# Energy Efficient Windows Market Report by Operating Type (Awning, Casement, Double-hung, Fixed, Hopper, Sliding), Glazing Type (Double Glazing, Triple Glazing, and Others), Component (Frame, Glass, Hardware), End Use (Residential, Non-Residential), and Region 2024-2032

Market Report | 2024-08-10 | 144 pages | IMARC Group

**AVAILABLE LICENSES:**

- Electronic (PDF) Single User $3899.00
- Five User Licence $4899.00
- Enterprisewide License $5899.00

**Report description:**

The global energy efficient windows market size reached US$ 21,218.6 Million in 2023. Looking forward, IMARC Group expects the market to reach US$ 40,640.3 Million by 2032, exhibiting a growth rate (CAGR) of 7.3% during 2024-2032. The market is experiencing significant growth mainly driven by the various technological advancements, the rising consumer awareness and government incentives. The rising demand for sustainable building materials and the widespread adoption of strict energy efficiency standards further propel the market growth.

Energy Efficient Windows Market Analysis:
-Major Market Drivers: Key market drivers include the rising consumer awareness of energy savings and environmental benefits which propels the demand for sustainable building materials. Government regulations and incentives like stringent building codes and tax rebates further encourages the adoption of energy efficient windows. Technological advancements like smart windows and enhanced glazing techniques improves the overall performance an appeal of energy efficient windows. Furthermore, the rising trend of green building certification and the emphasis on reducing carbon footprints is also contributing positively to the energy efficient windows market growth.
-Key Market Trends: Key market trends include the technological advancements such as windows with electrochromic and thermochromic features. There is also a growing emphasis on sustainability with increased demand for green building certifications and ecofriendly construction practices. Government incentives and strict building codes further promote the adoption of energy efficient windows across the world. Enhanced glazing techniques and improved materials contribute to better insulation and energy savings while rising the consumer awareness of environmental benefits further boosts the energy efficient

windows demand across the world.
-Geographical Trends: North America leading the market mainly due to its strict building codes and high consumer awareness. Europe follows by closely with a strong demand driven by sustainability initiatives and government incentives. The Asia Pacific region is also experiencing the rapid growth, mainly driven by the rapid urbanization and infrastructure development across the region. Emerging economies in Latin America and the Middle East are also witnessing rising adoption due to economic growth and evolving construction standards. These regional trends highlight diverse growth drivers and market dynamics across different parts of the world.
-Competitive Landscape: Some of the major market players in the energy efficient windows industry include Andersen Corporation, Builders Firstsource Inc., Deceuninck NV, JELD-WEN Inc., Marvin, Masco Corporation, PGT Innovations Inc., Ply Gem Residential Solutions (Cornerstone Building Brands Inc.), Schott AG, The REHAU Group, VKR Holding A/S and YKK Corporation, among many others.
-Challenges and Opportunities: The market faces various challenges like high initial costs and lack of consumer awareness in some regions. However, there are some significant opportunities as well which includes the government incentives, rising consumer demand for sustainable building materials and technological advancements in smart window technologies. Nowadays as regulatory standards become stricter and urbanization is on the rise across emerging economies, the market is set to experience a significant growth. Rising focus on reducing carbon footprints and energy consumption further propels the adoption of energy efficient windows thereby creating a positive outlook for the energy efficient windows market growth.

Energy Efficient Windows Market Trends:
Technological Advancements
Technological advancements in energy-efficient windows include the development of smart windows with electrochromic and thermochromic technologies, which adjust their tint in response to light and temperature, respectively, enhancing indoor comfort and energy efficiency. Enhanced glazing techniques, such as double or triple glazing with low-emissivity coatings, improve insulation by minimizing heat transfer. For instance, low-e glass is energy-efficient glazing designed to minimize heat transfer while maximizing natural light. It reflects heat back into buildings during winter and deflects it in summer, contributing to reduced energy costs. Ideal for various Australian climates, it maintains balanced thermal performance, reducing heating and cooling expenses while preserving natural light. Additionally, the use of advanced materials like argon or krypton gas fills between glass panes and improved thermal spacers further boosts energy savings, reducing heating and cooling costs for buildings.
Rising Focus on Sustainability and Environmental Impact
The rising demand for green building certifications is driving the adoption of energy-efficient windows, which play a crucial role in achieving sustainability goals. These certifications encourage the use of windows that significantly reduce energy consumption by improving thermal performance, thereby lowering heating and cooling needs. Enhanced thermal performance helps in reducing carbon footprints, as buildings require less energy, often derived from fossil fuels. This shift towards sustainable construction practices supports environmental conservation and contributes to the global effort to combat climate change. For instance, workers in a Tennessee factory are producing smart windows to combat climate change. The windows automatically tint to regulate light and heat, cutting energy needs by 20%. The Inflation Reduction Act provides tax credits to promote this technology. Smart windows have been installed in various locations, including airports and office buildings, offering cooler environments and energy savings.
Favorable Government Regulations and Incentives
Government regulations are driving the energy-efficient windows market through the implementation of stringent building codes and energy efficiency standards that mandate the use of such windows in new constructions and renovations. For instance, in April 2024, the Biden administration introduced updated energy efficiency standards for new federal affordable housing construction, aiming to save lower-income renters and homeowners millions of dollars annually. The new standards, impacting an estimated 150,000 new units each year, are expected to result in average annual savings of $963 per household and a total savings of $73 million. Opposition from some sectors suggests concerns about increased construction costs. Additionally, the availability of tax credits, rebates, and other financial incentives encourages homeowners and builders to invest in energy-efficient windows. These incentives make the initial costs more manageable and promote long-term energy savings,

