



**Delhi Electricity Regulatory Commission**  
**Viniyamak Bhawan, 'C' Block, Shivalik, Malviya Nagar, New Delhi – 110017.**

F.11(2282)/DERC/2024-25/8291

**Petition No. 64/2024**

**In the matter of:   Petition seeking approval of the Commission of a Scheme for replacement of non 5 Star rated Air-conditioners and Fans with BEE 5 Star rated Air-conditioners and Fans.**

**Tata Power Delhi Distribution Ltd.**

**....Petitioner**

**Coram:**

**Justice Umesh Kumar, Former Judge, Chairman, DERC**  
**Sh. Ram Naresh Singh, Member**  
**Sh. Surender Babbar, Member**

**Appearance:**

**Mr. Manish Kumar Srivastava, Advocate, TPDDL**

**ORDER**

(Date of Order: 18.06.2025)

1. M/s Tata Power Delhi Distribution Ltd. (TPDDL), has filed the instant Petition seeking approval of the Commission of a Scheme for replacement of non 5 star rated Air-conditioners and Fans with BEE 5 Star rated Air-conditioners and Fans and has prayed for:
  - a) approval of the proposed Air-Conditioners and Fans Replacement Scheme in terms of the detailed proposed Project Report enclosed as Annexure-B to the Petition or as may be modified by the Commission; and
  - b) to consider and allow the expenses on account of floating the tender, hiring of the implementation agency, administrative costs and the rebate cost along with interest thereon additionally in the ARR of the Petitioner to be recovered under the head of Demand Side Management budget or any other head as the Commission may deem fit.

**Petitioner's Submissions**

2. The Petitioner has made the following submissions:
  - i. The Petitioner, a company incorporated under the Company Act, 1956 is a distribution and retail supply licensee and is engaged in supplying electricity to its 14 lacs consumers in North and North West areas in Delhi.
  - ii. As an introductory to the reasons for preferring the instant Petition, it has been stated that the generation of power leaves carbon footprints on the

environment and multi-pronged steps are afoot at all levels by the Government in its effort to reduce the same, *inter-alia*, through energy conservation. One such step in the direction has been to establish the Organisation named Bureau of Energy Efficiency (BEE) under the Energy Conservation Act, 2001. The said Bureau evolves standards of minimum energy consumption by electrical appliances. For example, the air conditioners are rated on scale of 1 to 5 stars. Higher the number of stars more is the energy efficiency capability. Similarly, the standards and labels for BLDC fans have been previously made more stringent by the BEE with the aim of removing least efficient and introducing the most efficient products in the market.

- iii. Similarly, as per the mandate of the Electricity Act 2003 and other legislations in this behalf, the Commission has also issued its Demand Side Management Implementation Frame-work Regulations, 2014, ('DSM Regulations 2014') which mandate that the Distribution Licensee, *inter alia*, shall:
  - a) Design, develop and implement DSM Programmes that supplement national level efforts, specifically those promoted by BEE; and
  - b) Propose and implement DSM Programmes which shall, *inter alia*, provide long term savings,, reduce peak demand and associated costly power purchase, bring in energy efficiency etc.
- iv. That in pursuance of the Regulations and the mandate given in the earlier tariff Orders, the Petitioner has taken many similar initiatives such as the usage of CFLs, LEDs and promoting energy efficiency solution. The Petitioner has also launched appliance replacement programmes for refrigerators and air conditioners etc. These steps are also known as Demand Side Management Programmes and have been encouraged and promoted by the Commission.
- v. In order to promote Demand Side Management (DSM) measures in its area of operations, the Petitioner intends to launch a "*Rebate based Energy Efficient Air Conditioner and Fan Scheme*" for its Consumers. The main objective of the Scheme is to accelerate the adoption of BEE 5 Star Rated ACs and BLDC Fans through consumer rebate scheme. This Scheme, if approved and implemented, would significantly reduce the power consumption of consumers and as well as their electricity bills. It would also enhance awareness about use of energy efficient products amongst consumers and have a cascading effect for other energy efficient products. By implementing this scheme, it is expected to save deemed energy consumption by a conservative estimate of 815 kWh/year for every BEE 5 Star rated Air Conditioner and 141 kWh/year for every BLDC Fan.

