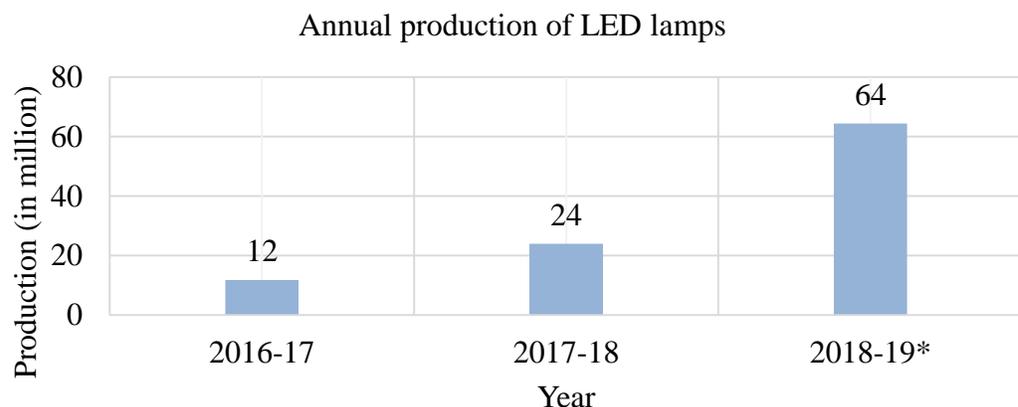




**MINUTES OF MEETING**

Fifth Technical committee meeting of LED lamps and Tubular Fluorescent Lamps was convened by Director (S&L) at Conference hall of Bureau of Energy Efficiency, New Delhi on 8<sup>th</sup> March, 2019. List of participants is attached at Annexure –A.

1. Welcoming the committee members, BEE made a presentation covering the following aspects:
  - (i) Existing market scenario of Star labeled LED lamps
  - (ii) Proposal for ratcheting up the existing energy consumption standards for LED lamps
  - (iii) Existing market scenario of Star labeled Tubular Fluorescent Lamps
  - (iv) Proposal for ratcheting up the existing energy consumption standards for Tubular Fluorescent Lamps.
  
2. BEE presented the market penetration of star labeled LED Lamps during last three years i.e. from FY 16-17 to FY 18-19\* wherein it was reported that:
  - (i) Star rating production has increased considerably with the implementation of mandatory labelling phase in the year 2018.

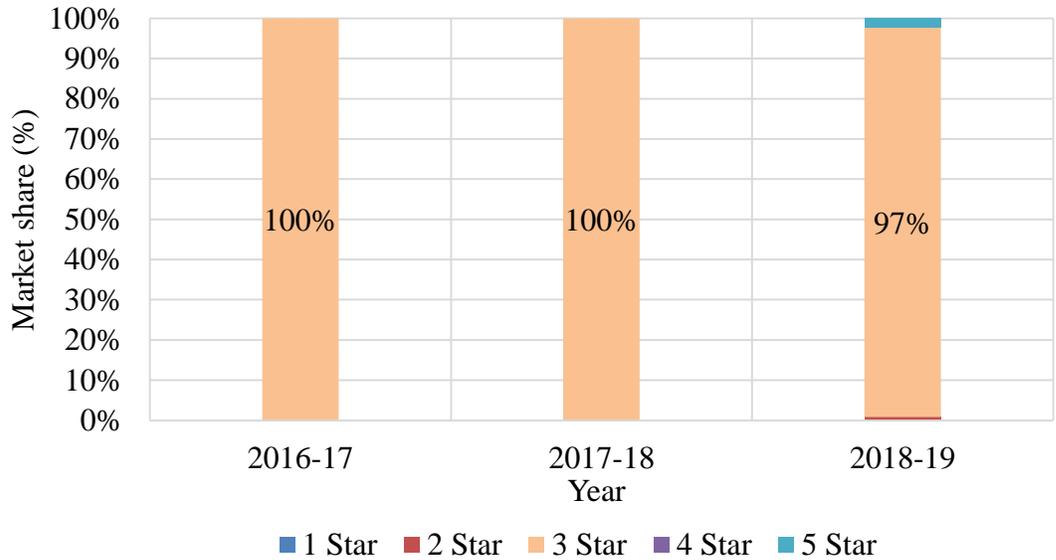


Note: \* represents that production data as on date for the ongoing FY 18-19.

