



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

F.11(2099)/DERC/2023-24/7751

Petition No. 18/2023

In the matter of: Petition under Delhi Regulatory Commission (Demand Side Management) Regulations, 2014 seeking approval of the Commission for Replacement of Air Conditioners.

M/s BSES Yamuna Power Ltd.

...Petitioner

Coram:

Hon'ble Dr. A. K. Ambasht, Member

Appearance:

Mr. Buddy A. Ranganadhan, Adv., BYPL

Mr. Dushyant Manocha, Adv., BYPL

ORDER

(Date of Order: 11.07.2023)

1. The Instant Petition has been filed by BSES Yamuna Power Ltd. (BYPL) for seeking approval of the Commission to replace the existing energy inefficient air conditioners in its area of supply with energy air conditioner having a 5-star BEE rating.
2. The Petitioner has made the following prayers in its Petition:
 - a. Approve the Petitioner's proposed air conditioner replacement scheme in the terms of the present petition and more specifically in view of Paras 5 and 6 of the Petition;
 - b. Allow the expenses incurred additionally in the Annual Revenue Requirement (ARR) of the Petitioner and to be recovered under the head of DSM budget or any other head as the Commission considers appropriate;
3. The Commission passed an order dated May 18, 2018 in Petition No. 23 of 2018 allowing installation of 5 Star rated Energy Efficient Air Conditioners for domestic consumers of the Petitioner, on the terms and conditions set out therein ("AC Replacement Scheme"). The Guidelines for calculating the rebate were issued by the Commission in its Order of May 18, 2018 itself. The AC Replacement Scheme,

WEAR FACE MASK

WASH HANDS REGULARLY

MAINTAIN SOCIAL DISTANCING

as approved by the Commission was valid for a period of 12 months. Thereafter, the Commission passed an Order dated November 26, 2018 in Petition No. 23/2018 whereby it included 1 Ton and 2 Ton air conditioners as a part of the AC Replacement Scheme and provided details on computation of rebate.

4. The Petitioner commenced its AC Replacement Scheme in May, 2018. Thereafter, the said scheme was extended by the Commission vide its letter dated June 8, 2020 and July 19, 2021. The highlights of AC Replacement Scheme, as finally implemented by the Petitioner, are as under:

DSM Program	Quantity	Load reduction	Energy Saving	Emission Reduction	Eq. Energy Reduction
	(Units)	(MWH)	(Rs. In Crore)	(t CO2)	(MTOE)
Saving due to Replacement of old AC with 5 Star rated Energy efficient AC	4985	1573	1.20	1290	135

5. Based on the Load Research study conducted & Energy Audit reports at DT level over the years, the maximum usage of air conditioning appliances occurs during late night hours, i.e. from 2200 to 0400 which signified the increase in average daily operating hours to 8 hours over a week from earlier 6 hours.
6. The Petitioner respectfully submits that proposed scheme is to promote Demand Side Management (DSM) measures. The salient features of the Petitioner's proposal are as under:
- The Petitioner intends to re-launch the energy efficient Air Conditioner program for its domestic consumers in its entire area of operation in Delhi.
 - Under this proposal, the Petitioner would replace the existing non-star rated Air Conditioner in working condition with BEE 5 Star rated Energy Efficient Air Conditioner.
 - The Petitioner proposes to install 3000 energy efficient air Conditioners in its licensed area for the next 3 years, with the following schedule:

Expected approval from the Commission	May-23
Tendering and on boarding of AC OEMs	July-23

Launch of AC Replacement Program	Aug-23
Target set for FY 23-24	300 AC
Target set for FY 24-25	1200 AC
Target set for FY 25-26	1500 AC

- d. The estimated annual energy savings due to use of energy efficient air conditioners over old inefficient air conditioners is 1276.8 units per air conditioner and estimated annual monetary saving per air conditioner would be Rs. 6320/-. Upon successful implementation of the scheme, estimated cumulative annual energy saving for consumers for a total 3000 air conditioners will be around 3.83 Mus per year and annual monetary saving at consumer's end shall be to the tune of around 1.90 crore.
- e. In similar vein, the expected annual avoidable power purchase is 4.15 Mus and the expected avoidable marginal power purchase cost per annum is 4.09 Crore.
- f. Total estimated present cost of the projects is 1.67 Crore including administrative and Implementation cost of 0.079 Crore for a 3 years program.
7. In view of the evident benefits for consumers and also the envisaged environmental benefits including the future benefits to the consumers and positive response from the consumers, it is requested that the Commission allows the present Petition in terms of the Petitioner's proposal and may:
- a. Permit replacement of 3000 inefficient air conditioners over a period of three years;
- b. Permit Inclusion of 1-ton air conditioners in the scheme so that the positive impact on the load curve of the Petitioner can be maximized. Notedly, as per the consumer's request received during the execution of previous program, requirement for 1 tonne AC is 59 percent followed by 1.5 tonne AC i.e. 40 percent and 2 tonnes i.e.; 1 per in Petitioner's license area.
- c. Note that presently star rating of air conditioners is valid till December, 2024. If Star rating of air conditioners undergo a change then the Petitioner will seek for quotation for new 5 Star rated air conditioner models from on boarded OEMs and revised price (if any) of the air conditioners will be notified the Commission.

