



Boeing Reports Progress on Containing Starliner Costs

Boeing executives said the company is making progress on containing the costs of its CST-100 Starliner commercial crew vehicle, but offered few details on technical work getting the spacecraft ready for its next flight.

In an April 23 earnings call to discuss the company's first quarter financial results, Kelly Ortberg, president and chief executive of Boeing, cited Starliner as one of the company's fixed-price programs where the company has improved cost management after serious overruns.

Boeing took \$523 million in charges against earnings on Starliner in 2024 as the company dealt with delays in the launch of the Crew Flight Test (CFT) mission and problems with the spacecraft suffered after launch. The company has taken just over \$2 billion in charges on Starliner through the life of the program.

The company, though, did not report any additional losses on Starliner in the first quarter. "We are continuing to work toward crew certification and resolve the propulsion system anomalies," the company stated in a 10-K filing with the U.S. Securities and Exchange Commission. "Risk remains that we may record additional losses in future periods."

In the earnings call, Ortberg said the company had made "real good progress" on fixed-price contracts like Starliner as well as some military aircraft.

"I think we've got all these programs now well contained" in terms of how much it will cost to finish them, known as estimate to complete or ETC. "Now, I'm not claiming victory here yet. We've got a lot of work to do on the ETCs on a lot of these programs. But I do think our disciplined cost risk management and active management with our customers to get to a win-win on these programs is helping."

There was no other discussion about Starliner in the call or the SEC filing, including progress on work to resolve thruster problems and helium leaks suffered on the CFT mission.

NASA's Aerospace Safety Advisory Panel was also circumspect about progress on Starliner during an April 17 public meeting by the committee. Paul Hill, a member of the panel, said the committee had an "informative discussion" with NASA's commercial crew program as part of that quarterly meeting, but that "details of most of which are not publicly releasable."

He did state that NASA and Boeing continue to study the Starliner anomalies from the CFT mission, with that work planned to continue into the summer. That work includes several teams looking into why those problems were not detected in earlier in design and development of the spacecraft or in analysis from its two previous uncrewed flights.

One issue he said the panel raised was that NASA considered the companies working on commercial service contracts like the commercial crew program to be "partners" rather than "vendors," which he said "leads to a very strong bias to be supportive" of the company. To continue reading, please click [here](#).

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U.S. Air Force Pilots Green Hydrogen Generators for Combat-Ready Microgrid

Decarbonization isn't just for cities and industry anymore—now, it's entering the battlefield. The United States Air Force (USAF) is testing out the next frontier in clean energy with hydrogen-powered microgrids, hoping to transform the way it powers its missions. Picture a power system that's mobile, reliable, and totally carbon-free. That's the vision, and they're bringing it to life through a cutting-edge pilot project with Electric Hydrogen Co., a rising name in the clean tech game.

Across the world, militaries are taking climate goals seriously—and the USAF is all in. With this pilot, they're putting green hydrogen to the test as a clean, resilient energy source for forward operations. The idea? Use mobile hydrogen fuel cell generators built into self-sustaining tactical microgrids that can run off the grid entirely.

That's a huge step forward, especially for remote or hostile environments where diesel has traditionally ruled. Unlike diesel generators, which are bulky, loud, and pump out emissions, these hydrogen systems are whisper-quiet and pollution-free. Even better? Thanks to electrolysis, they could eventually produce their own hydrogen on-site—cutting down on supply line vulnerability and boosting energy independence.

The military diving into clean energy isn't new. Over the years, we've seen solar panels on bases and biofuels in jets. But this time, hydrogen is taking center stage, and that's a big deal.

With Electric Hydrogen supplying the gear and know-how, the Air Force is pushing the envelope to prove these decentralized, renewables-powered systems can handle the real world. If they hold up under military conditions, it's not hard to imagine this tech spreading quickly—first within national defense, and then rippling out to cities, towns, and industries.

For Electric Hydrogen, this is more than another partnership—it's a high-stakes trial under perhaps the toughest conditions out there. This is where resilience meets real life. If these systems can thrive in defense settings, confidence across the hydrogen infrastructure sector will soar. Success here sends a huge signal to investors, governments, and innovators alike: green hydrogen tech isn't just future-ready—it's mission-ready.

Looking beyond the barracks, the potential here is massive. Imagine using similar hydrogen-powered microgrids to keep lights on in remote villages, isolated islands, or disaster zones. These are all places where diesel still dominates, despite its downsides. To continue reading, please click [here](#).



L3Harris Gains Edge in Race to Build Golden Dome Missile Sensors

A missile-tracking satellite developed by L3Harris Technologies demonstrated its ability to track hypersonic missiles from space, giving the defense contractor a potential key advantage in the Golden Dome program directed by the Trump administration to bolster U.S. defenses against advanced aerial threats.