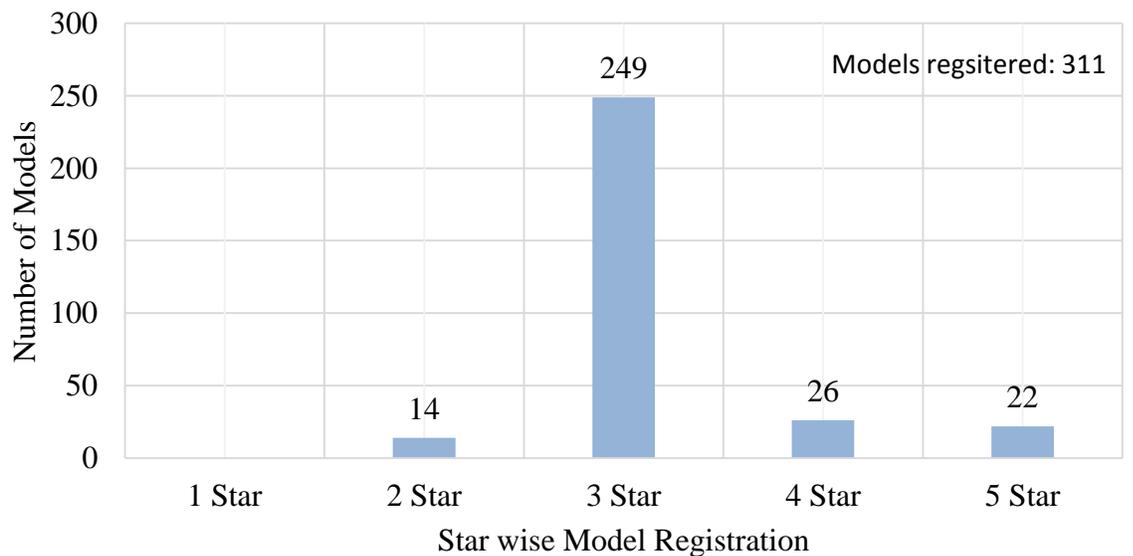


- (ii) 97% of the reported star labeled production for the year 2018-19 is under star level 3.

Star wise market share of LED lamp



- (iii) Out of 311 models registered in the FY 18-19, only 14 models lie under star level 2.





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In view of the existing market scenario, considering that only 14 models out of 311 fall under 2 star, the star rating plan can be ratcheted up by level 1 post the expiry of existing star rating plan i.e. w.e.f. 1<sup>st</sup> January, 2020.

Valid From 1 <sup>st</sup> January, 2018 to 31 <sup>st</sup> December, 2019		Valid From 1 <sup>st</sup> January, 2020 to 31 <sup>st</sup> December, 2022 (3 years)	
Star Rating	Luminous Efficacy (Lumen/ Watt)	Star Rating	Luminous Efficacy (Lumen/ Watt)
1 Star	≥ 68 to < 79	1 Star	≥ 79 to < 90
2 Star	≥ 79 to < 90	2 Star	≥ 90 to < 105
3 Star	≥ 90 to < 105	3 Star	≥ 105 to < 120
4 Star	≥ 105 to < 120	4 Star	≥ 120 to < 135
5 Star	≥ 120	5 Star	≥ 135

**Note: The proposed energy consumption standards will be valid for a period of three years i.e. from 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2022, wherein as applicable for existing star rating plan, no approvals shall be granted for Star level 1.**

3. In terms of the star wise production trend during the FY 18-19 and actual L/W value obtained through registered star labeled LED lamps, it was observed that a representable chunk of LED models can achieve an L/W value of even  $\geq 120$ . In keeping with this, BEE proposed the following:
  - (i) Existing star level 2 will become new star level 1.
  - (ii) No approvals to be granted for Star level 1 likewise the existing star rating plan.
  - (iii) Introduction of new L/W value as 5 star.
4. Representative from LED Manufacturing Association (i.e. LEDMA & ELCOMA) expressed their concerns on proportionate incremental cost for new 5 star LEDs, customer acceptability and understanding of existing 5 star labeled LEDs in the



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market once proposed revision in standards will be live, lower production percentage under star level 5.

5. Representative from Bureau of Energy Efficiency mentioned that the label validity period mentioned on the sample label itself resolves the issue of customer acceptability of revised star level for the same LED lamp. Further, it was clarified that the Star Rating, Year of manufacturing of the model (on sample label) and label validity period are in synchronization i.e. A 3 star model manufactured in the year 2019 with label validity period let's say 1<sup>st</sup> January, 2018 to 31<sup>st</sup> December, 2019 represents that, this star rating of the model manufactured in the year 2019 stands valid as per the energy consumption standard for the period given on the label. Now if the same model becomes 2 star as per the new energy consumption standard, then all the three details will change i.e. star rating 2, Year of manufacturing of the model as 2020, label validity period as 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2022.

