



National Energy Efficient Ceiling Fans Program

Context

In sub-tropical India, where yearly records are more than 3000 cooling-degree days, the northern and western regions endure blistering summers ranging from 32°C to 45°C, subjecting the populace to relentless heat stress. In this challenging climate, ceiling fans emerge as an indispensable technology, serving as a vital lifeline for the Indians. These fans provide affordable thermal comfort to the masses and are the least energy-consuming cooling appliance compared to other space cooling options. While ceiling fans boast an impressive 90% adoption rate in Indian households (CEEW, 2020), a mere 5% opt for energy-efficient (EE) models (EESL, 2023) in the expansive 50 million annual sales market (Prayas, 2023), creating a vast “lost opportunity” for energy efficiency for the next 10-15 years till it gets replaced. The total stock of ceiling fans in India is estimated to be 600 million, of which approximately 50% is an addressable market for energy-efficient replacement. The Bureau of Energy Efficiency (BEE) has enforced mandatory Star Labelling for ceiling fans starting from January 2023 to bolster the adoption of EE technologies. As per the data maintained by BEE, approximately 25% of the Star Labelled models are in the 5-star category. Figure 1 showcases the energy-saving potential of different Star Labelled fans. Very recently, the Government of India has also issued mandatory quality norms for ceiling fans to prohibit the sale of sub-standard ceiling fans in India.

Ceiling fans drive a significant portion of residential energy costs, often 50% of monthly electricity bills, and align closely with peak electricity demand. Thus, efficient fans allow substantial energy savings and peak demand management, as illustrated in Table 1 below. For customers paying higher electricity prices, the savings will be proportionately higher.

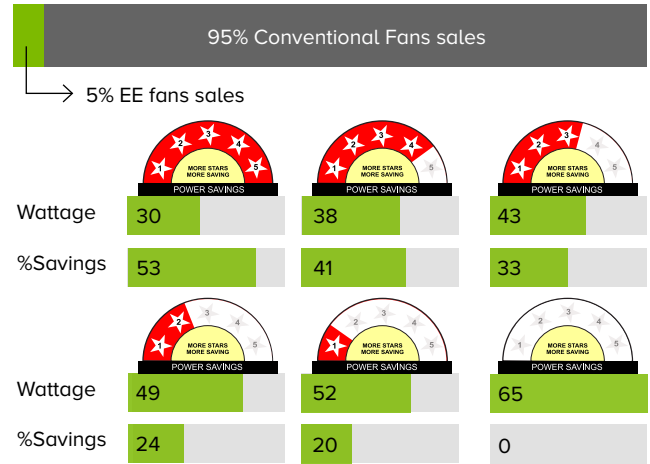


Figure 1: Ceiling fan market scenario and savings potential

Table 1: Benefits from the deployment of 1 million energy efficient fans

Savings category	Compared with a non-star labeled fan	Compared with a 1-star labeled fan
Annual electricity savings at customer end (GWh)	80	40
Avoided peak demand at customer end (MW)	20	12
Annual monetary savings to the customers* (INR)	70 crores	35 crores

About the Initiative

After the unprecedented success of the UJALA Program, where Energy Efficiency Services Limited (EESL) transformed the LED bulb market in India, the current focus is to replicate UJALA’s success in energy-efficient ceiling fans. EESL has initiated the “National Energy Efficient Fan Program” for phase-wise bulk procurement of 10 million high energy-efficient ceiling fans across India. The initiative aims to deploy highly efficient ceiling fans (5-star) based on an aggregate demand from various customers. The economies of scale will help reduce the manufacturing and delivery costs of energy-efficient ceiling fans. Apart from rapidly increasing the share of efficient fans from the current 5% and reducing bulk purchase price with future spillover impact on the retail price, the other market transformative benefits of the program are:

- Standardisation in the product design
- Enhanced warranty and quality
- Ease in servicing and for an extended duration
- Greater awareness about this otherwise ignored energy inefficient product used by masses

The Alliance for an Energy-Efficient Economy (AEEE) supports EESL in the demand aggregation process.

