

### Composites Market Update for December 2024

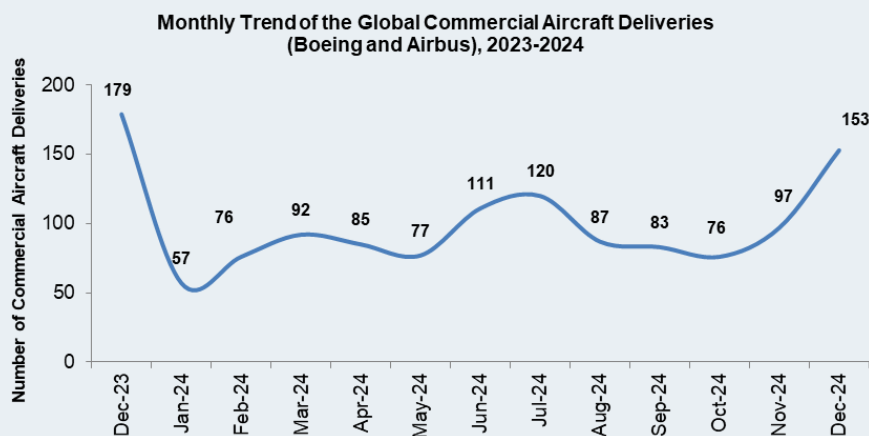
The composites industry continues to grapple with economic headwinds as December 2024 performance mirrored that of the previous year, with little change overall. Year-end data revealed that the composite industry as a whole experienced a nearly 9% year-over-year decline for 2024. While construction, infrastructure, and housing showed resilience, remaining nearly flat, other key segments such as transportation, pools and others were down by approximately 10%. The marine segment faced the steepest drop, declining almost 30%. Month-over-month performance for December remained stagnant, reflecting typical seasonal softness.

Despite a challenging macroeconomic environment, signs of cautious optimism are emerging. January 2025 appears to be tracking slightly better than the same period last year, hinting at potential stabilization. Lightweight materials in electric vehicles (EVs) continue to provide a growth driver for composites, supported by the ongoing electrification trend in the automotive industry. Additionally, advanced material innovations such as bio-based resins and enhanced thermoplastics are gaining attention, aligning with the push for sustainability across multiple industries.

Looking ahead, 2025 may bring moderate growth opportunities if demand for lightweighting solutions in transportation and construction persists. However, discretionary spending sectors like marine remain uncertain, requiring broader economic recovery and improved consumer confidence. Furthermore, investments in advanced composites for aerospace and infrastructure could help offset some declines. Industry leaders are also closely monitoring geopolitical developments and trade dynamics, which could significantly influence raw material costs and global demand patterns.

### Aerospace

Commercial aircraft (Boeing and Airbus) deliveries increased from 97 aircraft deliveries in November 2024 to 153 aircraft deliveries in December 2024.

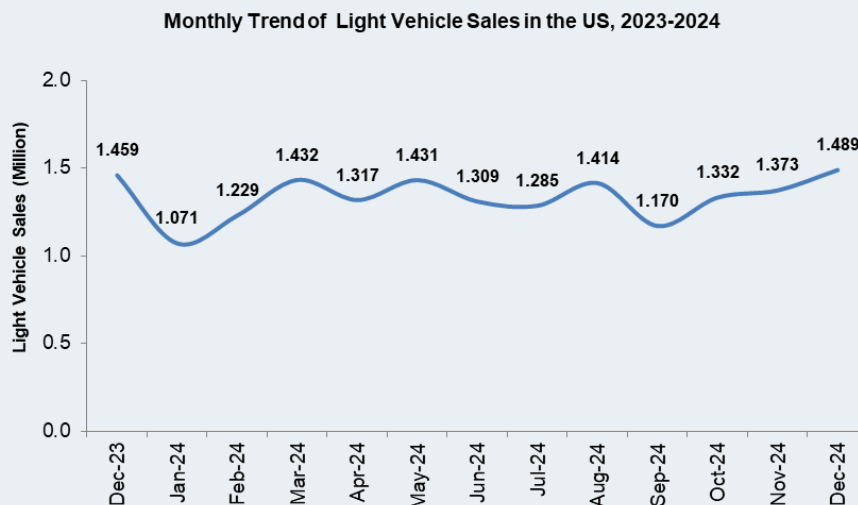


Some of the highlights of December 2024 are as follows:

