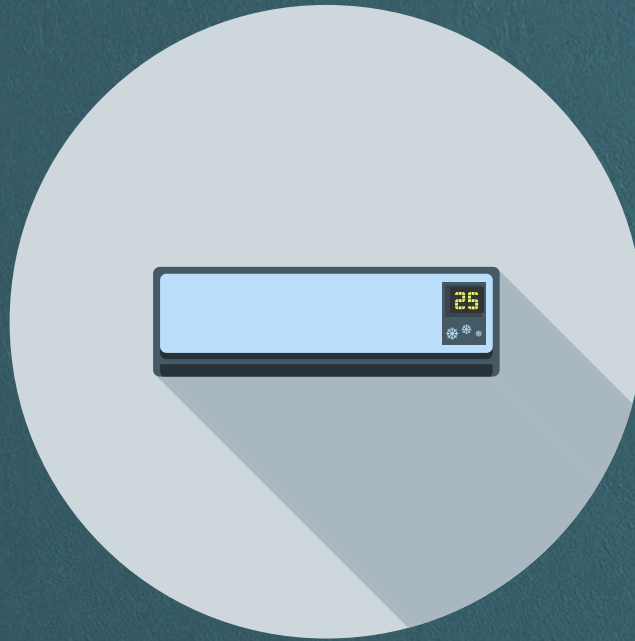


SUSTAINABLE PUBLIC PROCUREMENT

Green Room Air Conditioners on Government e-Marketplace

LAUNCHED ON JUNE 5, 2021



Background

Government e-Marketplace (GeM), launched in 2016, is an online platform for public procurement in India with the objective to create an open and transparent procurement platform for government buyers. Room Air Conditioners (ACs) are a high priority product for Sustainable Public Procurement (SPP) because of the high environmental impact an AC has over its life, from manufacturing, usage, servicing, and disposal. Sales of Room ACs are growing at over 15% annually, with over 44,000 ACs worth Rs. 1.7 Billion were procured on the GeM platform alone last year. The enabling policy and supporting regulations for Green ACs already exist, thereby ensuring ease of implementing sustainable public procurement.

Green Room Air Conditioners on GeM

Green Room Air Conditioners are those air conditioners that are super-efficient in terms of electricity consumption, use environment-friendly refrigerants and are capable of operating at different speeds.

Benefits of a Green Room Air Conditioner

- Approximately, 20% less annual electricity consumption.
- Approximately, 10% less greenhouse gas emissions over the product's lifetime.
- Cost range is comparable to that of 5 star rated room air conditioners.

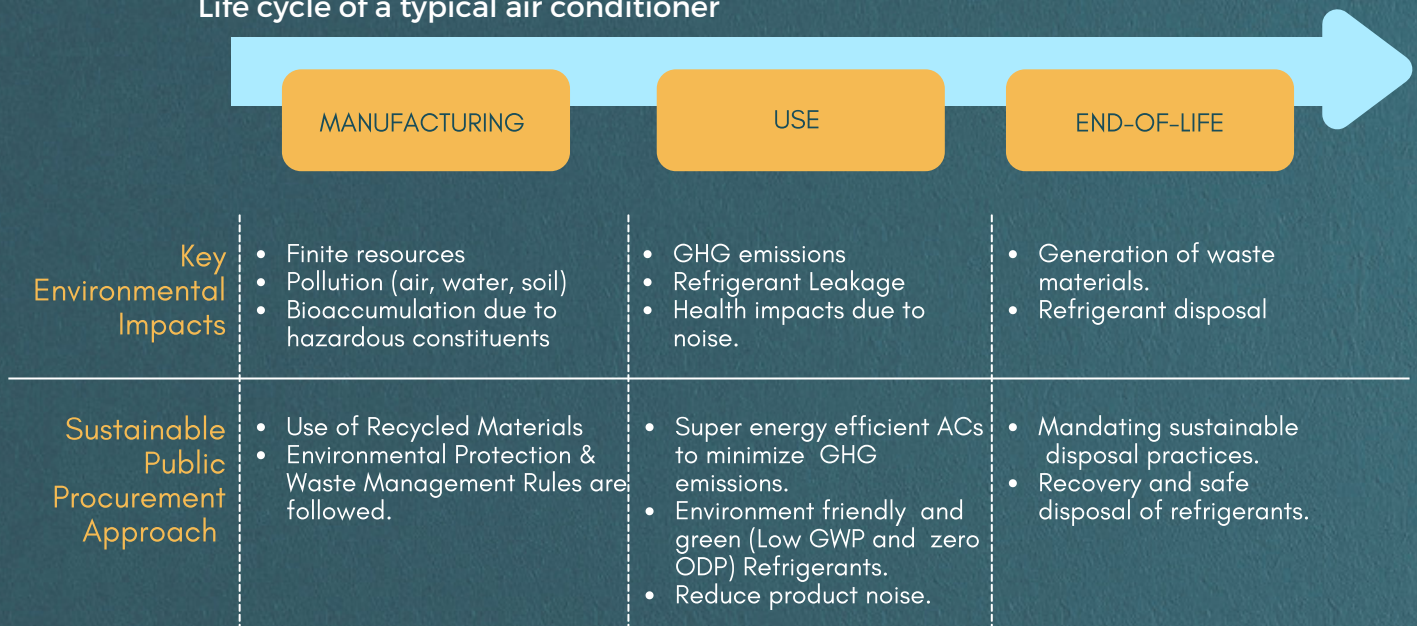
Salient Features of the Green Room Air Conditioner

- Variable Speed - Compressor is capable of operating at different speeds rather than being either 100% on or off based on cooling need.
- Super Energy Efficient - 20%-30% better ISEER than BEE 5 star rated split air conditioner.
- Eco friendly refrigerant - Refrigerant's global warming potential (GWP) is less than 700 and ozone depletion potential (ODP) is zero.



