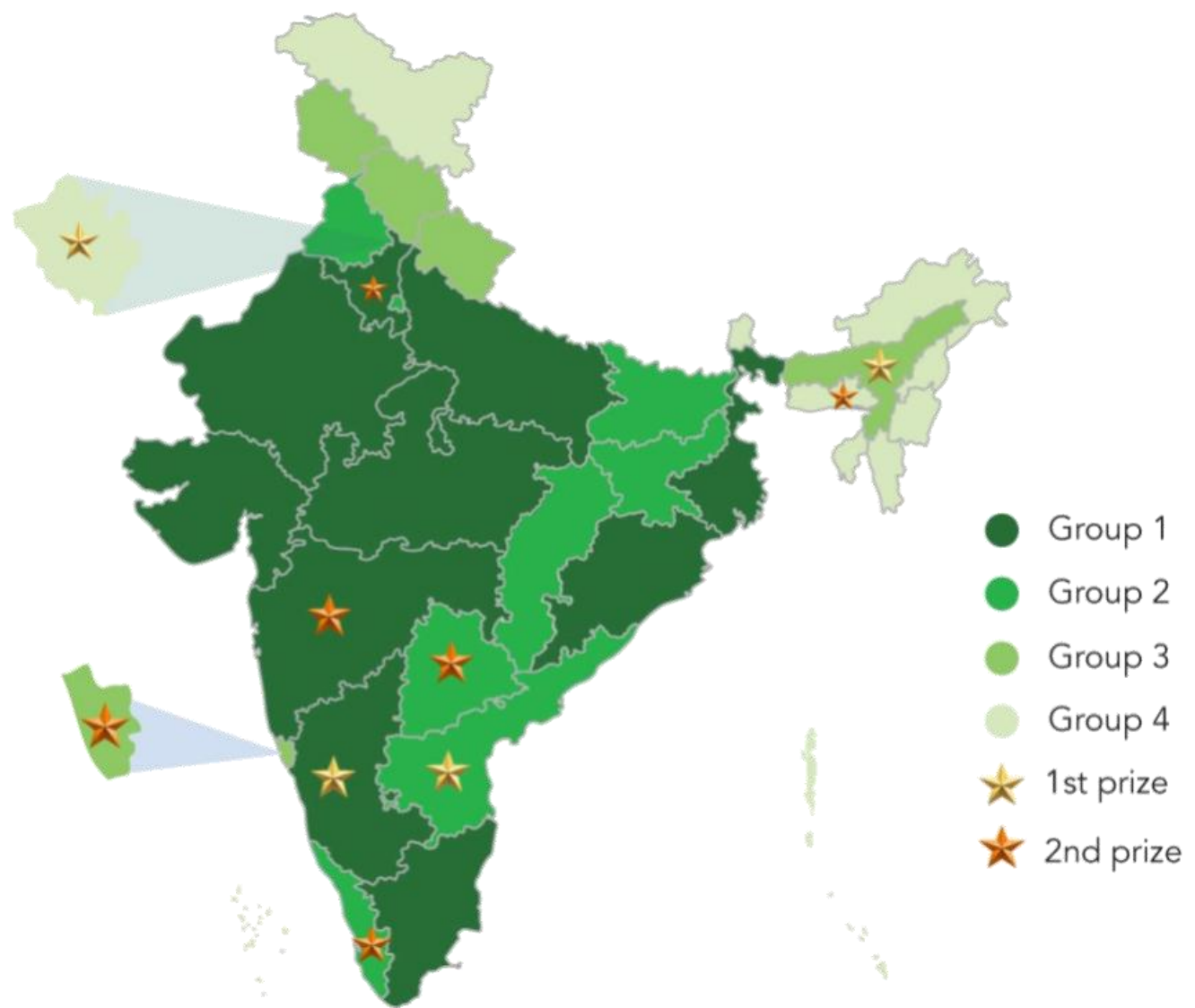
→ SEEI 2023 Results





Performance Category	SEEI 2019	SEEI 2020	SEEI 2021-22	SEEI 2023
Front Runner (≥ 60)	0	2	5	7
Achiever (50-59.75)	3	6	4	2
Contender (30-49.75)	8	4	8	3
Aspirant (< 30)	25	24	19	24

