

Ceiling fans: Selection criteria and energy efficiencies

Energy efficiency means reducing the energy usage of a product without diminishing its output or final response or user comfort levels. An energy efficient product consumes less energy to perform the same function in comparison with the same product having more energy consumption. In this context, energy efficiency in fans means providing the required air delivery with the least amount of energy consumption.

Most people focus on replacing their incandescent bulbs with LED bulbs to reduce their electricity consumption, but they do not realise that fans consume more energy. This is because fans have higher watts compared to lights are used throughout the day. As a result, fans contribute to [20% of the electricity](#) consumption in Indian households.

To improve energy efficiency of ceiling fans, Bureau of Energy Efficiency (BEE) has introduced [star labelling scheme](#) from the year 2006. Star rating is given on the basis of service value which is the ratio of air delivery (in cu m/min) to power input (in kW). Hence, greater the service value, higher the efficiency of the fan. Presently, star rating is available for fans with size of 1200 mm and minimum air delivery of 210 cu m/min. Consumer guide to ceiling fans:

1. Size: Ceiling fans ranges from 900 mm to 1400 mm. Within this, 1200 mm is the most common, which is also the only one size with star rating. Table 1 specifies the ideal size of fan for various room sizes.

Fan Size (in mm)	Room Size (in sq meters)
900	<7
1050	7 - 10
1200	10 - 12
1400	12 - 14
>1400	Greater than 14 sq meters

Table 1.

If the room size is bigger, then it is better to install multiple ceiling fans. Consumer should ensure that the minimum clearance distance between two consecutive fan hooks should be twice the fan size to be fitted. The images for clearance can be viewed [here](#).

Ceiling Height	Downrod length	Height above floor
8 feet	3 inches	7 feet
9 feet	6 inches	7.5 feet
10 feet	12 inches	8 feet
11 feet	18 inches	8.5 feet
12 feet	24 inches	9 feet
13 feet	36 inches	9 feet
14 feet	48 inches	9 feet
15 feet	60 inches	9 feet

Table 2.

2. Downrod length: The length of your downrod depends on the height of your ceiling. For safety reasons, a ceiling fan should always hang at least 7' above the floor. The more space between the ceiling and the blades, the better for air flow and circulation. For maximum air flow there should be at least 12 inches of air space between the blades and the ceiling. Care should be taken when putting ceiling fans on false ceilings. Make sure that there is enough space between the blades and false ceilings. Table 2 specifies the [down rod length](#). (To Be Continued)

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Tamil Nadu News

Secret of Tamil Nadu's energy: Wind and Water

From being a power deficient state, Tamil Nadu has risen to top the country in installed wind capacity, making it also one of the top states globally, behind only a few provinces in China and Texas in America, as a renewable energy generator.

A more diversified electricity generation mix will serve Tamil Nadu better, say experts. "New low cost solar capital additions and a major re-powering of Tamil Nadu's wind projects, a concerted improvement in energy efficiency plus reduced transmission and distribution losses, should deliver more than 80% of all electricity demand growth in the coming decade," said IEEFA's Energy Finance Studies Australasia director Tim Buckley in an international study conducted by him. By adopting more green power, the DISCOM will be able to operate profitably and at a lower tariff for consumers, said Buckley.

Wind power evacuation in Tamil Nadu has been the lowest this year as compared to the last three years. Data available with the state's power utility Tangedco shows that the DISCOM has evacuated only 5,790 million units of wind energy between April 1 and August 22, compared to 9,133MU during the corresponding period last year and 8440MU in 2016.

Heavy rainfall in wind catchment areas has been blamed for the low wind power evacuation but it has increased hydro power generation to a record high this year. Tamil Nadu has an installed wind power capacity of 8,000MW and nearly 99% of that is in the private sector. The wind power season begins in May and lasts till mid-September. At times, it extends till October. In the last few years, there has been record wind power evacuation and in 2017, the intra-day high was 5,093MW, but this year it is yet to cross 5,000MW. Tamil Nadu is the only state to keep its thermal units on standby during peak summer as the state has substantial capacity of green energy in the form of wind and solar power.

Compared to the last few years, wind power season began late this year. In the past two years, the state tapped wind power in April, but this year wind power generation was low even in May. This resulted in a drastic fall in evacuation of wind power, say power managers.