- **Caracol, AES forge LFAM-centered partnership.** Industrial robotic large-format additive manufacturing (LFAM) company Caracol announces a strategic partnership with Additive Engineering Solutions, specializing in turnkey LFAM services. This collaboration aims to accelerate the adoption of AM within the aerospace and defense (A&D) sector. The partnership will include AES installing a Heron AM platform to further expand its capabilities.
- **Airborne to supply Airbus with composite components for mega-constellation satellite solar arrays.** Airbus Netherlands B.V. has selected Airborne Aerospace B.V. to supply high-precision panel and yoke substrates for Spark wing solar arrays, a critical component of MDA Space's Aurora satellite product line, which aims to expand communication networks globally. Under the contract, Airbus will deliver Spark wing solar array wings featuring two wings with five panels each, providing a photovoltaic area exceeding 30 square meters. Airborne will manufacture more than 200 high-precision and ultra-stiff composite substrate panels for the project.

### Automotive

The U.S. light vehicle sales of 1,488,577 units in December 2024 represented an increase of 2.0% as compared to 1,458,853 units in December 2023.

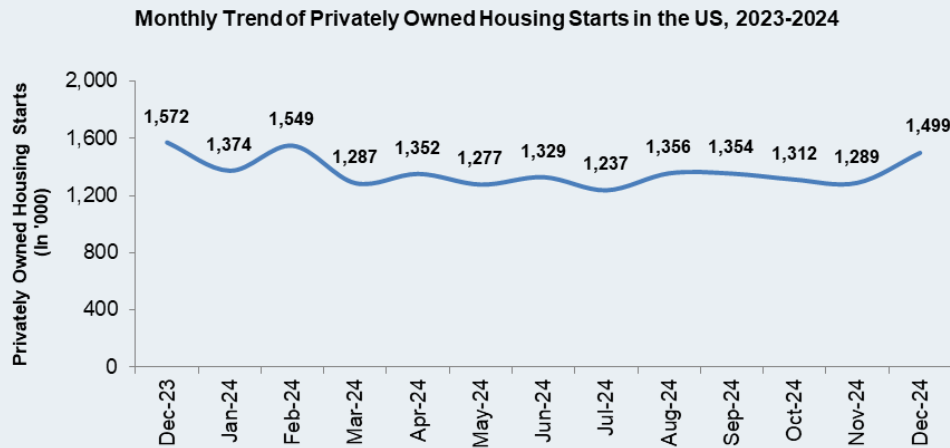


One of the highlights of December 2024 is as follows:

- **DITF oriented rCF tapes target virgin fiber CFRP substitution.** The German Institutes of Textile and Fiber Research Denkendorf (DITF) has announced the development of highly oriented tapes made from recycled carbon fibers (rCF) suitable for reuse in high-performance applications, such as structural automotive components. The production of carbon fiber-reinforced polymers (CFRP) continues to increase and with it the amount of CFRP waste. According to the DITF, this is because, depending on the processing method, up to 50% offcuts are generated during production.

### Construction

Privately-owned housing starts in December were at a seasonally adjusted annual rate of 1,499,000. This is 15.8% above the revised November estimate of 1,294,000, but is 4.4% below the December 2023 rate of 1,568,000. Single-family housing starts in December were at a rate of 1,050,000; this is 3.3% above the revised November figure of 1,016,000. The December rate for units in buildings with five units or more was 418,000.