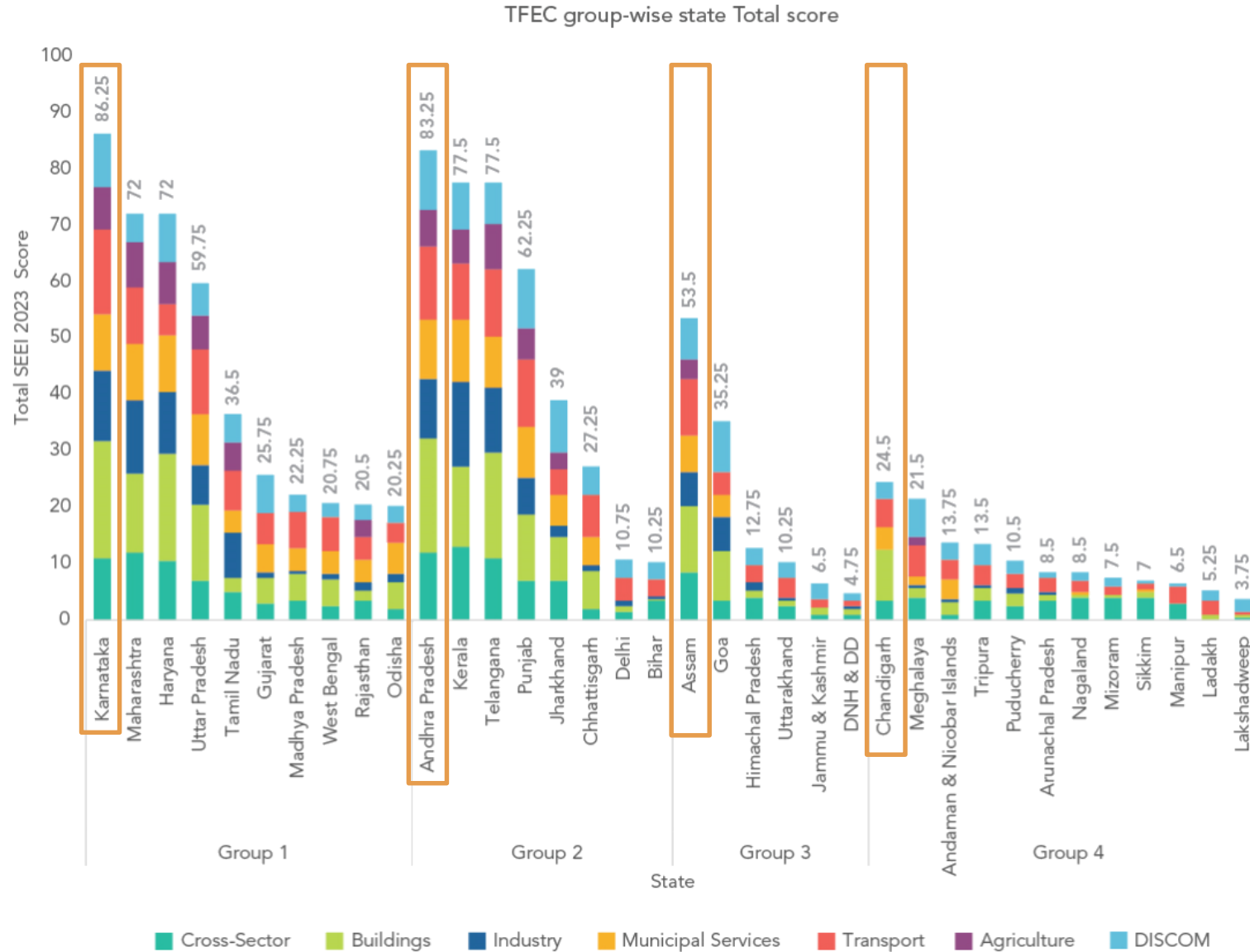
★ Most improved states (>10 points improvement)