- vi. The average useful life of an Air Conditioner and BLDC Fan is around 5 to 6 years. However, despite the high electricity consumption, consumers continue to use the inefficient and more energy consuming old Air Conditioners and induction Fans beyond their useful life.
- vii. That the Petitioner has conducted a focused load research for residential consumers. The same reveals that 1.5 ton Air Conditioners are the most commonly used, with the average household having 2 (two) Air Conditioners. As per BEE Sample and Labelling, the Air conditioners are used for around 9 (Nine) hours a day, for 180 (One Hundred and Eighty) days in a year. The Fans are used, on an average, 12 (Twelve) hours a day for approx. 250 (Two Hundred and Fifty) days in a year.
- viii. That a market survey conducted reveals that 3 Star rated ACs are the most popular and fast selling units and it is the price differential between BEE 3 star and 5 star rated Air Conditioner (Rs. 5000/- to 8000/- appx) which appears the reason behind its popularity. Thus, in order to encourage the consumers to switch over to BEE 5 Star Rated Air Conditioners, the Petitioner's Scheme proposes the following rebate for Air-conditioners and BLDC Fans :-

Particulars	Unit	AC	BLDC Fan
Number of AC/BLDC Fans offered under this Scheme	Nos	1500	900
Rebate	Rs.	3000	600
Grand Total Rebate Amount	Rs. [in Crore]	0.45	0.05
Total Energy saved per Year	MU	1.22	0.13
Total energy saving for utility considering T&D Loss 6.34%	MU	1.30	0.13
Load Reduction	MW	1.56	0.04
Annual Avoidable Power Purchase cost (@Rs. 08.33 per Unit)	Rs. [in Crore]	1.08	0.11

- ix. The above-mentioned rebate amount would be provided on the Market Operating Price (MOP), i.e. the price offered by Retailers which is generally lower than MRP (Maximum Retail Services). The said rebate being offered to the Consumers is proposed to be claimed in the Annual Revenue Requirement of the Petitioner for the relevant Financial Year from the Commission; as is in accordance with the guidance, observations and recommendations expressed by the Commission vide various Tariff Orders also.
- x. In light of the above, the Petitioner has proposed to facilitate and encourage the consumers to opt for higher energy efficient 5 Star rated Air Conditioners and BLDC Fans, which provide maximum energy efficiency and energy saving and consequently contributing to the overall achieving of the objective.

- xi. The Petitioner has further submitted various salient features of the Scheme, viz. Objective, Estimated deemed energy saving, Rebate offered, Target consumers, Replacement of the old Air Conditioner and Fans, Implementation Agency, Marketing and promotion.
- xii. The proposed savings expected by the Petitioner are in terms of reduction in power procurement cost during the summer months. The power purchase cost is anticipated at Rs. 08.33 for the FY 2024-25. The amount of energy that will be conserved after implementation of the scheme is 1.35 MU for both ACs & Fans i.e., 1.22 MU for AC & 0.13 MU for BLDC Fan]] annually, with a cumulative benefit of 4.29 MU for both AC & BLDC Fan (3.90 MU for AC & 0.39 MU for BLDC Fan)] over the three years of implementation period. Therefore, the expected yearly savings are Rs. 1.19 crores [i.e., Rs. 1.08 Crores for Air Conditioners and Rs. 0.11 crores for Fans].

**Commission Analysis**

- 3. The Petitioner has sought approval of its Scheme for replacement of non 5 star rated Air-conditioners with BEE 5 Star rated Air-conditioners and Old Fans with BLDC Fans. For implementing the Scheme the Petitioner has also prayed for allowing the expenses on account of floating tender, hiring of implementation agency, administrative costs and the rebate cost along with interest thereon additionally in the Annual Revenue Requirement of the Petitioner.
- 4. A meeting was conducted with the Petitioner on 26.05.2025, wherein the Petitioner was asked to submit the cost-benefit analysis of the proposed scheme as also the outcome of similar scheme launched by the Petitioner in the year 2018. In response, it was informed that the rebate in the current scheme for AC and Fan replacement has been calculated based on the avoidable peak power purchase cost realized by the DISCOM due to replacement of Non-star rated ACs and BLDC fans with 5-star rated appliances. Further, following data reflects the outcome of its earlier scheme:

<b>Total number of ACs replaced</b>	3664 nos.
<b>Average rebate amount disbursed per AC</b>	Rs 3335/-
<b>Total rebate Amount disbursed</b>	Rs 1.22 Crore
<b>Total Savings in Electricity (Million Units)</b>	3.483
<b>Avoidable Power Purchase Cost for the DISCOM</b>	Rs 1.80 Crore*

\*Taking Average Power Purchase Cost of Rs 5.19 for the year 2018-19 as given in the Tariff Order

- 5. The submissions and further inputs submitted by the Petitioner in support of the proposed Scheme have been analysed. The rebate proposed to be offered to

the Consumers has been linked to the annual savings likely to be achieved. Following assumptions have been made for calculation of rebate:

