GOVERNMENT OF INDIA
MINISTRY OF POWER

STATE ENERGY EFFICIENCY INDEX 2021-22

The State Energy Efficiency Index (SEEI) 2021-22 has been developed by the Bureau of Energy Efficiency (BEE) in collaboration with Alliance for an Energy Efficient Economy (AEEE) to track EE initiatives in the states and UTs. The first index, State Energy Efficiency Preparedness Index 2018, was launched in 2018. The second and third editions of State Energy Efficiency Index were launched in 2020 and 2021, respectively.

Objectives of SEEI 2021-22

- Help drive EE policies and programme implementation at the state and local level.
- Highlight best practices and encourage healthy competition among states.
- Track progress in managing the states' and India's energy footprint.
- Institutionalise state-level data capture and monitoring of state EE activities by State Designated Agencies (SDAs).

The State Energy Efficiency Index 2021-22 assesses the performance of the 36 states and UTs in energy efficiency implementation for the FY 2020-21 and 2021-22 using 50 indicators across seven sectors, namely: buildings, industry, municipal services, transport, agriculture, distribution companies (DISCOMs), and cross-sectoral initiatives. The programme-specific indicator has been introduced in SEEI 2021-22 to assess the programmes undertaken by the SDAs, state departments, industry associations, or public-private partnerships. The maximum score for the SEEI 2021-22 is 100.

A feedback survey on SEEI 2020 was conducted with the SDAs, where 18 out of 36 SDA responded.

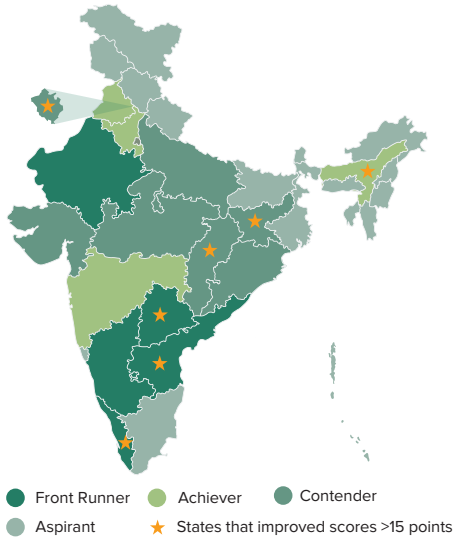
Usefulness of the State Energy Efficiency Index to the SDA

- 94% — Improving EE data collection and data management
- 94% — Tracking States' progress
- 100% — Enabling the overall coordination with other state departments to gather information pertaining to efficient use of energy and its conservation
- 100% — Developing ideas for EE programmes
- 83% — Influencing the State government/ departments to secure more budget for EE
- 72% — Enabling better relationship with private sector for collaboration in EE products and services

Catagories	Cross sector	Buildings	Industry	Municipal Services	Transport	Agriculture	DISCOMs	Total
Policy								
Finance								
Institutional Capacity								
Adoption of EE Measures								
Energy Savings								
		Programme-specific Indicators						
		Common Indicators						
Sector weights	12	25	21	10	16	6	10	100
Indicator Weights – Common	12	10	4	3	8	2	6	45
Indicator Weights – Programme		15	17	7	8	4	4	55