→ Top performers in SEEI 2023

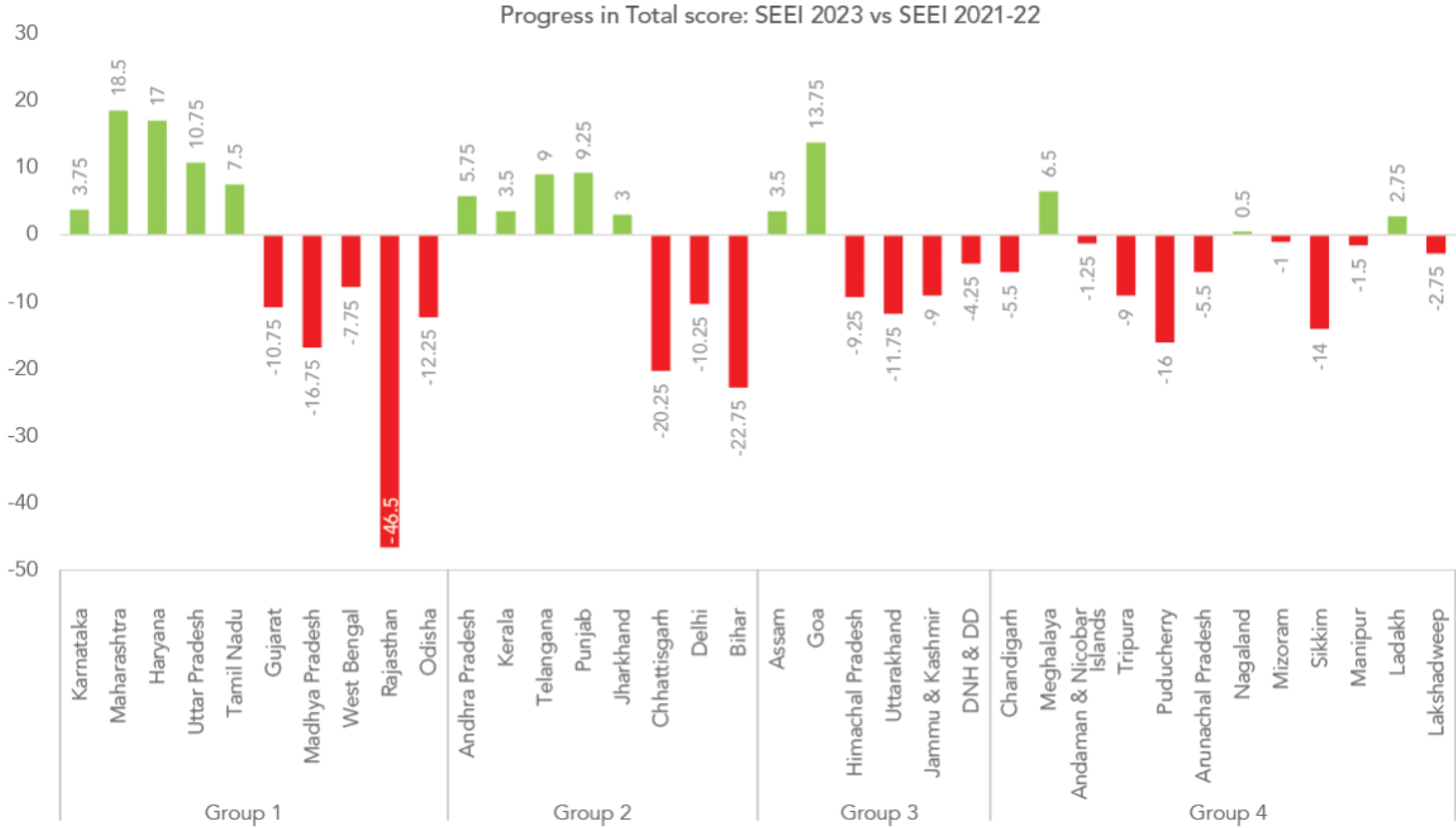


Group		
Group 1	Karnataka	Haryana Maharashtra
Group 2	Andhra Pradesh	Kerala Telangana
Group 3	Assam	Goa
Group 4	Chandigarh	Meghalaya