8. The Petitioner requests the Commission to accord expeditious approval for the present proposed scheme which is towards the benefit of all the stakeholders and the expenses incurred be allowed additionally in the Annual Revenue Requirement (ARR) of the Petitioner and to be recovered under the head of DSM budget or any other head as the Commission considers appropriate.

Commission Analysis

9. The Instant Petition has been filed by BYPL under Delhi Electricity Regulatory Commission (Demand Side Management) Regulations, 2014 seeking approval of the Commission for Replacement of inefficient Air Conditioners with efficient ones.
10. The Petitioner during the hearing held on 30/05/2023 stated that they are willing to sit with the Officers of the Commission for any query and the Petition was admitted and Order was reserved. Thereafter, vide email dated 12/06/2023, the Petitioner was asked to submit the Cost Benefit Analysis & performance of previous AC replacement scheme. BYPL vide letter dated 30/06/2023 submitted the said information.
11. Further, during the meeting with the Officers of the Commission and BYPL on 16/06/2023, the submissions of the Petitioner along-with additional information were discussed. It was also noted that under this scheme earlier approved by the Commission, BYPL have replaced 5089 nos. of inefficient ACs which led to an avoidable Power Purchase Cost of Rs. 8.76 Cr. from FY 2018-19 to FY 2022-23.
12. Considering the calculation of cost benefit analysis for AC replacement scheme based on all the information as provided by the Petitioner as stated above, and the cost saving as prorated to the ratio of Energy saved for specified AC, the Commission accords approval to this scheme for implementation of DSM based Energy Efficient Air Conditioner program in UT of Delhi on the following parameters:
 - a) **Buy back Arrangement**: The scheme shall be operated under 100% buy back arrangement so that the inefficient ACs must be taken out of the Grid and disposed-off in an environmental friendly manner.
 - b) **Rebate/Discount rate**: The rebate of 5 Star ratings of AC shall be computed, as per the following equation:

$$\text{Rebate (in Rs.)} = 5888.40 + 74.38 \times (\text{Savings in '000 Units per AC})$$

The Savings in '000 Units per AC will be computed as follows:

- i. The installed capacity of 5 Star/Inverter ACs compared with 3 star rated AC of power consumption of 2364 Watts;
- ii. Hours of Usage 10 hours/day
- iii. No. of days Usage 195 days/year
- iv. Transmission and Distribution Losses @ 8.60% for BYPL i.e. D/L Target for FY 2023-24 & 0.88% STU losses.
- v. Compressor Life (savings in MU computed from (i) to (iv) above is multiplied with compressor life and the resultant is input in the equation indicated above).

c) **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 Aggregate Revenue Requirement (ARR) of the Petitioner to be recovered under the head of Demand Side Management (DSM) budget or any other head subject to prudence check. Such expenses to be mentioned separately in the Audited Books of Accounts.

d) Eligibility of Consumers:

- (i) The Scheme shall be valid for Domestic Consumers as specified in DERC Tariff Schedule.
- (ii) The consumer should have a valid consumer connection number/CA number.
- (iii) There shall be no outstanding dues on CA number as on date of application.
- (iv) A maximum number of 3 ACs shall be offered to a consumer.
- (v) The scheme shall be applicable on first come first serve basis for the eligible consumers.

e) **Implementing Agency:** The Petitioner shall engage at least four implementing agencies discovered through competitive bidding process. The price to be quoted by the implementing agency in the bid process shall be net of the quoted price of new AC minus the salvage value of the old AC, which shall be indicated separately as part of the bid. The implementing agency shall be responsible for the safe disposal of old AC's.

f) **Maintenance of Records:** The Petitioner shall keep all the records related to this scheme separately. The Petitioner will submit following details related to the implementation of the scheme:

- (i) Final price discovered through competitive bidding for the specified ACs;
- (ii) Saving of energy due to implementation of this scheme;
- (iii) Administrative cost incurred under this scheme; and
- (iv) Any other record relevant to the scheme.

g) **Proper and Safe Disposal of Old replaced ACs:** 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 stored in the petitioner's warehouse from where the same shall be disposed of as per the applicable laws through an authorized disposal agency. The disposal certificate shall also be issued by such agency.

h) **Validity of the Scheme:** The scheme shall be valid for a period of 36 months from the date of issuance of this Order. Further, the Scheme shall be initiated for usage of Consumers within 21 days from issuance of this Order. The Petitioner shall expedite the above process accordingly.

13. The Petition is disposed of as per the directions and decisions contained in the paragraph 12 cumulatively of this Order.

14. Ordered Accordingly.

Sd/-
(Dr. A.K. Ambasht)
Member