**i. Assumptions for the Calculation of AC Rebate Amount:**

- a. For rebate amount calculations, Energy Consumption Standards for Star labelled room air conditioners by Bureau of Energy Efficiency (BEE) Notification dated 08.08.2017 (hereafter referred as BEEs Notification), as amended from time to time, has been followed.
- b. Rebate amount has been calculated based on the avoidable Average Power Purchase Cost (APPC) for the DISCOM with respect to the savings in electricity achieved on replacement of 1-star rated AC with 5-star rated AC.
- c. Indian Seasonal Energy Efficiency Ratio (ISEER) of 1- star and 5-star rated ACs as per Table-3.2(f) of BEEs Notification has been taken as a reference.
- d. As per Clause-4(3)(i) of BEEs Notification, operating hours of AC has been taken as 1600 hours/annum.
- e. As per Clause-6 of the BEEs Notification, compressor running has been taken as 50%.
- f. AT&C loss has been taken as per DERC Business Plan Regulations, 2023 Target for the year 2025-26 for the Petitioner, TPDDL (6.74%).
- g. Average Power Purchase Cost (APPC) for the year 2025-26 for the DISCOM has been calculated based on CAGR of APPC as approved by the Commission between 2018-19 to 2021-22 in the respective Tariff Orders.

**ii. Assumptions for the Calculation of Fan Rebate Amount:**

- a. Rebate amount has been calculated based on the avoidable Average Power Purchase Cost (APPC) for the DISCOM with respect to the savings in electricity achieved on replacement of conventional ceiling fan with 5-star rated BLDC fan.
  - b. Wattage of BLDC fan taken as 30 Watt and conventional ceiling fan as 75 Watt.
  - c. Hours of Fan usage taken as 12 Hours/Day with 200 operating days in a year.
  - d. AT&C loss has been taken as per DERC Business Plan Regulations, 2023 Target for the year 2025-26 for TPDDL (6.74%).
  - e. Average Power Purchase Cost (APPC) for the year 2025-26 for the DISCOM has been calculated based on CAGR of APPC as approved by the Commission between 2018-19 to 2021-22 in the respective tariff orders.
6. Considering the calculation of cost benefit analysis for AC replacement scheme based on all the aforesaid assumptions and the cost saving as prorated to the ratio of energy saved for specified AC, the Commission approves the scheme

proposed by the Petitioner for replacement of non-star rated Air-conditioners and Fans with BEE 5 Star rated Air Conditioners and Fans as under:

**(i) Buy back arrangement:**

Under the Scheme, 1500 non-star rates ACs and 900 conventional Fans may be replaced with 5-Star rated ACs and Fans (BLDC) respectively. The scheme shall be operated under 100% buy back arrangement so that the inefficient ACs/Fans are be taken out of the system and shall be disposed of in an environmental friendly manner.

**(ii) Rebate/Discount rate:**

Rebate amount for replacement of AC and fan shall be as follows:

Rebate for replacement of AC			Rebate for replacement of Fan
1 Tonne	1.2 Tonne	1.5 Tonne	1200 mm sweep
Rs 1700/-	Rs 2000	Rs 2500	Rs 600

**(iii) Expenses in ARR:**

The expenses on account of floating tender, hiring of implementation agency, administrative costs and the rebate cost along with interest thereon are allowed additionally in the Annual Revenue Requirement (ARR) of the Petitioner to be recovered under the head Demand Side Management (DSM) Fund.

**(iv) Eligibility of Consumers:**

- a. The consumer should have a valid consumer connection number/CA number and there should be no outstanding dues on the date of application.
- b. Only 01 (one) AC and/or 01 (one) Fan shall be offered against one CA number which shall be provided on first come first serve basis for the eligible consumers.

**(v) Implementing Agency:**

The Petitioner shall engage at least two implementing agencies discovered through competitive bidding process. The price to be quoted by the implementing agency in the bid process shall be the net of the quoted price of new AC (or Fan, as the case may be) minus the salvage value of the AC (or Fan, as the case may be), which shall be indicated separately as part of the bid.

**(vi) Maintenance of Records:**

TPDDL shall keep all the records related to this scheme separately. TPDDL shall submit following details related to the implementation of the scheme:

- a. Final price discovered through competitive bidding for the specified ACs and Fans;
- b. Actual saving of energy due to implementation of this scheme;

- c. Administrative cost incurred under this scheme; and
- d. Any other record relevant to the scheme.

**(vii) Proper and Safe Disposal of Old replaced ACs and Fans:**

The Petitioner shall ensure proper and environment friendly disposal of old replaced air-conditioners by the implementation agency to avoid misuse as well as safety hazards. For this purpose, the three leads (phase, neutral and capacitor point) from the sealed compressor tank shall be cut in the presence of the consumer. Subsequently, the old ACs shall be disposed of as per the applicable laws by the implementing agency. The disposal certificate shall also be issued by such agency.

**(viii) Validity of the Scheme:**

The scheme shall be valid for 12 months from the date of issue.

- 7. The instant Petition stands disposed of in the above terms.
- 8. Ordered Accordingly.

**Sd/-**  
**(Surender Babbar)**  
**Member**

**Sd/-**  
**(Ram Naresh Singh)**  
**Member**

**Sd/-**  
**(Justice Umesh Kumar)**  
**Former Judge**  
**Chairman DERC**