aligning with broader goals of reducing energy consumption and minimizing environmental impact. This regulatory support is crucial for widespread adoption and market growth.

Energy Efficient Windows Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels for 2024-2032. Our report has categorized the market based on operating type, glazing type, component and end use.

Breakup by Operating Type:

-Awning
-Casement
-Double-hung
-Fixed
-Hopper
-Sliding

Awning accounts for the majority of the market share

The report has provided a detailed breakup and analysis of the market based on the operating type. This includes awning, casement, double-hung, fixed, hopper and sliding. According to the report, awning represented the largest segment.

Awning windows dominate the energy efficient windows market share due to their superior insulation and ventilation capabilities. These windows, hinged at the top and opening outward, provide excellent airflow while maintaining energy efficiency. For instance, window awnings help reduce solar heat gain with up to 65% for south-facing windows and up to 75% for west-facing windows, resulting in a 20% decrease in air-conditioner usage during summer months. Well-built retractable awnings can also provide energy savings in winter by allowing free solar heating to enter the space. Their design prevents rain from entering while open, making them ideal for various weather conditions. The awning style contributes significantly to energy savings by reducing heating and cooling costs. Their popularity is driven by the combination of aesthetic appeal, functional advantages, and contribution to sustainable building practices, making them a preferred choice in both residential and commercial applications.

Breakup by Glazing Type:

-Double Glazing
-Triple Glazing
-Others

Double Glazing holds the largest share of the industry

A detailed breakup and analysis of the market based on the glazing type have also been provided in the report. This includes double glazing, triple glazing and others. According to the report, double glazing accounted for the largest market share.

Double glazing holds the largest energy efficient windows market share due to its superior thermal insulation properties. Consisting of two glass panes separated by an air or gas-filled space, double-glazed windows significantly reduce heat transfer, enhancing energy efficiency in buildings. This design minimizes heat loss in winter and keeps interiors cooler in summer, leading to substantial energy savings on heating and cooling costs. The widespread adoption of double glazing is driven by growing environmental awareness, stringent building codes, and the demand for sustainable construction practices, making it the preferred choice for energy-efficient window solutions. For Instance, the UK government offers several grants and schemes to help homeowners and tenants upgrade to energy-efficient double glazed windows. The Home Upgrade Scheme (HUG2) in England, the Home Energy Scotland Grant and Loan scheme, and the Affordable Warmth Scheme in Northern Ireland provide funding for low-income households. While there are no specific double glazing grants in Wales, the Nest scheme offers support for other energy-efficient home improvements. Homeowners can also explore options like the Green Deal Loan, Barclays Greener Home Reward, and financing from window installers to reduce the cost of new windows.

Breakup by Component:

-Frame

-Glass
-Hardware

Frame represents the leading market segment
The report has provided a detailed breakup and analysis of the market based on the component. This includes frame, glass and hardware. According to the report, frame represented the largest segment.
Frames represent the leading segment in the energy-efficient windows market due to their critical role in overall window performance. High-quality frames made from materials such as uPVC, fiberglass, and composite materials provide superior insulation, reducing thermal bridging and enhancing energy efficiency. Advanced frame designs incorporate multiple chambers and thermal breaks to improve their insulating properties. The increasing demand for sustainable building solutions and stricter energy codes drive the adoption of energy-efficient frames, making them a pivotal component in maximizing the thermal performance and energy savings of windows.
Breakup by End Use:
-Residential
-Non-Residential

Residential exhibits a clear dominance in the market
A detailed breakup and analysis of the market based on the end use have also been provided in the report. This includes residential and non-residential. According to the report, residential accounted for the largest market share.
The residential sector exhibits clear dominance in the energy-efficient windows market, driven by growing homeowner awareness of energy savings and environmental benefits. With rising energy costs, homeowners are increasingly adopting energy-efficient windows to reduce heating and cooling expenses. Government incentives and rebates for energy-efficient home improvements further boost this trend. Additionally, the emphasis on sustainable living and green building practices has led to higher demand for such windows in new constructions and renovations. The residential sector's focus on enhancing home comfort and reducing energy consumption significantly propels its market leadership.
Breakup by Region:

