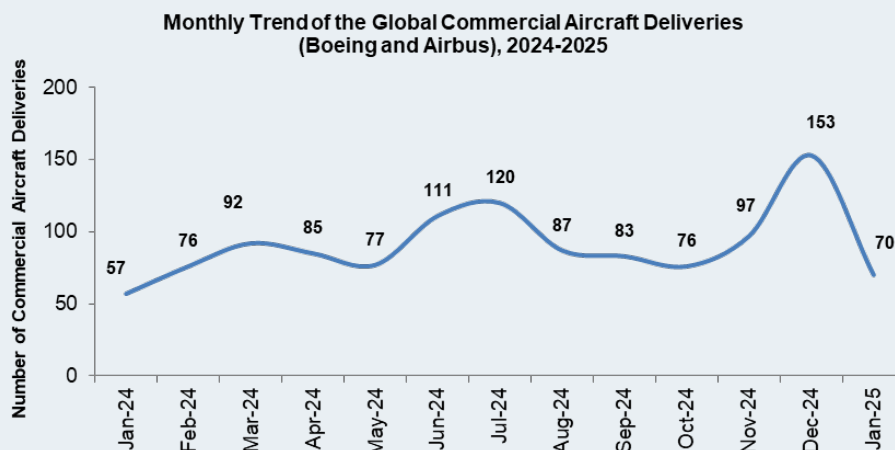


### Composites Market Update for January 2025

The composites industry faced a challenging start to the year, with January's performance falling below expectations. Total volume declined by 10% year over year, reflecting a subdued market landscape. While construction, infrastructure, and housing showed resilience, remaining nearly flat, other key segments, such as transportation, pools, and others, were down by approximately 7%. The marine segment faced the steepest drop, declining almost 19%. Despite a challenging macroeconomic environment, signs of cautious optimism are emerging. Looking ahead, there is cautious optimism for February, with early indicators suggesting potential improvement when compared to the previous year. However, challenges persist, including pricing pressures and overall market conditions. 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. 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 decreased from 153 aircraft deliveries in December 2024 to 70 aircraft deliveries in January 2025.

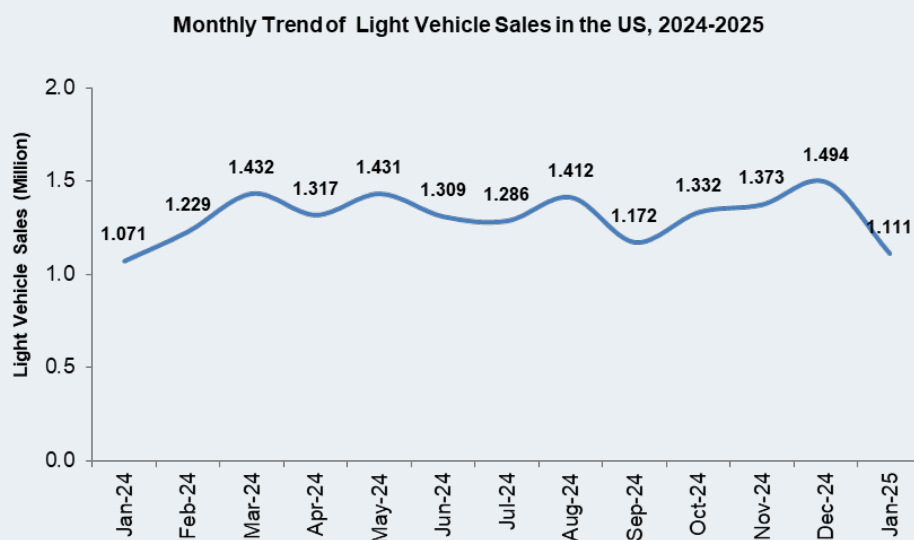


Some of the highlights of January 2025 are as follows:

- **Carbon fiber/flax landing gear achieves 54% weight reduction via tailored layup optimization.** Substituting metallic structures with composite materials presents a promising strategy for reducing the weight of aerospace components. However, integrating this approach into high-impact structures, such as helicopter landing gear, poses unique challenges that test standard composites engineering methodologies, requiring innovative solutions to meet safety and performance requirements. Conventional metallic landing gear relies on elastic deformation to dissipate energy and plastic deformation to create a controlled failure mechanism. This well-established design approach enables the landing gear to absorb significant loads without transmitting damaging forces to the fuselage or tail, as long as they do not touch the ground. In contrast, traditional composite structures are typically too rigid to perform in the same manner.
- **Leonardo unveils Proteus uncrewed rotorcraft demonstrator design.** Leonardo has unveiled the design of the Proteus technology demonstrator aircraft. The circa 3-ton uncrewed rotorcraft, manufactured with composites, will be used to demonstrate advances in autonomy and payload modularity and interchangeability, while developing novel rotorcraft technologies including design and manufacturing techniques.

