Lunar Dawn Team Awarded NASA Lunar Terrain Vehicle Contract

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Lunar Outpost teams with Lockheed Martin and Industry to develop a human-rated Moon rover as part of the agency's Artemis campaign

DENVER, April 3, 2024 /PRNewswire/ -- NASA has awarded a Lunar Terrain Vehicle Services (LTVS) contract to the Lunar Dawn team, led by Lunar Outpost as the prime contractor along with its principal partner Lockheed Martin (NYSE:LMT) and teammates General Motors (GM), The Goodyear Tire & Rubber Company, and MDA Space. The diverse team combines proven robotic and human space exploration heritage, cutting edge technology and automotive industry strengths to create a true off-road vehicle for living and working on the Moon's surface.



The Mission

This next-generation Lunar Terrain Vehicle (LTV) will enable the exploration of the surface of the Moon in unprecedented fashion as part of NASA's Artemis campaign. It will dramatically extend the range that astronauts can travel from their landing sites as they perform high-priority science investigations on the Moon. When not in use by NASA, the LTV will provide commercial services, contributing to a more accessible and sustainable cislunar economy.

"Surface mobility is a critical capability for humanity's future in space, and Lunar Outpost looks forward to driving value in the cislunar economy by providing a reliable, safe and capable vehicle that will be used to provide mobility to Artemis astronauts and perform critical missions autonomously on the Moon for commercial endeavors," said Lunar Outpost CEO, Justin Cyrus. "We look forward to leveraging the strengths of Lockheed Martin, a company with extensive human and advanced space systems experience, and our other industry teammates, GM, Goodyear and MDA Space, to provide an unparalleled technical offering at a commercially viable price point."

The Vehicle

The Lunar Dawn LTV will afford Artemis astronauts with an exceptional experience rooted in safety and convenience, including a flight deck-forward design that provides expansive views for navigating the challenging lunar environment.

"These unique technologies will enable the future of critical infrastructure required for a sustainable presence in space where humans can live, work far from Earth," said Kirk Shireman, vice president of Lunar Exploration Campaigns at Lockheed Martin. "Lockheed Martin is thrilled to be combining expertise with a diverse set of companies to embark on this next generation rover that will expand exploration and our understanding of the lunar surface."

The Lunar Dawn team's vehicle exceeds all the requirements set forth by NASA and was designed with mission growth capability in mind. Several of the vehicle's capabilities and features include:

- Advanced autonomous navigation and operation, with or without astronauts onboard.
- Capabilities for robust and diverse commercial use, including a reconfigurable cargo bed that allows for the changing of payloads with its robust robotic arm.
- The ability to not only survive, but to operate, during the two-week long lunar nights with temperatures down to -280 degrees Fahrenheit; this novel technology extends mission life from days to many years.

The Industry Team

The Lunar Dawn team is comprised of titans of their respective industries, who have been selected for their leading technology and proven ability to deliver space systems that can reliably operate in the toughest conditions.

As the lead of the Lunar Dawn Team, Lunar Outpost is pioneering a new teaming paradigm for the space industry. Lunar Outpost brings its speed and agility, track record of venture capital investors, keen understanding of the commercial market and direct lunar rover experience to this program. Lunar Outpost specializes in advanced spacecraft and robotic systems. As the only company presently contracted to design four lunar rovers and two already built and qualified, Lunar Outpost is the leading commercial planetary mobility provider. Lunar Outpost's commercial Lunar Rover missions reaching the Moon this year will serve as LTVS pathfinder missions that enable the team the exclusive ability to test technologies and gather data to further the LTV development.

- **Lockheed Martin** brings decades of experience delivering highly complex deep space vehicles including the complexities that come with human space flight on programs like Orion, Human Landing System Cislunar Transporter and planetary missions such as Lucy and OSIRIS-REx.
- **General Motors** is bringing its advanced Ultium EV battery technology along with extensive chassis and suspension development heritage. General Motors' experience on Lunar Surface mobility goes back to their contributions to the wheels, motor, and suspension of NASA's Lunar Roving Vehicle during the Apollo Program.
- **Goodyear** is developing the rover's tires leveraging years of experience in lunar mobility, dating back to Apollo missions.
- **MDA Space** draws from decades of experience in human spaceflight robotics and is providing the robotic arm and robotic interfaces, enabling a versatile ability to place and maintain commercial payloads.

ABOUT LUNAR OUTPOST

Lunar Outpost is an industry leader in lunar surface mobility, commercial space robotics, and space resources. From our terrestrial product lines revolutionizing the air quality sector on Earth to the creation of oxygen on Mars, our impact spans the solar system. Lunar Outpost's exploration class rover, the Mobile Autonomous Prospecting Platform (MAPP), will be the first commercial rover on the Moon and the first rover in history to explore the lunar South Pole.

Since our founding in 2017, Lunar Outpost has raised Venture Capital from top-tier investors and continues to attract strong investment partners as we continue to prove the opportunity that advanced mobility, robotics and autonomy provides to the new space economy and here on Earth. In 2021, Lunar Outpost announced that our commercially funded MAPP rover—including payload mass allocations for MIT and Nokia — was scheduled for delivery by an Intuitive Machines lander to the lunar South Pole. Lunar Outpost has since secured two additional contracted lunar surface missions, one of which is fully commercial and the other a NASA funded science exploration rover. In addition to the three missions above, Lunar Outpost has also won a contract with the Australian Space Agency to design and develop a lunar rover for Australia's first mission to the Moon as part of the Trailblazer program.

With over a dozen active contracts across commercial, defense and civil space, Lunar Outpost is The Next Leap that will enable humanity to become interplanetary.

Find out more at lunaroutpost.com. Follow us on X, LinkedIn, Instagram.

ABOUT LOCKHEED MARTIN

Lockheed Martin is a global defense technology company driving innovation and advancing scientific discovery. Our all-domain mission solutions and 21st Century Security vision accelerate the delivery of transformative technologies to ensure those we serve always stay ahead of ready. More information at lockheedmartin.com.

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