

A Consumer Guide on selecting an Air Conditioner (AC) - (Part 2)

In [part 1](#) of the consumer guide on selecting an AC, technical parameters of the appliance were discussed in detail. This edition will take a look at star labeling and its parameters.

Star labeling program

To promote energy efficiency and energy conservation, Bureau of Energy Efficiency (BEE) has introduced the [star labeling program](#) which assigns star rating to electrical appliances. With the help of this system, a consumer will be able to understand the energy efficiency of appliances. The below image explains the various parameters listed in the star label.



ISEER Value - Star rating of an AC is calculated using the Indian Seasonal Energy Efficiency Ratio (ISEER). ISEER is the ratio of Cooling Seasonal Total Load (CSTL) to Cooling Seasonal Energy Consumption (CSEC).

a) CSTL is the total annual amount of heat the equipment can remove from an indoor space when in operation; and
b) CSEC is the total annual amount of energy consumed by the equipment during the same period.

Higher the ratio of CSTL to CSEC (star rating), the higher the energy efficiency. To know more about ISEER check the detailed article in CAG's website [link](#).

Label period - BEE upgrades the energy efficiency standards at [regular intervals](#). For example - a 5-star-rated split AC with a label period of 2016 - 2017 may be considered as 3-star-rated in the year 2018 - 2019. Therefore, it is important to look at the [labeling period](#) in the star rating label.

AC Model & Year of manufacturing - The model number of a particular brand will also be denoted in star rating label. The year of manufacturing is as important as the star rating because the star rating will keep changing in line with technological improvements of energy-efficient products.

Cooling capacity— It is the amount of cooling produced by an AC or its ability to remove heat from a space. The units used to measure cooling capacity are ton of refrigeration or [watt](#). An one ton AC has a cooling capacity of around 3500 watt.

Electricity consumption - Annual electricity consumed by the appliance under test conditions will be denoted in the star label but it may vary according to the climatic conditions and usage [patterns](#).

Type of compressor - Variable speed and fixed speed compressors are widely [used](#) in air conditioners. Inverter type AC will have a variable speed compressor, which is energy efficient; and non-inverter type AC will have a fixed type compression.

Heat pump - Air conditioners with heat pumps are used in the northern parts of India where there are extreme summers and winters. Air conditioners with [heat pump](#) provide both cooling and heating. The function of heat pump is opposite to air conditioners. A heat pump takes heat from outside and pushes heat inside the room. If a heat pump is provided in the AC it will also be mentioned in the star label. **(concluded)**

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The Do-It-Yourself Energy Audit Series

For Household Consumers (Part 4)

TELEVISION AND CONNECTED APPLIANCES

This edition of the DIY Energy Audit Series will provide household consumers with a few energy saving tips that can be adapted while using television and connected appliances.

1. Do you switch off your television and set top box from the plug point, when not in use?
 - a) A [set top box](#) consumes the same amount of energy when in use and when not in use, unless it is switched off from the plug point.
 - b) Television consumes a [standby power of 7 Watts](#), when not in use, unless it is switched off from the plug point.

Best Practice: Ensure that your television, set top box and other connected appliances, like disc players and sound systems are plugged into a power strip that can be easily switched off from the plug point immediately after use. This practice will reduce your electricity consumption.



2. Do you keep the volume levels on your television and sound system under check?

The impact of volume levels on electricity consumption was tested and the [results](#) indicated that an increased level of volume on television and sound system results in increased consumption of electricity.

Best Practice: Make sure that the volume levels on your television and sound system are maintained at an optimal level to reduce consumption of electricity.

3. Have you adjusted your television's display settings to ensure optimal consumption of electricity?

Brightness of the screen and the electricity consumed thereby are directly proportional. Brighter the display setting on your screen, the higher the electricity consumed. This holds true for televisions, computers, laptops, mobile phones, tablets, and other display devices.

Best Practice: Be sure to adjust the brightness level in the default display settings of your television and all other display devices to conserve electricity.

4. Would you prefer a High Definition (HD) set top box if it consumes more power than a standard set top box?

The [image](#) below depicts the amount of power consumed by different kinds of set top boxes. It can be observed that a HD set top box consumes more than twice as much as a standard definition set top box.



Key Takeaway: A standard definition set top box can be opted for if you prefer conserving energy more than watching television in HD quality.

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5. Are you looking to buy an energy-efficient television?

Although plasma TVs are the cheapest option, it costs more to keep them running as they consume more than twice the power consumed by LED TV. On the other hand, even though LED TVs are expensive, it is cheaper to run them over a long period of time.

