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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46027-2025

**Greenhouse gases - Quantification requirements and methods
of product carbon footprint - Room air conditioners**

温室气体 产品碳足迹量化方法与要求 房间空调器

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Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Quantification Purpose	3
5 Quantization range	4
6 Inventory Analysis	6
7 Impact Assessment	10
8 Results Interpretation	13
9 Product Carbon Footprint Report13	15
10 Critical Review	15
11 Product Carbon Footprint Statement15	16
Appendix A (Informative) Example of a Carbon Footprint Quantification Scheme for Room Air Conditioner Products	16
Appendix B (Informative) Data Inventory Collection Example	18
Appendix C (Normative) Calculation Method for Electricity Consumption of Room Air Conditioner Products During Use Phase	21
Appendix D (Informative) Product Carbon Footprint Report (Template)	22
Reference	27

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents". Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

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Greenhouse gas product carbon footprint quantification method and Request room air conditioner

1 Scope

This document provides the purpose of quantifying the carbon footprint of room air conditioners (hereinafter referred to as "room air conditioners"), and specifies the scope, Inventory analysis, impact assessment, result interpretation, product carbon footprint report, critical review and product carbon footprint declaration.

This document is applicable to air-cooled condensers, fully enclosed electric compressors, rated cooling capacity not exceeding 14000W, climate type Product carbon footprint quantification of T1 room air conditioner. Other types of air conditioners and low ambient temperature with nominal heating capacity not exceeding 14000W Air source heat pump hot air blower for reference use.

2 Normative references

GB 21455-2019

GB/T 24040

GB/T 24044

GB/T 24067

3 Terms and Definitions

The terms and definitions defined in GB/T 24040, GB/T 24044 and GB/T 24067 and the following apply to this document.

3.1 room air conditioner

A device that provides conditioned air to a room.

Note. It mainly includes refrigeration systems for refrigeration and dehumidification, air circulation and purification devices, and may also include heating and ventilation devices (which can be assembled in one housing or a system of components designed to be used together).

[Source. GB/T 7725-2022, 3.1.1]

3.2 Greenhouse gas

The natural and human-induced atmospheric ions that absorb and emit radiation from the Earth's surface, atmosphere, and clouds.

The gaseous component of radiation with wavelengths in the infrared spectrum.

Note. Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), hexafluoroethane (PFOS), Sulfur (SF₆) and nitrogen trifluoride (NF₃).

[Source. GB/T 24067-2024, 3.2.1]

3.3

The sum of GHG emissions and GHG removals in the product system, expressed in CO₂ equivalent, based on a single measure of climate change.