*Assuming an electricity tariff of INR 7/kWh and a fixed charge of INR 300/kW/month

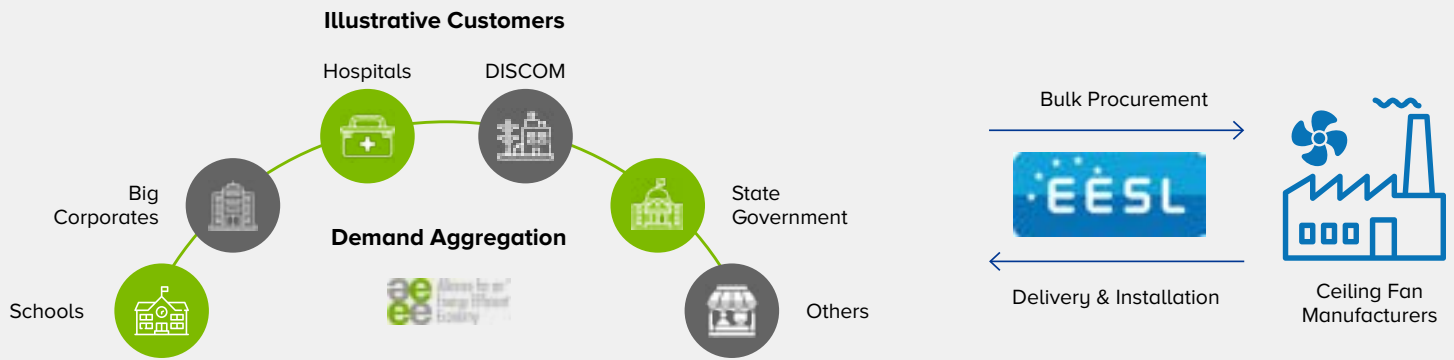


Figure 2: Conceptual Representation of the Project

The project aims to offer customers a bespoke procurement, installation, and post-installation service for deployment at scale. Aggregating customer demand for bulk procurement while meeting the requirements as per the customers' unique needs is the initiative's hallmark. For bulk procurement to be effective, the project focuses solely on 1200mm ceiling fans, ensuring uniformity. The technical specifications will be stringent than the commonly available models in the market and compliant with the latest standards issued by the Bureau of Indian Standards (BIS). The program will have robust quality assurance and quality check procedures in place to ensure its credibility. This will avoid cutting corners by manufacturers, instead nudging them to introduce best-in-class products with assured energy performance. The initiative also allows customers to make preferential purchases from small and medium enterprises where customers can feel pride in supporting such businesses and aiding the Make-In-India initiative. Depending on the customer's type, the customers stand to gain numerous advantages, as showcased in Table 2.

Table 2: Key Benefits to Customers

Key Benefits	State government departments	State designated agencies	Public sector entities	Private sector	Companies with CSR commitments	DISCOMs
Monetary savings due to bulk procurement	✓	✓	✓	✓	✓	✓
Savings in electricity bill	✓	✓	✓	✓	✓	✓
Emissions avoided	✓	✓	✓	✓	✓	✓
Meeting mandatory and voluntary compliances (CSR, ESG, net zero, PAT, ECBC)	-	-	✓	✓	✓	-

Who can Associate with the Initiative?

If you are an organisation satisfying one or more criteria listed below, then partner with EESL on this initiative:

- ➔ With captive use of ceiling fans
- ➔ Keen for its employees to become energy efficient in residential energy use
- ➔ Mandate to promote energy efficiency in the state or own department
- ➔ It aims to enhance sustainability by encouraging the supply chain to adopt environmentally conscious practices
- ➔ Commitment towards ESG, net zero, decarbonization
- ➔ Pledged or obligated to undertake CSR
- ➔ Government bodies committed to achieving net-zero emissions targets and supporting sustainability initiatives

A Guide to Getting Started



Indicate your interest by submitting an Expression of Interest (EOI) using the format shared.



Write to **Vipin Rohilla** at vipin@aeee.in or **Pankaj Bansal** at pkbansal@eesl.co.in

About the Organizations

Founded in 2009, EESL is a public Super ESCO set up by Indian government authorities to enable consumers, industries, and governments to effectively manage their energy needs. AEEE supports policy implementation and has enabled the energy efficiency market with a not-for-profit motive since 2008. EESL and AEEE have a strategic MOU on energy efficiency that covers joint activities on accelerating the manufacturing and adoption of energy-efficient fans in India.