

# Energy Efficiency in India: Current State and Policy Recommendations

SANKHYA (संख्या)

*“There cannot be a good plan for economic progress without adequate data and there cannot be adequate data without a good plan for collecting them...”*

*P.C Mahalanobis, Member, First Planning Commission of India & Scientist*

# STATE ENERGY EFFICIENCY INDEX

The State Energy Efficiency Index (SEEI) is a framework developed by the Bureau of Energy Efficiency (BEE) in collaboration with the Alliance for an Energy-Efficient Economy (AEEE) to evaluate and rank the energy efficiency of states and union territories in India.

States/UTs are scored using 50 general indicators pertaining to policy, institutional capacity, financing mechanisms, and adoption of Energy Efficiency measures across 7 sectors.



The current index covers 28 states and 8 union territories.

Help implement Energy Efficiency policies at State and Local level

Highlight best practices and encourage adoption of innovative policies for energy efficiency

Track progress of each state towards national goals for energy security, access, and climate change mitigation

Monitor state-level energy efficiency activities through institutionalized data capture and monitoring by State Designated Agencies.

SEEI enables a comparative assessment of energy efficiency progress across states and helps identify areas where states can improve their energy efficiency policies and programs.

The indicators used in the SEEI framework are designed to provide a comprehensive and holistic assessment of energy efficiency progress across different sectors of the economy.

Objectives of the Index

# STATUS OF ENERGY EFFICIENCY IN INDIAN STATES

The SEEI results are categorized into four groups i.e. front runner, achiever, contender and aspirant based on their total score.

The grouping of states and Union Territories is determined by their progress and accomplishments in implementing energy efficiency measures across seven sectors.

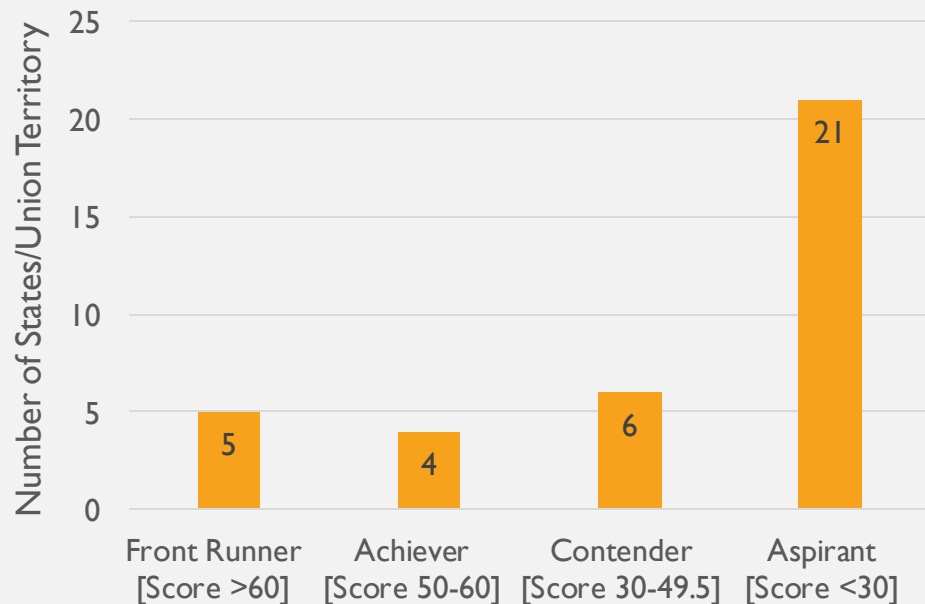
Karnataka topped the index with 82.5 followed by Rajasthan with a score of 67.

Andhra Pradesh, Karnataka, Kerala, Rajasthan, and Telangana were identified as the top performers and front runners in the SEEI report.

Ladakh and Lakshadweep scored the lowest with 2.5 and 6.5 respectively

The overall performance of the 8 Union Territories was below average with an average score of 17.18 out of 100.

Categorization of States and Union Territories



## FEW BEST PRACTICES IMPLEMENTED IN INDIA

- Rajasthan has set up a cold-chain network that is both energy-efficient and eco-friendly, using solar-powered cooling to achieve sustainable outcomes.
- States like Telangana, Karnataka, and Chandigarh have adopted policies and schemes to encourage the adoption of green building practices, offering tax benefits and incentives to promote their use.
- Andhra Pradesh government has extended financial assistance to the State Designated Agency to promote energy efficiency initiatives for sustainable development. Additionally, the state has also implemented EE measures in 547 court buildings under the Building Judiciary Energy Efficiency Project, resulting in 2.66 MU energy savings and avoiding emissions of 2263 tons of carbon dioxide.
- Under the CHAITHANYAM scheme in Kerala, 18 projects have been completed to improve energy efficiency in government hospitals, schools, and other buildings, resulting in a total energy savings of 0.44 MU.

# POLICY SUGGESTIONS

## Mandate energy audits

Presently energy audit is mandated only on few notified industries by the Bureau of Energy Efficiency. The government should mandate energy audits for all large enterprises and provide incentives for implementing energy saving measures identified in these audits.

## Promote Energy Efficiency in SMEs

To promote energy efficiency in Small and Medium Enterprises (SMEs), governments should develop and implement a package of specially designed policies and measures. These measures should include having a system in place to ensure that energy audits are carried out by qualified engineers, widely promoted and easily accessible for all SMEs. Further, SMEs should be provided with high-quality and relevant information on proven practices for energy efficiency that is appropriate to each industrial sector.

## Public Education Program

To encourage energy conservation and efficiency in daily life, the government should launch public awareness campaigns. These campaigns can educate people on the benefits of energy efficiency and ways to adopt energy-efficient practices in their daily routines. This can be done through targeted awareness programs delivered through various channels, such as social media, TV, radio, and public events, to reach a wide audience.

## Introduce Monetary Awards to Promote Sustainable Architecture

Monetary awards may be established by the government to recognize and reward architects or building designers who demonstrate exceptional innovation and commitment to sustainability in their designs. The monetary prize should be a significant amount that would encourage architects to prioritize sustainable design in their work and help to promote sustainability in the industry. This award could also raise public awareness about the importance of sustainable architecture and encourage more architects to incorporate environmentally conscious design principles into their projects.

## Improving Energy Efficiency through Cross-Sectoral Collaborations

Large-scale energy efficiency projects require collaboration between financial institutions, energy service companies, and energy professionals. States should implement policies for promoting this collaboration as it can provide access to financing and expertise, and facilitate innovative financing mechanisms to overcome financial barriers. Cross-functional collaborations can also streamline project development and implementation, ensure proper design and implementation, and improve project quality and effectiveness.

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— THINK TANK —

Sankhya\* is an initiative of Bridge Policy Think Tank to create interface snapshots in statistics and policy analysis while promoting critical thinking and analysis.

*\* Sankhya means numbers and is also a school of rationalist Indian philosophy. According to Sankhya philosophy reliable knowledge comes from only three pramanas (proofs)- pratyakṣa ('perception'), anumāṇa ('inference') and śabda (āptavacana, meaning, 'word/testimony of reliable sources').*