### Automotive

The U.S. light vehicle sales of 1,110,720 units in January 2025 represented an increase of 3.8% as compared to 1,070,520 units in January 2024.

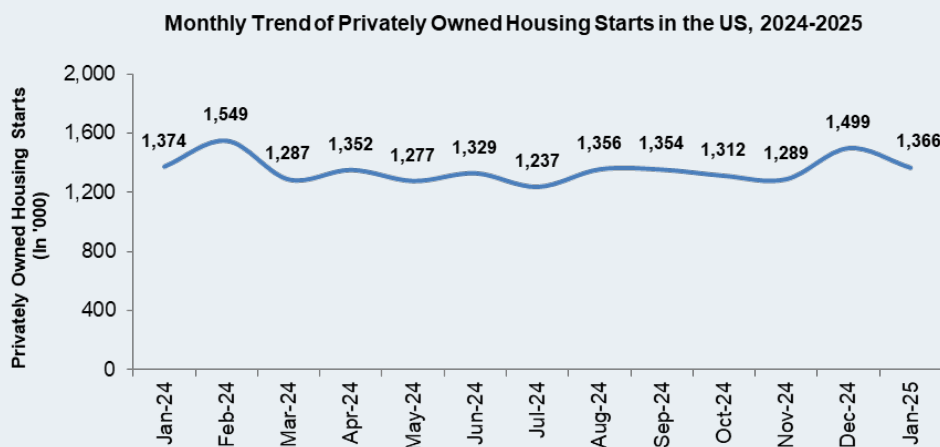


One of the highlights of January 2025 is as follows:

- Pultruded CFRP chassis enables 36% payload increase for specialized commercial vehicles.** In the evolving landscape of urban logistics and mobile commerce, the demand for specialized, lightweight commercial vehicles has surged. Driven by rapid urbanization, the boom of on-demand services and industries spanning last-mile delivery, food distribution, mobile healthcare and specialized maintenance are increasingly relying on compact, adaptable vehicles. These vehicles enable efficient, flexible service in densely populated areas and restricted zones where larger vehicles face operational and regulatory barriers.

### Construction

Privately-owned housing starts in January were at a seasonally adjusted annual rate of 1,366,000. This is 9.8% below the revised December estimate of 1,515,000 and is 0.7% below the January 2024 rate of 1,376,000. Single-family housing starts in January were at a rate of 993,000; this is 8.4% below the revised December figure of 1,084,000. The January rate for units in buildings with five units or more was 355,000.



### 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 2 units in December 2024 amounted to 324 MW. Wind energy, with an aggregated generating capacity of 153.65 GW that contributes 11.68% to the total energy sources, amounted to 1,315.63 GW.

Some of the highlights of January 2025 are as follows:

- **ExoTechnologies, Ventum Dynamics Launch Danu composite rooftop wind turbine.** ExoTechnologies and renewable energy company Ventum Dynamics have announced the launch of a fully recyclable wind turbine. Enabled by ExoTechnologies' natural fiber-reinforced thermoplastic Danu composite. According to Venture Dynamics the vane shroud design accelerates wind capture, enabling a greater volume of air to pass through the turbine. This focused wind is directed straight toward and across the entire rotor disc with minimal energy losses, optimizing power capture at the rotor." Its omnidirectional design also makes it capable of capturing wind from all directions, delivering up to 3,000-5,000 kilowatt-hours annually.
- **Swancor, Adani sign MOU for recyclable wind farm in India.** On Jan. 8, Swancor signed a memorandum of understanding (MOU) with Adani New Industries Ltd., officially initiating a partnership to build India's first recyclable wind farm. On the basis of the Global Wind Energy Council (GWEC), India is striving to achieve its goal of reaching 140 gigawatts (GW) of installed wind power capacity by 2030. Thus, this project will further support the rapid growth of India's wind energy sector.