Star Rating	Validity period of Energy Consumption Standards	Year of Manufacturing
3***	01/01/2018 - 31/12/2019	2018/2019
2**	01/01/2020 – 31/12/2022	2020/2021/2022

6. CLASP submitted that in India, it is observed that  $\geq 140$  L/W values can be achieved through self-ballasted LED lamps and internationally, this value is found to even more than 200 L/W. Lower production percentage under star 5 doesn't imply that the up gradation could not be carried out. It may please be noted that models lying under 5 star are always aspirational and may not have a massive production. Reported 138 L/W value is not a hypothetical value, rather it is a realistic value logged under BEE database.
7. Concluding the meeting, chair submitted that in keeping with the realistic efficiency value that can be achieved and even higher L/W value published by laboratories, the proposal of ratcheting up the energy consumption standards for LED lamps is open for the comments of stakeholders with apt justification till 15<sup>th</sup> April, 2019, failing which, the proposal stands accepted.



8. For up gradation in existing energy consumption standards of TFL, BEE presented the existing market scenario of star labelled Tubular Fluorescent Lamps, wherein it was reported that:
- (i) Over the years, the overall production of Tubular Fluorescent lamps has dropped gradually with the increasing use of LED lamps.
  - (ii) Only 16 models registered during the FY 18-19.
  - (iii) Out of these 16 models, 9 models lie under star level 1 while remaining 7 under star level 3.
9. In keeping with this, the chair mentioned that for Tubular Fluorescent lamps, the same star rating plan will be extended for a period of another 1 year followed by an up gradation by Star Level 1 i.e.

Valid From 1 <sup>st</sup> July, 2018 to 30 <sup>th</sup> June, 2020		Valid from 1 <sup>st</sup> July, 2020 to 30 <sup>th</sup> June, 2021	
Star Rating	Luminous Efficacy (Lumen/ Watt)	Star Rating	Luminous Efficacy (Lumen/ Watt)
1 Star	≥ 65 to < 75	1 Star	≥ 65 to < 75
2 Star	≥ 75 to < 85	2 Star	≥ 75 to < 85
3 Star	≥ 85 to < 95	3 Star	≥ 85 to < 95
4 Star	≥ 95 to < 110	4 Star	≥ 95 to < 110
5 Star	≥ 110	5 Star	≥ 110

10. Subsequently, representative from Philips submitted that, based on the outcome of lamps testing being carried out in Netherlands, it is to mention that, for halo phosphates, there is no scope of improvement in efficiency. Manufacturing associations and representative from other Industries were also of the same opinion.



**Final Decisions of Fifth Technical Committee Meeting on LED lamps and TFL:**

1. Extension in star rating table of LED lamps for a period of 6 months from 1<sup>st</sup> January, 2020 to 30<sup>th</sup> June, 2020 followed by an up gradation by star level 1. i.e.

<b>Valid From 1<sup>st</sup> January, 2020 to 30<sup>th</sup> June, 2020 (Extension of existing table for 6 months)</b>		<b>Valid From 1st July, 2020 to 30<sup>th</sup> June, 2023 (3 years)</b>	
<b>Star Rating</b>	<b>Luminous Efficacy (Lumen/ Watt)</b>	<b>Star Rating</b>	<b>Luminous Efficacy (Lumen/ Watt)</b>
1 Star	≥ 68 to < 79	1 Star	≥ 79 to < 90
2 Star	≥ 79 to < 90	2 Star	≥ 90 to < 105
3 Star	≥ 90 to < 105	3 Star	≥ 105 to < 120
4 Star	≥ 105 to < 120	4 Star	≥ 120 to < 135
5 Star	≥ 120	5 Star	≥ 135

Note: No approvals would be granted for star level 1 in new star rating table effective from 1<sup>st</sup> July, 2020 as in case of existing star rating table.

2. Extension in the existing energy consumption standards for Tubular Fluorescent Lamps for a period of another 3 years i.e. from 1<sup>st</sup> July, 2020 to 30<sup>th</sup> June, 2023 based on consensus in the committee over abysmal scope of improvement in the efficiency of tubular fluorescent lamps.

<b>Star Rating</b>	<b>Luminous Efficacy (Lumen/ Watt)</b>
1 Star	≥ 65 to < 75
2 Star	≥ 75 to < 85
3 Star	≥ 85 to < 95
4 Star	≥ 95 to < 110
5 Star	≥ 110



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3. LEDMA and ELCOMA to submit brief on common star rating plan for LED and TFL.
4. Finalization of common star rating plan for LEDs, TFL and inclusion of Tubular LEDs in existing star labelling program, subject to the publication of BIS standard for TLEDs & concurrence of ELCOMA.

The meeting concluded with vote of thanks to the chair.