

Innovation and collaboration for cleaner, more sustainable transportation

Hexcel is committed to the development of innovative, lightweight composites solutions for its customers, while also driving progress towards its own sustainability goals. Gail Lehman, Executive Vice President, General Counsel and Secretary, is the Chair of the Hexcel Sustainability Strategy Team, and explains.



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Hexcel announced progress against its 2030 environmental targets at JEC World 2024. How does Hexcel plan to work toward a cleaner and more sustainable future?

GL: Hexcel is uniquely positioned by providing the broadest product portfolio of lightweight composite solutions for the aerospace industry and targeted industrial markets. By lightweighting aircraft and other forms of transportation, fuel consumption is reduced leading to lower emissions. Supporting this beneficial impact to society from lightweight composites, the Hexcel team is focused on reducing our environmental impact.

As part of our 2030 sustainability targets, Hexcel established four objectives to drive continuous improvement for our environmental, health and safety (EHS) efforts:

- 30% reduction in greenhouse gas emissions;
- 30% reduction in waste to landfill;
- 20% reduction on freshwater use;
- 50% improvement in safety, total recordable incident rate (TRIR).

We are proud to report that we have already achieved our worker safety goal and will be continually assessing that area for even further reduction. In addition, we continue to make significant progress

toward achieving our other EHS targets, all of which enhance Hexcel's efficiency and sustainability. We are working to drive key operational initiatives to reduce resource use, energy consumption and emissions at our sites, including the use of improved heat recovery exchangers, the adoption and procurement of renewable power generation, and maintaining a continual focus on minimising consumables and recycling production waste. Moreover, in addition to placing significant emphasis on our safety and environmental goals, we create a more sustainable future by ensuring the sustainability of our organisation as a whole. We know that Hexcel's customers are increasingly focused on multiple critical sustainability initiatives such as supply chain management, ethics and compliance, community involvement, and workforce diversity and human rights concerns. For this reason, we focus on operating as a low-risk business partner and are tracking goals and targets in these crucial areas as well.

Does Hexcel also track product-focused sustainability improvements to work alongside its operational targets?

GL: We certainly do. Hexcel is committed to driving innovation relating to our products, where lightweighting for our customers leads to greater fuel efficiency and a reduction in greenhouse gas emissions, significantly contributing to a cleaner and more sustainable planet. Product innovation is an important part of Hexcel's DNA and a leading focus for our long-term goals. Hexcel's strong and lightweight carbon fibre, reinforcements, honeycomb, prepreg and resin solutions are all key enablers for our customers to achieve their own efficiency and sustainability targets. In 2023, we opened a new 100,000 ft² Center of Research & Technology Excellence at our manufacturing site in Salt Lake City, Utah. The new facility reinforces our commitment to innovation and will be vital for Hexcel's development of lightweight solutions for next-generation customer programmes.

Our collaboration with Fairmat led to more than 170 tons of prepreg material being diverted from waste in 2023.



HexPly Nature Range ski
with natural fibre reinforcements.



Fairmat's proprietary mechanical and robotic recycling technologies transform carbon fibre waste into CFRP chips, a second-generation carbon fibre that can be used in various applications.
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As a leading composites supplier, are you aligning with your customers to ensure momentum for environmental improvements?

GL: Absolutely! We are privileged to work with customers that are committed to sustainability initiatives and share similar goals to reduce their environmental impact. Our customers appreciate and embrace the opportunities our composite technologies provide to reduce greenhouse gas emissions. As a result, we work hard to align our priorities with the needs and expectations of our customers to ensure we can innovate together to create a more sustainable future.

In our Commercial Aerospace business, we anticipate that each new generation of aircraft will incorporate increasing quantities of advanced composites, thereby creating lighter, more fuel-efficient and quieter aircraft with lower CO₂ emissions. The same can be said for the Space & Defense segment. When it comes to our Automotive customers, who have accelerated their transition to lower carbon emissions with electric mobility, we can confirm that they greatly value our lightweight materials and our increased adoption of bio-derived and recycled solutions. In our Marine segment, we are also helping decarbonise maritime operations, enabling large vessels (500 mt+) to utilise wind power, making them less dependent on fossil fuels. Naval architects and shipyards are collaborating to manufacture and install massive carbon fibre masts and rigid wingsails on cruise liners and container ships. Across all our segments, Hexcel stays close to its customers to ensure alignment for these critical efforts.

Recycling, along with repurposing of composite materials, is a key industry focus. How does Hexcel incorporate recycling in its operations?

GL: Hexcel is actively addressing two key areas with respect to recycling, specifically repurposing our manufacturing scrap waste and end-of-life recycling for our products. Hexcel has recycling collaborations in place with both Carbon Conversions and Fairmat. These collaborations help us direct both dry carbon fibre and prepreg waste from our operations into value-added, second-life products, including chopped fibre, nonwovens and cured carbon composite components. Our focus here will be a key driver to achieve our "waste to landfill" reduction target.

At JEC World this year, visitors will have seen a collection of parts by Fairmat that demonstrate its 2024 JEC Composites Innovation Award nominated Closed Loop Ecosystem for Carbon Fibre. We are very proud to support Fairmat's recycling efforts, with almost all of our European-produced carbon fibre prepreg cutoffs avoiding landfill and being processed for reuse into commercial products. Our collaboration with Fairmat led to more than 170 tons of prepreg material being diverted from waste in 2023.

Hexcel is also working toward increasing the circularity of its products through its participation in programmes to assess and drive opportunities for end-of-life recycling for carbon composites. For example, Hexcel is the first carbon fibre and prepreg manufacturer to join the Aircraft Fleet Recycling Association (AFRA) and is also a member of the RightCycle PPE recycling

scheme and the International Aerospace Environmental Group (IAEG). End-of-life solutions will require industry-wide effort across the aerospace sector and Hexcel is committed to working with its customers and other industry partners on this issue.

How do new composite opportunities impact Hexcel's sustainability strategy?

GL: Our technologies enable our current customers to enhance the sustainability of their products. We look forward to continuously driving product innovation for these existing relationships, but we are also interested in emerging opportunities such as hydrogen storage and urban air mobility. These are both key areas where lightweighting and efficient use of materials can contribute to increased fuel efficiency and expanded range in customer products. Our offerings can also support our customers as they increase the use of next-generation technologies, such as sustainable aviation fuel (SAF). More specifically, our lightweight materials enable reduced fuel consumption, which offers our customers crucial cost savings as they increase their use of SAF.

Hexcel will continue to innovate, creating products that are lighter and stronger than any comparable material and turning the dream of cleaner, efficient, and more sustainable transportation into a reality.

Further information

- **Hexcel:** www.hexcel.com
- **Fairmat:** www.fairmat.tech