### **Consumer Goods**

New orders for manufactured durable goods in January, up following two consecutive monthly decreases, increased \$8.7 billion or 3.1% to \$286.0 billion. This followed a 1.8% December decrease. Excluding transportation, new orders were virtually unchanged. Excluding defense, new orders increased 3.5%. Transportation equipment, also up following two consecutive monthly decreases, led the increase, \$8.6 billion or 9.8% to \$96.5 billion.

One of the highlights of January 2025 is as follows:

- **Pwnage Introduces Carbon Fiber Composite Gaming Mouse Trinity CF.** Pwnage, a leader in premium gaming peripherals, has launched the Trinity CF gaming mouse. This groundbreaking device sets new standards in performance, durability, and versatility, catering to gamers seeking the best lightweight gaming mouse on the market. One of the key features is the carbon fiber composite construction. Crafted with advanced carbon fiber composite, the Trinity CF offers exceptional strength and durability while maintaining an ultra-lightweight profile. Weighing just 37-39 grams, it stands as one of the lightest gaming mice available, providing swift and effortless movement during intense gaming sessions. Its versatile shape caters to various grip styles and hand sizes, ensuring comfort and precision for all users.

### Recent Development in Material

- **Mallinda Unveils Groundbreaking Vitrimax VHM Resin.** Mallinda Inc., a pioneer in advanced polymer technology, informed about the commercial launch of Vitrimax Versatile Hot Melt (VHM) Resin, a revolutionary vitrimer-based composite resin system that transforms how manufacturers process and recycle high-performance composites. This breakthrough technology combines the superior mechanical properties of thermosets with the processing flexibility of thermoplastics, marking a significant advancement in sustainable manufacturing and, for the first time, enabling economic recyclability and reuse for high-performance composites. Mallinda targets 100% recycling and re-use of production scrap with Vitrimax VHM customers and targets end-of-life circularity programs as well. Due to molecular-level design for circularity, Vitrimax resins and their composites can always be profitably recycled at lower cost than their virgin inputs.

### Recent Product Launches in the Composites Market

The following table represents a new product launch in the composites market in January 2025.

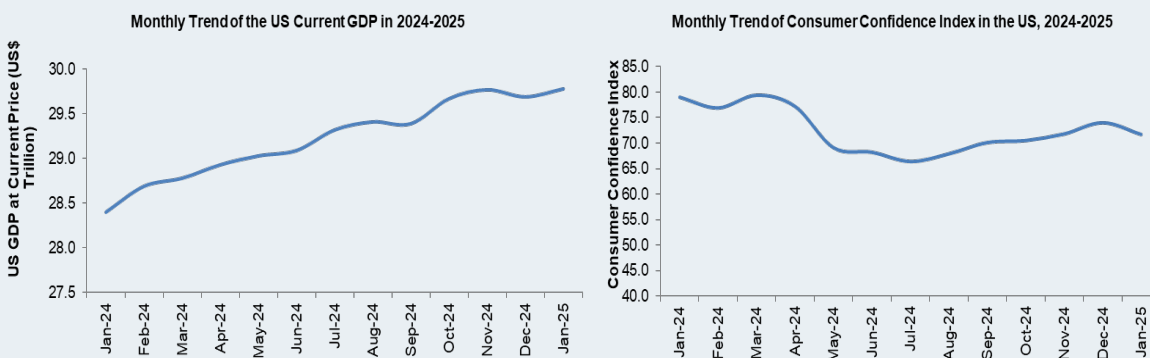
Product	Company Name	Description
Skyrider X1	RICTOR	The Skyrider X1, RICTOR's latest breakthrough in the eVTOL field, elevates the concept of "future mobility" to unprecedented heights. This flying motorcycle represents a revolutionary leap in passenger aviation. It has multi-functional personal vehicle design features such as 4-axis, 8-propeller system for enhanced stability and carbon fiber composite and aviation-grade aluminum materials for unmatched durability and performance.

### The US Economic Overview – January 2025

The US Consumer Confidence Index decreased to 71.7 in January 2025 as compared to 74.0 in December 2024. The GDP at current price of the US increased from US \$29.69 trillion in December 2024 to US \$29.78 trillion in January 2025.

**Real gross domestic product (GDP)** increased at an annual rate of 2.3% in the fourth quarter of 2024, according to the second estimate. In the third quarter of 2024, 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 2.3% in the fourth quarter of 2024, revised up 0.1% from the previous estimate. The personal consumption expenditures (PCE) price index increased 2.4%, revised up 0.1%. Excluding food and energy prices, the PCE price index increased 2.7%, revised up 0.2%.



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