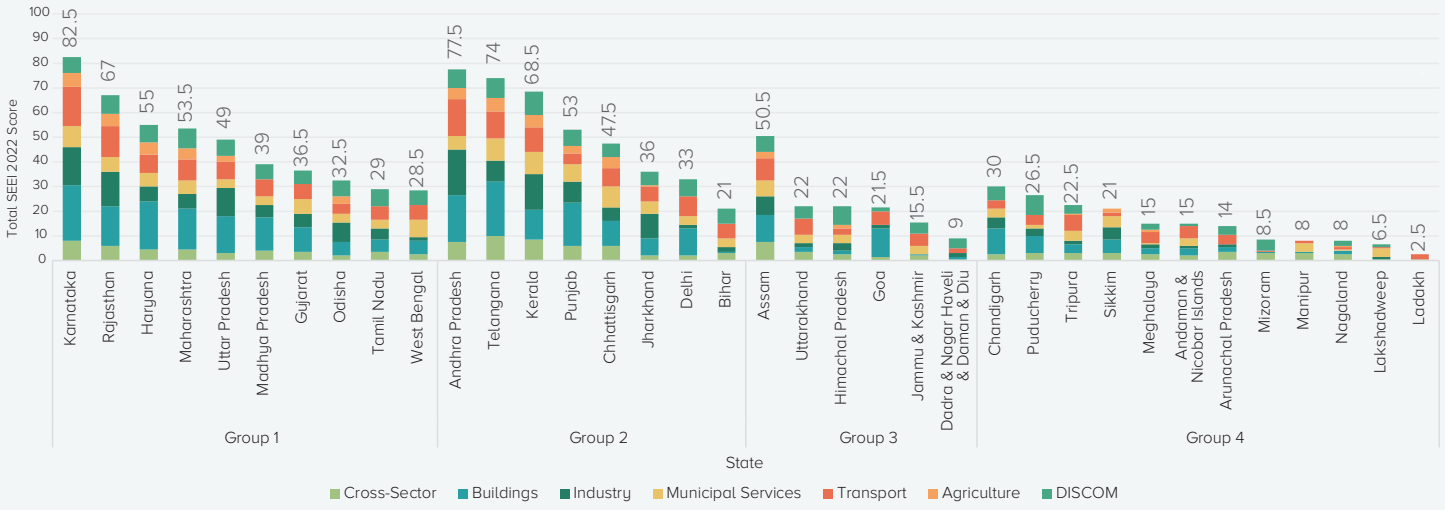
SEEI 2021-22 Results

SEEI 2021-22 categorises the states and UTs as 'Front runner' (>60), 'Achiever' (50-60), 'Contender' (30-49.5), and 'Aspirant' (<30) based on their total scores. Karnataka is the top-performing state in SEEI 2021-22. Five (5) states, namely Andhra Pradesh, Kerala, Karnataka, Rajasthan, and Telangana are in the 'Front runner' category in SEEI 2021-22. Four (4) states namely Assam, Haryana, Maharashtra, and Punjab are in the 'Achiever' category, and eight (8) states, namely Chandigarh, Chhattisgarh, Delhi, Gujarat, Jharkhand, Madhya Pradesh, Odisha, and Uttar Pradesh are in the 'Contender' category. Twenty-eight (28) states improved their scores compared to SEEI 2020, of which seven (7) states have improved by more than 15 points. Telangana and Andhra Pradesh are the two most improved states, increasing their scores by 45.5 and 27 points, respectively, due to improvements in reporting the common indicators and the data furnished for the programme-specific indicators.