→ State/UT's Scores: TFEC Group-wise



→ State/UT's Progress in Total Score: SEEI 2023 vs SEEI 2021-22



SPOTLIGHT ON EXCELLENCE

Celebrating top-performing states across sectors



Buildings

Karnataka



Industry

Kerala



Municipal Services

Kerala



Transport

Kerala



Agriculture

Maharashtra
Telangana



DISCOM

Andhra Pradesh
Punjab



Cross sector

Kerala

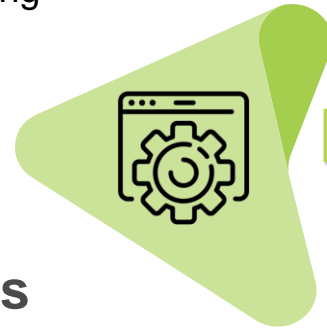
State program

- **15 states** initiated EE programs in public buildings, **14 states** in commercial buildings & **9 states** in residential building
- **9 states** conducted capacity building



Policy

- **20 states** notified ECBC 2017.
- **16 states** adopted ECBC in municipal bye-laws
- **17 states** took initiatives related to ENS
- **11 states** had policy/notification for mandatory use of EE appliances in government buildings

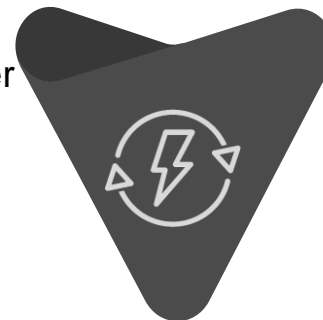


BUILDINGS SECTOR



Adoption of EE measures

- **7 states** provided data regarding ECBC-compliant buildings & **7 states** made progress in constructing super ECBC buildings
- **Maharashtra** has the highest number of certified green buildings
- **6 states** took the initiative for EE in affordable housing
- **6 states** implemented measures for e-cooking
- **4 states** initiated the benchmarking study



Institutional capacity

- **15 states** enhanced institutional capacity
- **12 states** have government authority to certify and enforce compliance
- **5 states** allocated state budget

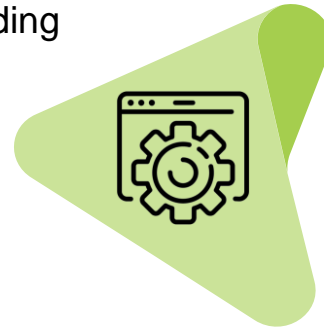
State program

- **10 states** implemented EE programs in large industry, **7 states** in MSME
- **11 states** conducted capacity building



Policy

- **6 states** have EE provisions in industry/MSME policy
- **6 states** have policy/scheme for carrying out MEA and implementation



INDUSTRY SECTOR



Institutional capacity

- **14 states** enhanced institutional capacity
- **30 states** have government authority to certify and enforce compliance
- **6 states** allocated state budget

Adoption of EE measures

- **Industrial unite of 23 states** received EC awards
- **5 states** took the initiative for electrification of end-use industries





Institutional Capacity

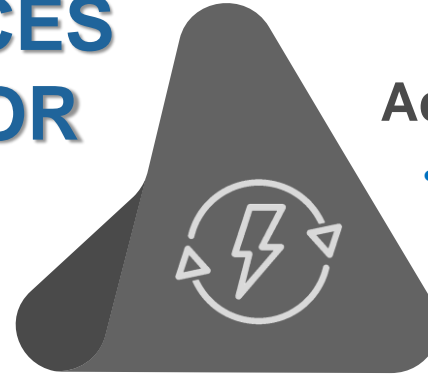
- **14 states** enhanced institutional capacity
- **12 states** have government authority to certify and enforce compliance
- **3 states** allocated state budget