Hydro power projects were set up in the early 1960s when the state was solely dependent on this source of power. "In early years, hydro power used to be generated during peak summer with the water saved during the southwest monsoon. But this year we ran the pumps on current receipts," said the official.

Source : [The Times of India](#), August 30, 2018

India News

EESL's big challenge: Make cheaper, evolved electric vehicles

State-owned Energy Efficiency Services Ltd, which leads the country's energy efficiency and conservation drive, has thrown open a challenge for entrepreneurs and startups to develop electric cars that are more efficient in terms of performance and cheaper than what it had sought in its E-cars tender last year.

As part of a two months-long innovation challenge based on a common streak of energy efficient solutions, Energy Efficiency Services (EESL), along with World Bank and World Resources Institute (WRI), has sought variants of electric cars that can run 200 km or more on a single charge and is priced not more than Rs 10 lakh.

The solutions, if viable, will be scaled up and commercialized by EESL, senior officials said.

Although proposed as a means to seek innovative solution in the electric mobility segment, the specification is strikingly different from the 130 km range that EESL had sought in a tender it floated last year for procurement of 10,000 electric cars. Home grown automakers Tata MotorsNSE -3.36 % and Mahindra & Mahindra bagged the tender, with each car priced at Rs.11.2 lakhs.

SUBSIDY FOR CHARGING STATIONS:

Speaking at the launch of the innovation challenge here on Tuesday, power secretary Ajay Kumar Bhalla said the ministry has asked the department of heavy industries to subsidise setting up charging stations to help the electric car market pick up.

He said the government expects the challenge to bring forth scalable solutions that can be adopted for integration of renewable energy and promoting electric mobility in the country. "One of the biggest challenges that India is facing where we are working towards 'one nation one-grid', and adding huge transmission capacity, is the addition of 175 GW of renewable capacity by 2022," Bhalla said.

EESL managing director Saurabh Kumar said the government is exploring better solutions than what is already available on the table as of date.

"We are trying to go away from the straitjacket approach," Kumar told ET. "The challenge is very much achievable. People can look at innovative design elements while we have thrown open an outcome," he said.

Source : [The Economic Times](#), August 22, 2018

Consumer Focus

FACTS

The petitioner complained about defective meter which is not working for a month to the Assistant Engineer (AE). After several complaints to the concerned Official about the problem, the petitioner has come to the forum to find a remedy to the problem.

CONTESTATIONS

Appellant: Due to the high Voltage , several home appliances as well as the meter are damaged, after complaining to the CGRF the digital meter was changed after the inspection.

Respondent: After the complaint was made in CGRF the AE has visited the petitioner's house and informed him that we will provide the digital meter after your payment.

OBSERVATIONS AND JUDGMENT

In view of the findings, the appellant had complained about not changing the defective meter. The respondent was directed to change the meter. The appellant has got the new meter after paying the meter charges.

On being asked the reasons for delay in solving the problem, the respondent informed the appellant that the digital meters were "Out of stock" and was distributed based on the periodical basis.