One of the highlights of December 2024 is as follows:

- Bcomp, Temca achieve intricate composite cladding for French school façade.** In a collaborative effort, Bcomp's flax fiber composites and Temca's manufacturing expertise have been combined to create the cladding panels for the façade of the new Cité Scolaire Internationale Jacques Chirac in Marseille, France. The panels, a combination of glass fiber-reinforced polyester and ampliTex fibers, were manufactured using RTM. Each panel is coated with a white gelcoat formulated to withstand exposure to outdoor elements like UV rays, rain and pollution. The materials also meet fire requirement specifications.

### Wind Energy

As per the most recent "Energy Infrastructure Update" released by the Office of Energy Projects within the Federal Energy Regulatory Commission, wind energy with the combined installed capacity of 3 units in November 2024 amounted to 174 MW. Wind energy, with an aggregated generating capacity of 153.17 GW that contributes 11.75% to the total energy sources, amounted to 1,303.90 GW.

One of the highlights of December 2024 is as follows:

- Vestas to repurpose Isle of Wight facility for U.K. onshore blades.** Following an agreement in principle with the UK government, Vestas intends to repurpose its Isle of Wight facilities to build onshore blades, mainly to support the U.K. market. The factory focuses on manufacturing blades for the V174 offshore turbine, though demand for this product is coming to an end and site constraints have made it unsuitable for next-gen offshore wind blade production.

### Consumer Goods

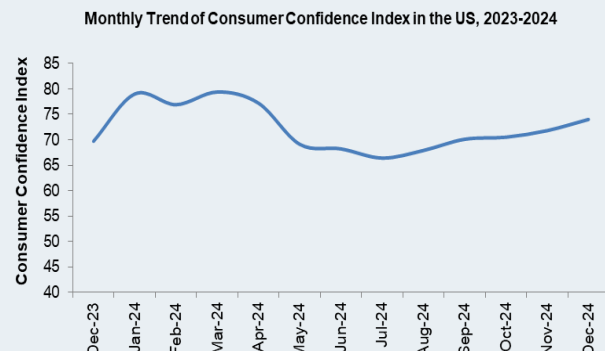
New orders for manufactured durable goods in December, down four of the last five months, decreased \$6.3 billion or 2.2% to \$276.1 billion. This followed a 2.0% November decrease. Excluding transportation, new orders increased 0.3%. Excluding defense, new orders decreased 2.4%. Transportation equipment, also down four of the last five months, drove the decrease, \$6.9 billion or 7.4% to \$86.1 billion.

### The US Economic Overview – December 2024

The US Consumer Confidence Index increased to 74.0 in December 2024 as compared to 71.8 in November 2024. The GDP at current price of the US increased from US \$29.68 trillion in November 2024 to US \$29.84 trillion in December 2024.

**Real gross domestic product (GDP)** increased at an annual rate of 2.3% in the fourth quarter of 2024, according to the advance estimate. In the third quarter, real GDP increased 3.1%. The increase in real GDP in the fourth quarter primarily reflected increases in consumer spending and government spending that were partly offset by a decrease in investment. Imports, which are a subtraction in the calculation of GDP, decreased.

The price index for gross domestic purchases increased 2.2% in the fourth quarter of 2024, compared with an increase of 1.9% in the third quarter of 2024. The personal consumption expenditures (PCE) price index increased 2.3%, compared with an increase of 1.5%. Excluding food and energy prices, the PCE price index increased 2.5%, compared with an increase of 2.2%.



**About Lucintel:** *Lucintel has been in the business for 15 years and has served thousands of clients, ranging from small, emerging organizations to multinational Fortune 500 companies such as 3M, Ashland, Audi, Dow, GE, General Motors, and Momentive. Lucintel is a growth accelerator firm that helps companies with market entry strategies, growth financing, M&A, market research, and strategic consulting. Let us create a growth roadmap that meets your goals and budget. Visit [www.lucintel.com](http://www.lucintel.com) and contact us today (email: [helpdesk@lucintel.com](mailto:helpdesk@lucintel.com) or call us at 972-636-5056) for a free consultation and we will explain how Lucintel can assist your business.*