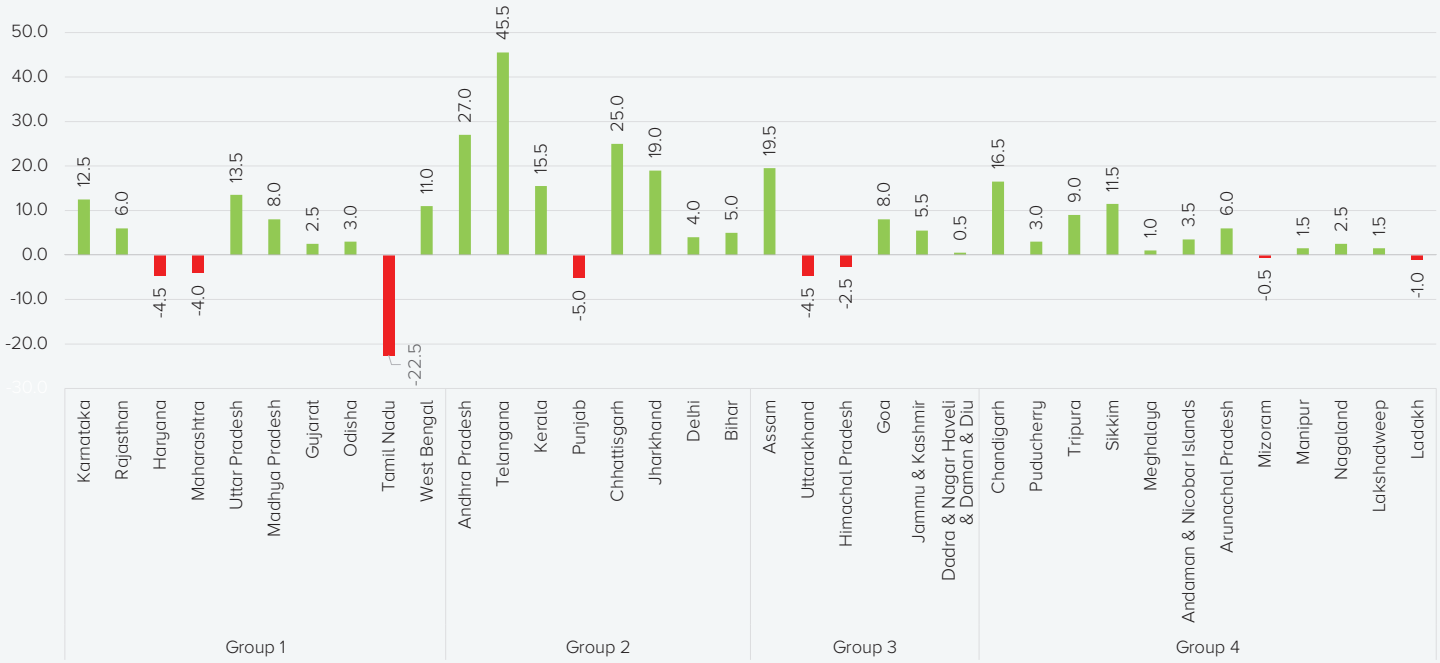


To enable peer-to-peer comparison, all the states and UTs are classified into four groups based on their total annual final energy consumption (TFEC) as Group 1 (>15 MTOE), Group 2 (5-15 MTOE), Group 3 (1-5 MTOE) and Group 4 (<1 MTOE). TFEC group-wise state total scores for all seven (7) sectors and the progress of each state in SEEI 2021-22 compared to SEEI 2020 is shown below.

TFEC group-wise state total scores



Progress in total scores: SEEI 2021-22 vs SEEI 2020



KEY FINDINGS

The states and UTs stepped up their efforts to gather and submit relevant data within the stipulated time. Increasing competition among the states regarding the reporting of EE practices is also observed. The states and UTs effectively provided data related to policy, institutional capacity, and various sector-specific state programmes. However, data on outcomes-based parameters like green building penetration, EV penetration, energy conservation awards, and sector-specific EE programme have been sourced from EESL, CII, IGBC, GRIHA, GBCI, and BEE. The energy intensity of the states and the proportion of hybrid and electric passenger vehicles have been calculated in-house with data from several govt sources.

ECBC 2017 was notified in six more states from SEEI 2020, bringing the total to 18. Twelve states have adopted ECBC in municipal building bye-laws. Seventeen states conducted training on Eco Niwas Samhita, compared to 6 in SEEI 2020. Ten states have drafted ENS rules for residential consumers and reported adopting ECBC in new constructions. Twenty-two states have EE programmes in public buildings, but only 11 have programmes for commercial and residential buildings.

BEE established a PAT cell in each state for the industry sector to support EE efforts. Twenty seven states have an Adjudicating Officer. EE programmes for large industries, MSMEs, and PSUs are present in only 13, 17, and 4 states, respectively.

In transport, 11 states have fuel efficiency policies, and 22 states have electric mobility policies, with 2 in the draft stage. Fourteen states have EV procurement policies for government use of EVs. Nine states have state-run EV charging infrastructure, and 27 states have reported ethanol blended petrol available. EE public transport programmes exist in 22 states, and private transport programmes in 6 states.

In the municipal services sector, 12 states have conducted capacity building on EE in municipal services for relevant stakeholders at the state level. Twenty Nine states have EE street lighting programmes and 9 states have EE programmes related to water/ sewerage systems.

In the agriculture sector, 4 states have policies for climate-friendly cold chain, 9 have policies for integrated water and energy savings. Fourteen states have EE programmes in place in the agriculture sector.

In the DISCOM sector, 95 utilities have T&D loss reduction targets in PAT cycle VII. ToD/ToU tariffs for industrial/commercial consumers have been implemented in 25 states, and 7 states have them for domestic consumers. Smart meter installation has been reported by 13 states, and 28 have DSM programmes with UJALA being the most common.

Only 2 states have EE targets at both the state and sector levels. 5 states have innovation and R&D programs for EE, while 6 states have dedicated budgets for their State Designated Agencies (SDAs). Thirty One states have established State Energy Conservation Funds, with 26 contributing matching grants. However, only 5 states have utilized these funds on a Revolving Investment Fund (RIF) basis. Sixteen states have formed steering committees headed by the Chief Secretary for energy transition, and 8 SDAs have collaborated with government entities, while 6 have collaborated with private entities to promote EE.

TAKEAWAYS

Develop and implement State Energy Efficiency Action Plans, with close coordination between government, private stakeholders, and clearly defined timelines.

Facilitate fiscal support for energy efficiency by earmarking funds specifically for energy efficiency and utilize SECF to create bankable opportunities and facilitate private sector investment.

Strengthen institutional capacity: by appointing EC/EE nodal officers in all government departments and setting up EC/EE cells in district and head offices.

Collaborate with financial institutions (FI), ESCOs, and energy professionals to bridge the gap between demand and supply of EE solutions.

Mainstream monitoring and reporting of energy data through transparent online portals and engage with government departments and private entities for updates.

Drive EE implementation in MSMEs by leveraging their untapped potential through collaboration with relevant state departments and private partners.

Alliance for an Energy Efficient Economy™

www.aeee.in

To find out more visit the State Energy Efficiency Index Portal

www.stateenergyefficiencyindex.in