-North America
o United States
o Canada
-Asia-Pacific
o China
o Japan
o India
o South Korea
o Australia
o Indonesia
o Others
-Europe
o Germany
o France
o United Kingdom
o Italy
o Spain
o Russia
o Others
-Latin America

o Brazil
o Mexico
o Others
- Middle East and Africa

North America leads the market, accounting for the largest energy efficient windows market share
The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America represents the largest regional market for energy efficient windows.
North America leads the energy-efficient windows market, accounting for the largest market share due to several factors. The region's stringent energy efficiency regulations and building codes drive the adoption of energy-efficient windows. For instance, in May 2023, the Biden administration announced new building energy standards for federally financed homes, aiming for over 35% energy savings for families. This plan includes updated building codes and an $830 million fund for clean-energy building retrofits. The White House expects these measures to reduce carbon emissions and lower energy costs. The administration is also encouraging state governments and financial institutions to support the adoption and financing of these initiatives. Additionally, high consumer awareness and demand for sustainable building practices contribute to market growth. Government incentives and rebates for energy-efficient home improvements further boost this trend. The presence of key market players and advancements in window technology also play significant roles in maintaining North America's market leadership in the energy-efficient windows sector.
Competitive Landscape:
- The market research report has also provided a comprehensive analysis of the competitive landscape in the market. Detailed profiles of all major companies have also been provided. Some of the major market players in the energy efficient windows industry include Andersen Corporation, Builders Firstsource Inc., Deceuninck NV, JELD-WEN Inc., Marvin, Masco Corporation, PGT Innovations Inc., Ply Gem Residential Solutions (Cornerstone Building Brands Inc.), Schott AG, The REHAU Group, VKR Holding A/S and YKK Corporation.

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

- The energy-efficient windows market is highly competitive, with major players like Andersen Corporation, JELD-WEN, Pella Corporation, and Marvin Windows and Doors leading the industry. These companies focus on innovation, offering advanced products like smart windows and low-emissivity glazing. Smaller regional players also contribute by addressing specific market needs and preferences. Competitive strategies include expanding product portfolios, enhancing distribution networks, and leveraging government incentives for sustainable products. The market sees continuous investment in research and development to improve energy efficiency and sustainability, aiming to meet stringent building codes and consumer demand for eco-friendly solutions.

Energy Efficient Windows Market News:
- In June 2024, Andersen Global expanded in Turkey through a collaboration agreement with Celen Corporate Property Valuation & Counseling Inc. The partnership adds valuation resources to the organization's existing tax and legal capabilities. With 50 years of experience, Celen offers comprehensive valuation services to Turkish and global clients. Andersen Global's Chairman, Mark L. Vorsatz, expresses enthusiasm about the collaboration, highlighting Celen's commitment to providing top-notch client service and expertise in the valuation sector.
- In April 2023, JELD-WEN, a global building products manufacturer, finalized the sale of its Australasia business to Platinum Equity for approximately AU$ 688 million. This move is in line with JELD-WEN's strategy to optimize shareholder value and streamline its operations. The transaction, expected to close in Q3 2023, will allow JELD-WEN to focus on debt reduction. Platinum Equity, with extensive experience in corporate carve-outs, sees promising opportunities in the Australasia business. For more information, visit

JELD-WEN's website.

Key Questions Answered in This Report
1. How big is the global energy efficient windows market?
2. What is the expected growth rate of the global energy efficient windows market during 2024-2032?
3. What are the key factors driving the global energy efficient windows market?
4. What has been the impact of COVID-19 on the global energy efficient windows market?
5. What is the breakup of the global energy efficient windows market based on the operating type?
6. What is the breakup of the global energy efficient windows market based on the glazing type?
7. What is the breakup of the global energy efficient windows market based on the component?
8. What is the breakup of the global energy efficient windows market based on the end use?
9. What are the key regions in the global energy efficient windows market?
10. Who are the key players/companies in the global energy efficient windows market?

**Table of Contents:**

# Energy Efficient Windows Market Report by Operating Type (Awning, Casement, Double-hung, Fixed, Hopper, Sliding), Glazing Type (Double Glazing, Triple Glazing, and Others), Component (Frame, Glass, Hardware), End Use (Residential, Non-Residential), and Region 2024-2032

Market Report | 2024-08-10 | 144 pages | IMARC Group

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

**ORDER FORM:**

| Select license | License | Price |
|---|---|---|
| | Electronic (PDF) Single User | $3899.00 |
| | Five User Licence | $4899.00 |
| | Enterprisewide License | $5899.00 |
| | VAT | |
| | Total | |

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

| | | | |
|---|---|---|---|
| Email* | | Phone* | |
| First Name* | | Last Name* | |
| Job title* | | | |
| Company Name* | | EU Vat / Tax ID / NIP number* | |
| Address* | | City* | |
| Zip Code* | | Country* | |

| | |
|---|---|
| Date | 2025-06-23 |
| Signature | |