Key Takeaway: LED television can be opted for if you would like to purchase an energy-efficient television that will be worth the investment in the long run.

(to be continued)

Tamil Nadu News

Tamil Nadu: Shortage of digital meters hits handover of flats

Shortage of digital electricity meters has affected new houses in getting individual power connections. While Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) has allowed procurement of digital meters from private dealers, the developers have expressed concern over the delay in handing over units on time.

A developer based in the suburbs said there has been a shortage in meters over the last two months. "This is for the first time we are facing such an issue in more than a decade. We have been assured by TANGEDCO that the shortage of digital meters would be resolved in 10 days, but if it prolong there could be severe impact regarding on-time delivery of houses," he said.

The Chennai chapter of Confederation of Real Estate Developers' Association of India (CREDAI) has estimated that about 500 units could not be delivered due to non-availability. "The delay in handing over apartment units due to a shortage is two months. After we took up the issue with TANGEDCO, an order has been issued to procure meters from private firms," CREDAI Chennai vice president said. But the meters have to be tested by government authorities ahead of installation. "Purchasing from private firms and getting them tested by the government is a new practice," he added.

A senior state government official said TANGEDCO did not place the order for new digital meters within the timeframe. "Testing at the Central Power Research Institute takes a long time. We have now allowed people to buy from empaneled vendors on certain conditions," TANGEDCO official said.

Source: [Economic Times](#), March 20, 2019

India News

India to save 3 billion units of electricity by 2030 with new star rating programme

India is likely to save an estimated 3 billion units of electricity by 2030 as a result of the newly launched star rating programme for microwave ovens and washing machines. The power ministry has expanded its ambitious Standards & Labeling (Star Rating) program for energy efficiency for appliances to cover the two appliances.

The programme has been formulated by the Bureau of Energy Efficiency. It will be initially implemented for the two appliances on a voluntary basis and will remain valid till 31 December, 2020. Power secretary A K Bhalla said the initiative will promote technology and energy efficiency in microwaves ovens, a popular household gadget. "We have estimated savings of over 3 billion units of electricity at consumer-end through the adoption of Star Rated Microwave Ovens and Washing Machines by 2030. This would be equivalent to reduction of 2.4 million-ton of CO2 by the year 2030," he said.

The size of the Indian microwave oven market stood at 1.21 million units in year 2017-18 and is projected to grow at a Compound Annual Growth Rate (CAGR) of 2 per cent. The size of the washing machine market stood at 6.1 million units in 2017-18 and is projected to grow at a CAGR of 8 per cent.

In order to ensure faster adoption of Standards & Labeling program, BEE has developed an online registration platform for quick registration and approval under this initiative. The manufacturers will be able to register products online for availing appropriate star rating for the models. Any model or brand of washing machine or a microwave oven can avail star rating on a scale of 1 to 5 based on test report or equivalent labs subsequent to scrutiny by BEE.

Source: [Economic Times](#), March 09, 2019

Consumer Focus

The petitioner has a three phase domestic connection for his house. He has claimed that one phase was not working for several months and complained about the issue to the relevant authorities. Initially, he had registered the complaints over the phone, but there was no response. Later, he filed a written complaint to the TANGEDCO to take necessary action on the same. There was no response for the written complaint as well. Hence the petitioner has approached the Consumer Grievance Redressal Forum.

The forum ordered TANGEDCO to attend the issue at the earliest. The utility inspected the petitioner's service connection and found that there was a loose connection in the wires. The wires were tightened and the normal supply was restored.

The forum ordered the utility to take necessary action against the officials for not addressing the problem immediately. The petitioner intimated to the forum of the issue being resolved satisfactorily.

ECC VOICE

நிலத்தில் இடையூறாக உள்ள கம்பம் மற்றும் மின் பாதைகளை மாற்றி அமைத்திட செய்ய வேண்டிய வழிமுறைகள்:

மின் கம்பங்களை DCW (Deposit Contribution Work) எனும் திட்டத்தின் கீழ் மாற்றி அமைத்திடலாம். இதற்கு ஒரு வெள்ளைத்தாளில் மின் கம்பம் மற்றும் பாதையினை மாற்றி அமைக்க விருப்பத்தினை தெரிவித்து, முகவரி, தொலைபேசி எண் போன்ற விவரங்களுடன், ரூ.80/- மதிப்புள்ள உறுதி மொழி படிவம் இணைக்கப்பட்டு சம்பந்தப்பட்ட பகுதியின் உதவி செயற்பொறியாளரிடம் மனு அளிக்க வேண்டும். இதனுடன் பதிவு கட்டணமாக தாழ்வழுத்த பாதைக்கு ரூ.50/, உயர் அழுத்த பாதைக்கு ரூ.500/- செலுத்த வேண்டும்.