Green ACs - Life Cycle Climate Performance based Specifications

Life cycle of a typical air conditioner



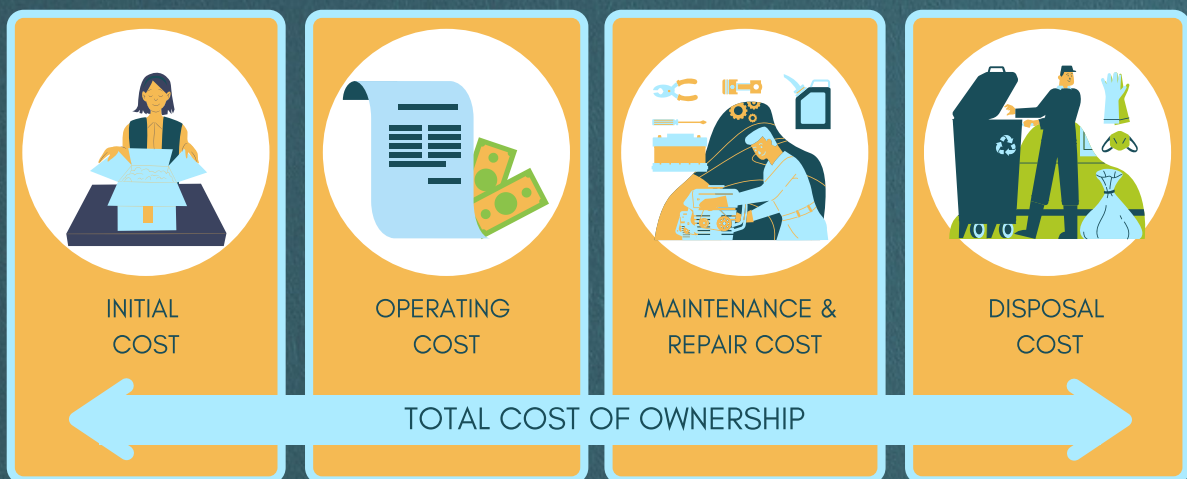
Green Room Air Conditioner Specifications on GeM

Compressor Type	Variable speed
Safety and Performance	Conform to the requirements for quality, safety and performance prescribed in IS 1391 Revised /IEC 60335-2-40 (under preparation) and all requirements specified as under.
Product Noise	Air conditioner noise levels shall be as notified under the Environment (Protection) Act, 1986, and as per BIS (IS 1391 Revised).
Energy Performance	<ul style="list-style-type: none"> • 3517 W to 5240 W (1-1.49 TR) – ISEER greater than or equal to 5.8 • 5275 W to 6682 W (1.5-1.99 TR) – ISEER greater than or equal to 5.4
Refrigerants	Refrigerant should have Zero ODP. Global warming potential (GWP) not exceeding 700 (100 years)
Recycled Plastic Components	Product shall be designed to promote recycling Utilizing at least 80% by weight of plastics for recycled plastic components
Paint	Paints used in the product shall not contain heavy metals or their compounds include mercury (Hg), lead (Pb), cadmium (Cd) and hexavalent chromium (Cr).
Packaging	The air conditioner packaging shall be made of recycled or biodegradable materials. Plastic packaging shall not contain halogenated hydrocarbon.
Green Disposal	Take-back or buy-back option is available with the manufacturer.

Selection based on Total Cost of Ownership

The initial cost of acquiring the a green room air conditioner can be higher than a conventional room air conditioner. But should a higher initial cost be the deciding factor that deters a buyer from purchasing the product?

A holistic way of evaluating a product is by considering the cost of the product over its lifetime. The 'Total Cost of Ownership' calculation incorporates the costs incurred during operation (electricity bill in case of an air conditioner), and maintenance over its lifetime in addition to the initial cost of acquiring the product.



Comparing a 1.5 TR 5-star Split RAC with Green RAC

5-Star RAC initially costs ₹ 42,000 - ₹ 70,000	Green RAC initially costs ₹ 42,000 - ₹ 75,000
On an average, consuming 890 kWh/year	On an average, consuming 750 kWh/year
Total Cost of Ownership over 7 years is ₹ 141,880	Total Cost of Ownership over 7 years is ₹ 122,090
GHG emissions over its lifetime 5,110 kg CO ₂	GHG emissions over its lifetime 4,300 kg CO ₂

A Green Room Air Conditioner is cheaper than a 5-Star RAC over its life time; often, with a payback period of less than One year.

Link to purchase Green Room Air Conditioner on Government e-Marketplace
<https://gem.gov.in/>