ECC Voice

மழைநேரத்தின்போது விபத்துக்களை தடுப்பதற்க்கான முன்னெச்சரிக்கை நடவடிக்கைகள்

- சாலையில் அறுந்து கிடந்த மின்கம்பிகளைக் கண்டால் உடனடியாக பக்கத்திலிருக்கும் மின்சார அலுவலகத்தில் புகார் செய்யவேண்டும்.
- புறநகர்ப் பகுதிகளில் தலைக்கு மேல் செல்லும் மின்சார வயர்களில் உரசிச் செல்லும்படியான கொடிகளில் ஈரதுணிகளைக் காயப்போடக் கூடாது.
- கேபிள் பாக்ஸ், பில்லர் பாக்ஸ்களைப் பெரும்பாலும் உயரமாகக் கட்டியிருக்க வேண்டும்.
- தண்ணீர் தேங்கியிருக்கும் நேரங்களில் பில்லர் பாக்ஸ்களின் அருகே யாரும் செல்ல கூடாது. அதேபோல் தேங்கியிருக்கும் தண்ணீரின் அளவு பில்லர் பாக்ஸின் உயரத்துக்கு வந்து விட்டால் உடனடியாக அருகில் இருக்கும் மின்சார அலுவலகத்தில் தெரிவிக்க வேண்டும்.
- பழைய வீடுகளில் மழையின்போது சுவரில் ஈரம் பரவியிருக்கும். அவ்வாறு ஈரம் பரவியிருக்கும் சுவர்களின் அருகில் இருக்கும் ஸ்விட்ச் பாக்ஸை தொடக்கூடாது, ஈரம் காய்ந்த பின்னரே அதை தொடவோ அல்லது பயன்படுத்தவோ வேண்டும், ஈரக்கையுடன் ஸ்விட்ச்சை ஆன்/ஆஃப் செய்யக் கூடாது.
- மாடியிலிருந்து உடைகளோ வேறு ஏதேனும் பொருட்களோ பறந்து கையால் எடுக்க முடியாத இடங்களில் விழுந்துவிட்டால் அதை இரும்புக் கம்பிகளைக் கொண்டு எடுக்கக் கூடாது.
- மின்சாரம் தொடர்பான எந்தப் புகாராக இருந்தாலும் உடனடியாக அருகில் உள்ள மின்சார அலுவலகத்தை தொடர்பு கொள்ள வேண்டும்.
- யாருக்காவது ஷாக் அடித்துவிட்டால் அருகில் இருப்பவர்கள் உடனடியாக சி.பி.ஆர் (Cardio Pulmonary Resuscitation) என்று சொல்லப்படும் இதயம் மற்றும் சுவாச இயக்க மீட்பு நடவடிக்கைகளைச் செய்ய வேண்டும். அதாவது விபத்துக்குள்ளானவரை சமதளத்தில் படுக்கவைத்து, ஒரு கைக்குட்டையை அவர் வாயில் வைத்து மூச்சுக்காற்றை ஊதி, உள்ளும் புறமுமாக இழுக்க வேண்டும் அல்லது 108 என்கின்ற எண்ணை அழைத்தால் அவர்கள் முதலுதவிக்கான வழிமுறைகளை கூறுவார்கள்.

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Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organization that works towards protecting citizen's rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision making.

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World News

Govt, EESL, World Bank sign \$300 million pact for EE programme

The government, World Bank and state-owned EESL today inked a USD 220 million loan agreement and a USD 80 million guarantee pact to push energy efficiency programme in India. To be implemented by EESL, the programme will help scale up the deployment of energy saving measures in residential and public sectors, strengthen EESL's institutional capacity, and enhance its access to commercial financing.

The USD 220 million loan, from the International Bank for Reconstruction and Development (IBRD) to Energy Efficiency Services Ltd, has a 5-year grace period, and a maturity of 19 years.

"The Government of India, the EESL, and the World Bank today signed a USD 220 million Loan Agreement and a USD 80 million Guarantee Agreement for the India Energy Efficiency Scale-Up Program," the joint statement by World Bank and EESL said. The investments under the programme are expected to avoid lifetime greenhouse gas emissions of 170 million tons of CO2, and contribute to avoiding an estimated 10 GW of additional generation capacity. This would be over 50 per cent of the National Mission for Enhanced Energy Efficiency target of 19.6 GW indicated in India's Nationally Determined Contributions (NDCs) under the Paris Accord.

"The programme will help tackle the financing, awareness, technical and capacity barriers faced by new energy efficiency programs and support the UJALA and SLNP programs of the Government of India," said Sameer Kumar Khare, Joint Secretary, Department of Economic Affairs, said in the statement.

"This is one of the several steps being taken by the Government of India to meet its climate change commitments to reduce carbon intensity by 33-35 percent by 2030," he added.

The key components of the operation include: creating sustainable markets for LED lights and energy efficient ceiling fans; facilitating well-structured and scalable investments in public street lighting; developing sustainable business models for emerging market segments such as super-efficient air conditioning and agricultural water pumping systems; and strengthening the institutional capacity of EESL. Source : [The Economic Times](#) , August 28, 2018

Publications/Regulations

- Tracking SDG7: The Energy Progress Report 2018 , August 2018, [Click here](#)
- Green Energy Finance in India: Challenges and Solutions, August 2018, [Click here](#)

Household Electrification Status — Saubhgya 2018