The Missile Defense Agency (MDA) confirmed April 25 that L3Harris' Hypersonic and Ballistic Tracking Space Sensor (HBTSS) satellite prototype met performance targets in tests. The agency launched two competing HBTSS demonstration satellites in February 2024 — one built by L3Harris and another by Northrop Grumman — but only the L3Harris satellite has satisfied program requirements, according to an MDA spokesperson.

"While a full assessment of proven payload performance has not yet been concluded, MDA can confirm that the L3Harris satellite is successfully demonstrating its primary functions," the spokesperson told SpaceNews. "The Northrop Grumman satellite failed to meet established requirements."

MDA awarded Northrop Grumman a \$155 million contract and L3Harris a \$121 million contract in January 2021 to develop HBTSS prototype satellites for the demonstration.

"We were pleased to partner with both L3Harris and Northrop Grumman on this important homeland missile defense capability and look forward to working with them in the future," the MDA spokesperson said. "The rapid prototype process was designed for a fair but difficult challenge for the industry members involved ... This entire effort represents a great lesson learned in the success and effectiveness of the rapid prototype process."

HBTSS is seen as a cornerstone technology in the Golden Dome program — a missile defense initiative launched by the Trump administration and formalized through executive order. The directive calls for the "acceleration of the deployment of the Hypersonic and Ballistic Tracking Space Sensor layer" as part of a broader strategy to protect the U.S. against missile and aerial threats.

The HBTSS sensor is designed to track fast, low-flying hypersonic weapons that can maneuver unpredictably in the atmosphere — a significant challenge for traditional radar and satellite systems. Unlike ballistic missiles that follow predictable arcs, hypersonics require real-time, high-fidelity tracking data to enable interception. To continue reading, please click [here](#).



Boom Supersonic Announces Symphony Engine Test Site at Colorado Air & Space Port

Boom Supersonic, the company building the world's fastest airliner, Overture, today announced that it has selected a site at the Colorado Air and Space Port in Watkins, CO to conduct engine tests for its Symphony propulsion system. The site was previously used for hypersonic engine development. Symphony, the bespoke engine for Overture, is a medium bypass turbofan optimized for supersonic flight. Boom is investing \$3-5 million into the site this year to prepare it for supersonic engine testing, slated to start later this year.

"Symphony is rapidly advancing from concept to reality. By leveraging an existing site, Boom will have the first independently-owned supersonic engine test facility for less than it would have cost to rent a government facility," said Blake Scholl, Founder and CEO of Boom Supersonic. "By vertically integrating propulsion, we are able to accelerate development, reduce costs, and custom-tailor an engine for Overture—unlocking capabilities like Boomless Cruise."

The Symphony engine test facility, located in Adams County only 35 miles from Boom's headquarters, will support this year's test of Symphony's prototype core. Measuring 12 feet long and 4 feet in diameter, the core is the high pressure spool of the engine, consisting of the compressor, combustor, and turbine—the most critical components of the first independently-developed supersonic jet engine.

"This is an exciting moment not just for Adams County, but for the future of aerospace innovation in Colorado," said Lynn Baca, Chair of the Adams County Board of Commissioners. "Boom's investment in our community puts us at the forefront of the aerospace industry and reflects our shared commitment to advancing next-generation transportation technologies."

The facility at the Colorado Air and Space Port includes a control room and advanced instrumentation. Data collected from Symphony core tests will allow Boom to refine engineering and manufacturing design for Symphony. Boom expects to expand the site in 2026 to facilitate full-scale testing of the entire Symphony turbofan prototype.

"We are very excited to welcome Boom Supersonic to the Colorado Air and Space Port and to support the development of its revolutionary Symphony engine," said Jeff Kloska, Director of the Colorado Air and Space Port (CASP). "We look forward to a great partnership with Boom and to advancing our aviation and aerospace ecosystem at CASP." To continue reading, please click [here](#).



Continuum Powders Recycles Nearly One Ton of Nickel Superalloy Scrap Per Week For Siemens Energy

Continuum Powders, Houston, Texas, USA, announced that it has successfully recycled nearly one ton per week of nickel superalloy scrap from a Siemens Energy facility over the last five months of 2024. The reclaimed superalloy, totalling 16,182 kg, is comprised of rare earth minerals and the next step in the process will be to test the reintegration of these materials into Siemens Energy's supply chain.

This milestone reflects our unwavering commitment to innovation and sustainability," said Rob Higby, CEO of Continuum Powders. "By prioritising efficient recycling and high-quality production, we are helping industry leaders reduce their environmental impact and build supply chain resiliency."

By transforming waste into valuable materials through its proprietary Greyhound M2P plasma atomisation process, Continuum Powders is working to eliminate the need for energy-intensive traditional recycling methods, minimise landfill waste, and drive the circular metal economy.