State program

- **20 states** have EE programs in street lighting, **11 states** in water/sewerage systems
- **11 states** conducted capacity building



MUNICIPAL SERVICES SECTOR



Adoption of EE measures

- **12 states** took the initiative to promote the use of EE pump and motors in municipal water and sewerage systems

State program

- **8 states** have EE programs in public transport, **14 states** in private transport
- **7 states** conducted capacity building

Policy

- **12 states** have transport policies advocating fuel efficiency
- **25 states** have notified EV policy & **3 states** have draft policy

Institutional capacity

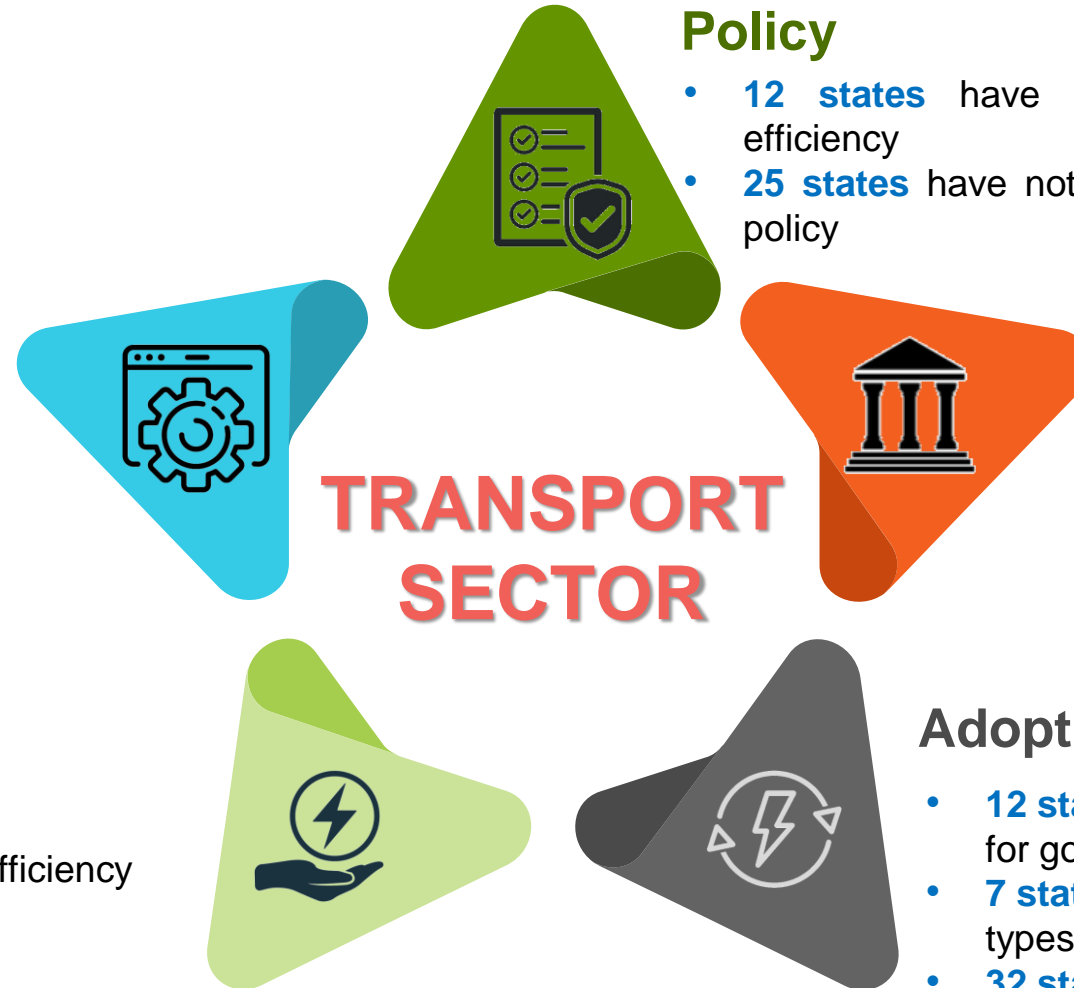
- **15 states** enhanced institutional capacity
- **25 states** have government authority to certify and enforce compliance
- **4 states** allocated state budget

