

Energy-efficient & Green Construction / Retrofitting Market Forecasts to 2032 – Global Analysis By Type (Energy-efficient New Construction and Green Retrofitting), Component, Building Type, Certification Standard, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Energy-efficient & Green Construction / Retrofitting Market is accounted for \$200.1 billion in 2025 and expected to reach \$86.8 billion by 2032 growing at a CAGR of 5.2% during the forecast period. Energy-efficient and green construction or retrofitting refers to the design, renovation, or upgrade of buildings to minimize environmental impact and optimize energy use. It involves integrating sustainable materials, advanced insulation, efficient HVAC systems, renewable energy sources, and smart technologies to reduce carbon emissions and operational costs. Retrofitting existing structures enhances performance by replacing outdated systems with eco-friendly alternatives, improving indoor air quality, and conserving resources. These practices support climate resilience, regulatory compliance, and long-term savings, while promoting healthier living and working environments. Green construction aligns with global sustainability goals, transforming built environments into low-impact, high-efficiency spaces for future generations.

Market Dynamics:

Driver:

Government Incentives & Regulations

Government incentives and evolving regulations are key drivers propelling the market. Tax credits, subsidies, and mandates for carbon reduction are motivating developers

and property owners to adopt sustainable practices. Regulatory frameworks like building codes and energy performance standards are accelerating retrofitting initiatives across residential, commercial, and industrial sectors. These policies not only reduce environmental impact but also stimulate innovation and investment in green technologies, aligning construction practices with national climate goals and global sustainability commitments.

Restraint:

High Upfront Costs

High upfront costs significantly hinder the adoption of green construction practices. The expense of advanced HVAC systems, sustainable materials, and smart technologies creates financial barriers, especially for small developers and low-income sectors. These costs delay retrofitting decisions, reduce project scalability, and limit market penetration. Without accessible financing or incentives, stakeholders may prioritize short-term savings over long-term sustainability, slowing progress toward climate goals and widespread green infrastructure transformation.

Opportunity:

Technological Advancements

Technological advancements present a transformative opportunity for the market. Innovations in smart building systems and modular retrofitting are enhancing efficiency and scalability. Breakthroughs in insulation materials, solar integration, and water-saving technologies are driving performance gains while reducing environmental impact. These developments enable predictive maintenance, real-time monitoring, and adaptive climate control, making buildings more resilient and cost-effective. As tech adoption accelerates, it unlocks new business models and expands access to sustainable infrastructure globally.

Threat:

Regulatory Complexity

Regulatory complexity hampers the growth of market by creating fragmented standards, inconsistent enforcement, and burdensome approval processes. Navigating diverse building codes, certifications, and compliance frameworks increases project timelines

and costs, especially for small and mid-sized firms. This uncertainty discourages investment, slows innovation, and limits scalability. Without harmonized regulations and streamlined pathways, stakeholders face operational inefficiencies that delay sustainable retrofitting and undermine broader climate and energy goals.

Covid-19 Impact:

The Covid-19 pandemic disrupted construction timelines, supply chains, and investment flows, temporarily slowing the green retrofitting market. However, it also catalyzed demand for healthier indoor environments, energy resilience, and remote monitoring technologies. Stimulus packages and recovery plans in several regions prioritized sustainable infrastructure, accelerating retrofitting projects. The crisis underscored the importance of climate-resilient buildings and flexible design, prompting a shift toward smart HVAC systems, touchless technologies, and improved air filtration.

The HVAC systems segment is expected to be the largest during the forecast period

The HVAC systems segment is expected to account for the largest market share during the forecast period because of its central role in energy optimization and indoor air quality. Advanced HVAC technologies, including smart thermostats and energy recovery ventilators, are increasingly integrated into retrofitting projects. These systems significantly reduce energy consumption and carbon emissions while enhancing occupant comfort. Rising demand for climate-responsive buildings and regulatory pressure to meet energy standards is driving widespread adoption. HVAC upgrades offer measurable ROI, making them a retrofit priority.

The water conservation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the water conservation segment is predicted to witness the highest growth rate due to growing concerns over resource scarcity and climate resilience. Innovations such as greywater recycling, low-flow fixtures and smart irrigation systems are gaining traction in both new construction and retrofits. Regulatory mandates and LEED certification criteria are encouraging adoption, especially in water-stressed regions. These solutions not only reduce utility costs but also support sustainable urban development. As awareness grows, water-efficient retrofitting is becoming a strategic imperative.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rapid urbanization, infrastructure expansion, and strong government support for green building initiatives. Countries like China, India, and Japan are investing heavily in sustainable construction to meet climate targets and improve energy security. Rising middle-class demand for eco-friendly housing and commercial spaces is fueling retrofitting activity. Regional policies promoting energy efficiency, coupled with technological adoption and foreign investments, position Asia Pacific as a dominant force in the global market.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR owing to advanced technological adoption, and robust retrofitting programs. The U.S. and Canada are prioritizing energy-efficient upgrades in aging infrastructure, supported by federal incentives and green financing. Growing awareness of climate risks and operational cost savings is accelerating demand across residential, commercial, and institutional sectors. The region's leadership in smart building technologies and sustainability certifications further propels growth, making North America a hotspot for innovation and investment.

Key players in the market

Some of the key players in Energy-efficient & Green Construction / Retrofitting Market include Turner Construction Company, Johnson Controls, Skanska AB, Honeywell International Inc., Bechtel Corporation, Siemens AG, AECOM, Trane Technologies, Bouygues Construction, Saint-Gobain, L&T Construction, Schneider Electric, Balfour Beatty, Kiewit Corporation, and Fluor Corporation.

Key Developments:

In September 2025, Tabreed and Johnson Controls have struck a long-term deal to co-develop next-generation district cooling technology, focusing on efficient centrifugal chillers, real-time performance analytics, and lifecycle services—all to cut energy use, emissions, and cost while aligning with regional climate-neutrality goals.

In June 2025, Honeywell has expanded its licensing agreement with AFG Combustion and Greens Combustion Ltd. to include Callidus Ultra Blue Hydrogen process burners and flare technologies. This collaboration aims to support the energy transition by

integrating innovative flare technologies with hydrogen solutions, paving the way for a more sustainable future.

Types Covered:

Energy-efficient New Construction

Green Retrofitting

Components Covered:

Building Envelope

HVAC Systems

Lighting Systems

Renewable Energy Integration

Water Efficiency Solutions

Smart Building Technologies

Building Types Covered:

Residential Buildings

Institutional Buildings

Commercial Buildings

Industrial Buildings

Certification Standards Covered:

LEED (Leadership in Energy and Environmental Design)

WELL Building Standard

Green Globes

Other Regional Standards

Applications Covered:

Energy Efficiency

Water Conservation

Indoor Environmental Quality

Waste Reduction & Material Efficiency

Other Applications

End Users Covered:

Government & Public Sector

Private Sector

Real Estate Developers

Facility Management Companies

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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