பின்னர் சம்பந்தப்பட்ட பிரிவு அலுவலகத்தில் இடம் பார்வையிடப்பட்டு மதிப்பீடு தயாரித்து அதிகார பூர்வ பொறியாளருக்கு மதிப்பீடு அனுமதிக்காக அனுப்பி வைக்கப்பட்டு அனுமதி பெறப்படும். அனுமதி பெறப்பட்டவுடன் பிரிவு அலுவலகத்திலிருந்து மதிப்பீடு கட்டணம் குறிப்பிட்ட காலத்திற்குள் செலுத்த அறிவிப்பு அனுப்பப்படும்.

உரிய காலத்தில் மதிப்பீடு கட்டணம் செலுத்தப்பட்டவுடன் பணி ஆணை பெறப்பட்டு பணிகள் முடிக்கப்படும். மதிப்பீடு கட்டணம் செலுத்தப்படவில்லையெனில் விண்ணப்பம் நிராகரிக்கப்படும். மின்பாதை மாற்றி அமைத்திட மொத்த கால அளவு 60 நாட்களாகும். மின்மாற்றி கட்டுமானம் மாற்றி அமைத்திட கால அளவு 90 நாட்களாகும். மின்பாதை / மின்மாற்றி கட்டுமானம் மாற்றி அமைக்கப்பட்டபின் பணி ஆணை முடிக்கப்பட்டு மீதமுள்ள தொகை இருப்பின் 90 நாட்களுக்குள் திருப்பி அளிக்கப்படும். நிலுவை இருப்பின் வசூலிக்கப்படும்.

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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

How Europe is faring on renewable energy targets

The European Union (EU)'s use of renewable energy—such as hydropower, wind and solar—reached 17.5 percent in 2017, keeping it on track for a target of 20 percent by 2020. Each member state has its own renewable energy goal, based on its situation and potential, ranging from 10 to 49 percent. While 11 countries in the bloc have already surpassed their targets, others are lagging behind, according to EU statistics authority Eurostat.

With the target for 2030 at 32 percent, Eurostat says: "While the EU as a whole is on course to meet its 2020 targets, some member states will need to make additional efforts to meet their obligations."

Sweden: champion of Europe

Europe's renewable energy leaders are Nordic countries: Sweden, Finland and Denmark. Since 2012 more than half of the total energy consumed in Sweden has come from renewable sources, according to the International Energy Agency. This is due in large part to hydroelectric power, which provides more than 40 percent of the country's electricity output. Swedes heat themselves mainly with biofuels.

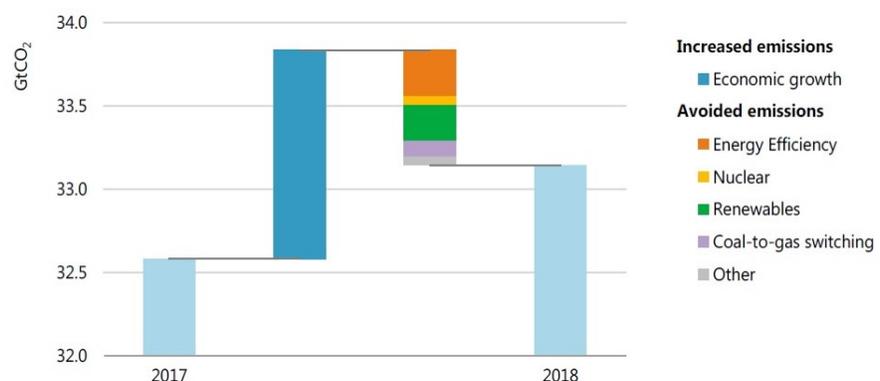
Denmark—a small, flat country long dependent on energy imports—now gets 43 percent of its electricity from wind power after investment starting in the late 1970s when it began phasing out coal plants.

Source: phys.org, March 30, 2019

Publications / Regulations

- India Cooling Action Plan, March 2019 ([Ozone Cell, MoEFCC, GOI](#))
- Order on rooftop solar generation , March 2019 ([Tamil Nadu Electricity Regulatory Commission](#))
- Order on generic tariff for solar power and related issues, March 2019 ([Tamil Nadu Electricity Regulatory Commission](#))
- Launch of phase - II grid connected solar rooftop solar programme, March 2019 ([Ministry of New & Renewable Energy](#))

Change in global energy related CO₂ emissions and avoided emissions (in giga tonne), 2017-18



Source: Global Energy & CO₂ Status Report, [International Energy Agency \(IEA\)](http://www.iea.org)