Energy Saving

- **7 states** have reported the fuel efficiency achieved by their SRTCs

Adoption of EE measures

- **12 states** have policies on EV procurement for government use.
- **7 states** have charging infrastructure for all types of EV
- **32 states** have ethanol-blended petrol



Policy

- **4 states** policies to promote EE and climate-friendly cold chain infrastructure
- **10 states** policy for integrated water and energy savings

State program

- **8 states** initiated EE programs
- **11 states** conducted capacity building

AGRICULTURE SECTOR

Institutional capacity

- **15 states** enhanced institutional capacity
- **10 states** have government authority to certify and enforce compliance
- **8 states** allocated state budget

Adoption of EE measures

- **7 states** have taken steps to encourage the adoption of EE pumps for new connections



Policy

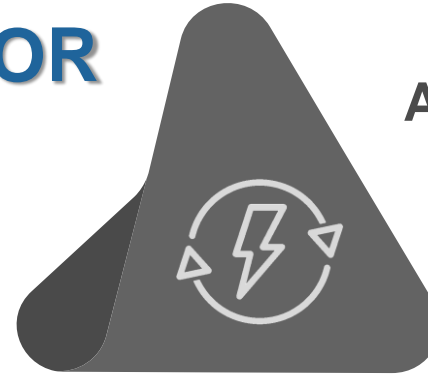
- **26 states** have ToD/ToU tariff for commercial & industrial consumer
- **10 states** have ToD/ToU tariff for residential consumer
- DISCOMs of **30 states** submitted quarterly energy accounting reports & DISCOMs of **16 states** submitted annual energy audit report
- **9 states** took initiative in line with RDSS scheme

DISCOM SECTOR



State program

- **20 states** reported programs in DSM
- **10 states** conducted capacity building



Adoption of EE measures

- **26 states** reported smart meter data
- **33 states** reported metering status at feeder & DT level
- **10 states** took initiative in segregating agricultural feeders

Energy Saving

- Energy intensity calculated as TFEI in TOE per unit of GSDP for FY 2020-21
- **7 states** reported non-fossil fuel-based power procurement

Adoption of EE measures

- **10 of 8 SDAs** carried out various activities to enforce provisions of the EC Act 2001
- **7 states** had standard practices to collect end-use energy data
- **7 states** organized energy conservation awards



Policy

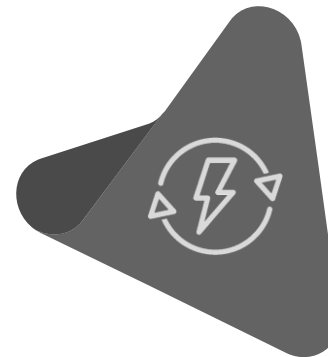
- **8 states** finalized SEEAP and **5 states** in draft stage
- **3 states** have dedicated EE/EC policy & **3 states** have EE/EC related policy
- **8 states** promoted R&D in EE

Finance

- **9 states** utilized >60% of BEE funds
- **7 states** provided a dedicated budget to SDA
- **33 states** notified SECF, **27 states** provided matching funds & **2 states** utilized in RIF mode



CROSS SECTOR



Institutional capacity

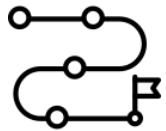
- **21 states** formed SLSC committee under chief secretary
- **9 states** reported periodic communication with the respective Energy/Power dept & DoEFCC
- **9 SDAs** collaborated with other dept
- **8 SDAs** collaborated with private sector

→ Key recommendation for states and UTs



Comprehensive Data Management:

- Prioritize systematic collection, measurement, and analysis of energy data at subnational levels.
- Use data to identify high consumption areas, inefficiencies, and potential savings.
- Develop tailored conservation strategies and efficient programs.