The scrap came from Siemens Energy's facility in Winston-Salem, North Carolina, where the company services equipment for power generation (e.g. gas turbines, steam turbines, and generators.) Using its Greyhound M2P process, Continuum reverted unused engine components into high-quality, nickel-based metal powders tailored to meet the stringent standards of industries such as aerospace, defence, and energy.

"Our goal is to recycle scrap materials into high-quality metal powders for reuse in Additive Manufacturing because when we minimise waste and boost circular manufacturing, it makes us a stronger player in the energy sector," said Rich Voorberg, president of Siemens Energy in North America.

This ongoing partnership aims to establish a new standard for sustainable manufacturing by demonstrating that advanced recycling technology can produce high-performance materials while enhancing supply chains and reducing carbon emissions. The process not only minimises energy consumption, transportation, and material handling but also serves as a cost-effective and environmentally responsible alternative to traditional recycling methods.

"Our recycling and powder production capabilities prove that innovative solutions can deliver significant environmental and economic value while meeting the most demanding industry requirements," said Michael Brennen, Sales Director at Continuum Powders. To continue reading, please click [here](#).



UPM Advanced Solutions Partners With Carpenter Additive For Powder

To better serve the additive manufacturing community, UPM Advanced Solutions is now the preferred powder distributor for Carpenter Additive. This partnership strengthens Carpenter's reach by enabling UPM Advanced Solutions to support transactional powder business with expert service and flexible ordering. UPM Advanced Solutions offers fast, reliable delivery—including same-day shipping on in-stock materials—ensuring customers experience shorter lead times and greater convenience. As Carpenter's trusted distribution partner, UPM Advanced Solutions is committed to helping grow the powder market and making high-performance additive materials more accessible.

UPM Advanced Solutions will be stocking high-quality Carpenter powder that is used for Laser Powder Bed Fusion (LPBF), Direct Energy Deposition (DED), and Electron Beam Melting (EBM). These materials are commonly used in the aerospace, defense, space, medical, energy industries, as well as other industrial markets. UPM Advanced Solutions' Laser Powder Bed Fusion powders include Inconel 625, Inconel 718, AISi10Mg, Stainless 316, Stainless 17-4, Stainless 15-5, Tool Steel 300, Ti-64 Grade 23, CoCr, and Hastelloy. For DED/EBM, UPM Advanced Solutions carries Inconel 625, Inconel 718, and Stainless 316 powder.



At UPM Advanced Solutions, we are here to be your one-stop shop for additive solutions, with build plates, powder, feedstock, and other consumables, as well as customizable solutions, post print processing, and value chain management. As a global provider, our goal is to achieve same-day responses, next-day shipments, and quick turnarounds, making sure that we have the proper inventory on hand. We are here to help any customer find the powder they are looking for, even if it is not currently stocked and readily available. To learn more about UPM Advanced Solutions powder supply and advanced manufacturing solutions, please click [here](#).

Alternative Energy Applications and Specialty Materials

United Performance Metals continues to lead the charge in providing high-quality metals for cutting-edge alternative energy industries. UPM's heat and corrosion resistant alloys, including nickel, stainless steel, cobalt, and alloy steel, are top-tier choices for building a sustainable future. Below are just a few of the industries that United Performance Metals helps to support through specialty metals, unrivaled customer service, and deep material expertise.

Nuclear Fission: Nuclear fission is the process of atoms splitting apart and releasing heat, which is then used to generate energy. As there is a boom in Small Modular Reactor (SMR) production, United Performance Metals is able to supply the metal alloys and solutions needed for nuclear reactor cores that possess strong heat resistance.

Nuclear Fusion: Nuclear fusion aims to harness the energy of atomic nuclei fusing and releasing energy. Specialty metal alloys are used for these fusion reactor cores and must be corrosion resistant and have the ability to withstand high temperatures.

Geothermal: Geothermal energy is a continuous and readily available renewable energy source that uses the internal heat of the Earth's crust to generate energy. Stainless steel and nickel are used in piping, turbines, condensers, and heat exchangers for the geothermal industry. These metals can maintain strength under high-temperature conditions and exhibit excellent resistance to oxidation and corrosion.

Concentrated Solar Power: Concentrated Solar Power (CSP) uses solar panels to concentrate a large area of sunlight into a receiver. This process uses nickel alloys and stainless steel for heat exchangers and storage tanks.

Hydropower: Hydropower harnesses the energy of moving water to generate electricity. The kinetic energy of the water is used to turn turbines, which then spin generators to produce electricity. Stainless and alloy steels are commonly used in hydropower components, including turbines, valves, and pipes, due to their strength, durability, and corrosion resistance in unique environments like water.

To learn more about alternative energy materials UPM provides and their applications, please click [here](#).

