SE-09-02
Version 1
23rd May 2018

NOTE ON ENERGY AND ENVIRONMENTAL BENEFITS OF 5 STAR ACs

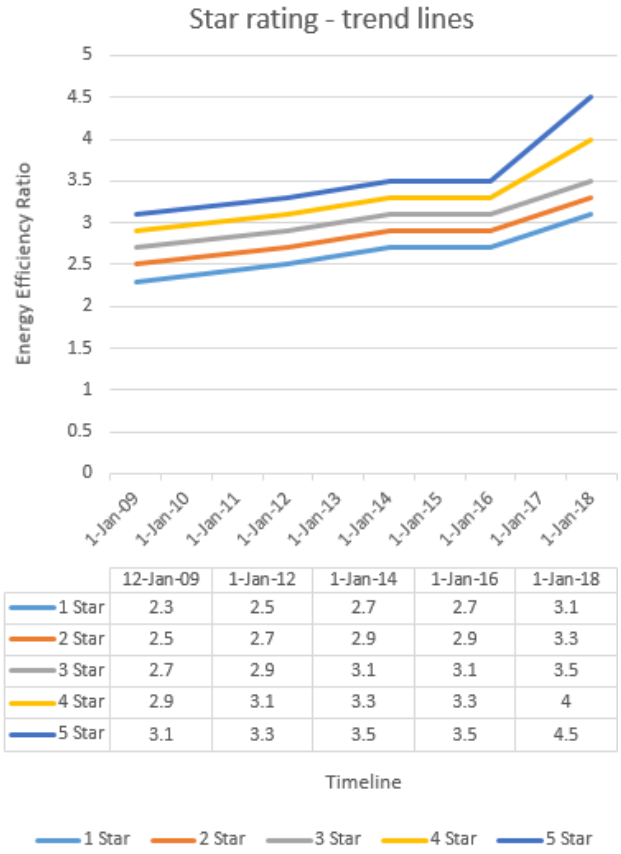
1. We are not offering just a 5* ac, we are infact offering a 5*++ ac. Our offering is:
   - 5* inverter ac ratings as per BEE (Bureau of Energy Efficiency) is min. 4.5ISEER, against which our offering is with a higher ISEER (5.24)
   - 5* inverter, which is superior to 5* fixed speed (see item 4)
   - Saving potential compared to what we were offering till Dec 2017, which our customers will be using now, is upto 35-40%.

   (ISEER: Indian Seasonal Energy Efficiency Ratio)

Product	Rating year	ISEER	CSEC kWh	Savings on 3* fixed (2017)	
5* inverter	2018	5.24	520	-37%	we are offering now
5* inverter	2018	4.5	600	-28%	is starting of a 5* inverter ac in the market
3* fixed	2018	3.6	756	-9%	
3* fixed	2017	3.1	828		we have been providing this till now

CSEC: kWh consumption for 1600hrs of operation in average Indian climatic conditions

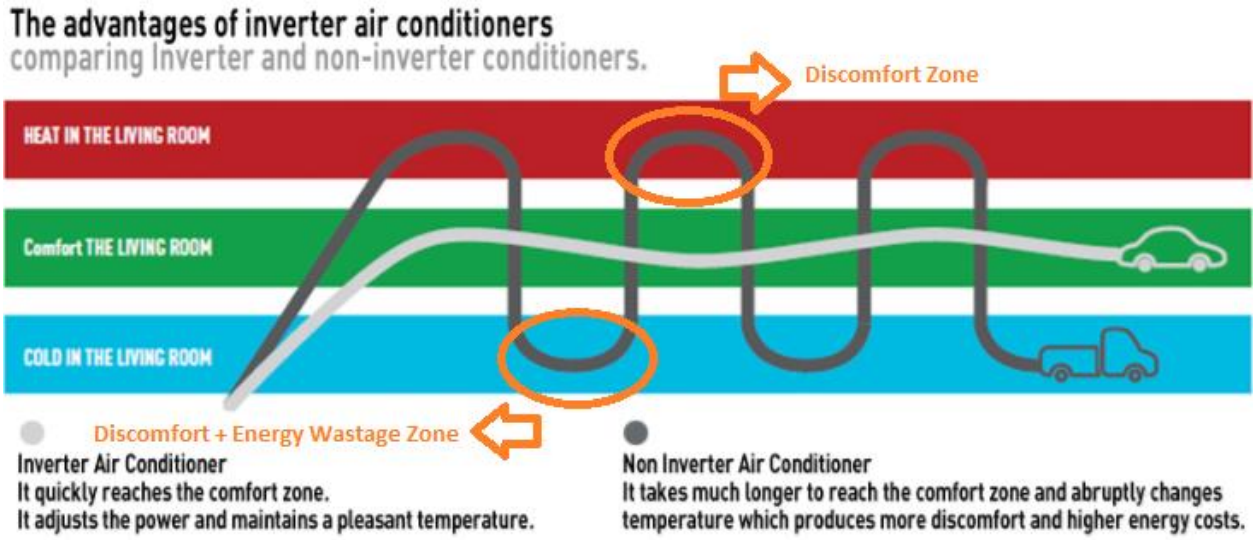
2. It is historically seen that BEE upgrades the star rating every 2 years with ISEER incrementals of 0.5. Therefore our ACs may remain 5* rated for several years, i.e. they may survive a rating downgrade in 2019 (speculative).



	12-Jan-09	1-Jan-12	1-Jan-14	1-Jan-16	1-Jan-18
1 Star	2.3	2.5	2.7	2.7	3.1
2 Star	2.5	2.7	2.9	2.9	3.3
3 Star	2.7	2.9	3.1	3.1	3.5
4 Star	2.9	3.1	3.3	3.3	4
5 Star	3.1	3.3	3.5	3.5	4.5

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3. Air conditioners are a main contributor to the peak electricity demand, which stresses the grid of the nation. Having the most efficient equipment relaxes the peak demand, and the saved electricity can be used on productive pursuits of the nation.
4. Inverter ACs are better for comfort also, as depicted in the diagram below.
    - Fixed speed compressors switch on and keep reducing the temperature until they achieve room temperatures below the set level, then the compressor switches off, to get triggered back again when the room is above the set temperature.
    - Inverter acs reach and maintain the room temperature by adjusting their speed through the drives.



5. These air conditioners are with R410* refrigerant which has no ODP (Ozone Depletion Potential) as compared to the R22 which had ODP and was in use in the earlier air conditioners (offered until Dec 2017).

6. Our marketing team may also collaborate with Hitachi to detail out additional marketable features of their units.

*Note: R410 still has high GWP (Global Warming Potential) as compared to R32, R290 recommended by RMI. However only Daikin offers R32 refrigerant.