Effective Implementation of SEEAP:

- Turn SEEAP recommendations into tangible outcomes through strategic policies and programs.
- Employ SMART goals, investment analysis, and robust monitoring.
- Form working groups, ensure transparent reporting, and engage stakeholders.



Synergizing State Energy Transition:

- Focus on targeted actions integrating energy efficiency with renewable energy and green hydrogen.
- Enhance collaboration among state departments and agencies.
- Promote regular stakeholder engagement and sharing of best practices.

→ Key recommendation for states and UTs



Leveraging SECF in Revolving Investment Fund Mode:

- Allocate SECF funds to a revolving pool to sustain funding for energy efficiency projects.
- Encourage low-interest loans for energy efficiency projects through financial institutions.



Empowering ESCOs:

- Address challenges faced by Energy Service Companies (ESCOs) like credit access and policy hurdles.
- Develop a supportive environment for ESCOs to thrive and contribute to job creation and energy optimization.



Integrating GESI in Energy Policies:

- Implement gender equality and social inclusion in energy efficiency strategies.
- Offer incentives for energy audits in women-led enterprises and integrate energy efficiency in affordable housing.



Leveraging the Carbon Market:

- Use the Carbon Credit Trading Scheme to promote energy-efficient technologies.
- Enhance public understanding of the connection between energy efficiency and carbon credits.

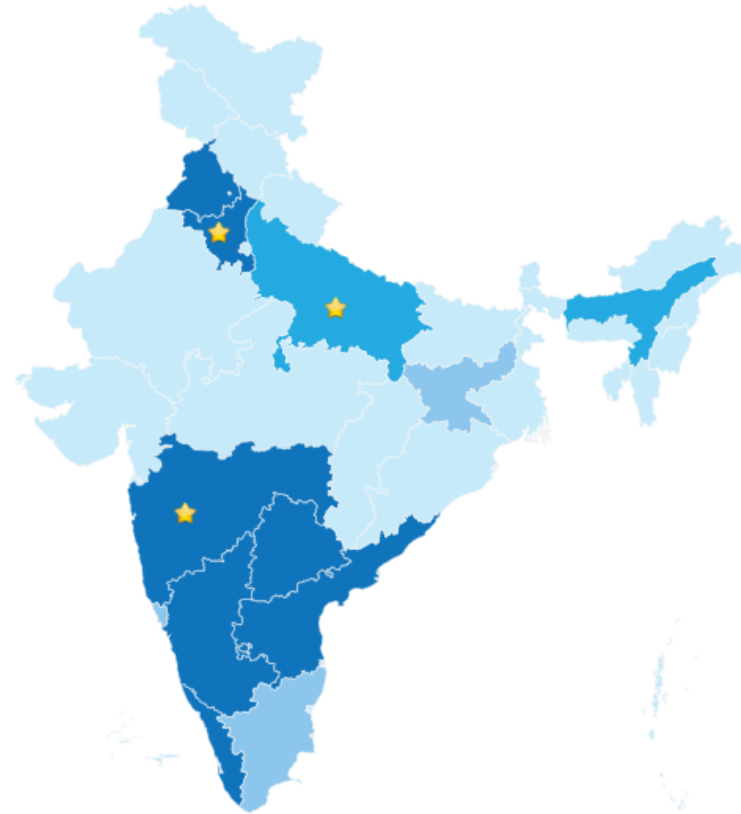


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State Energy Efficiency Index 2023

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

★ Most improved states
Most improved states include Goa, which is not marked with a star on the map due to its small size



Thank You !



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