

**Transportation and Propellant Resources in the
Cislunar Economy**

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United Launch Alliance (ULA) is currently developing new technologies to deliver reliable, regular, flexible transportation to the cislunar economy. Cislunar space is a significant growth area for global, commercial space activities. Within thirty years, 1,000 people can be permanently working and living in space. In space manufacturing and off Earth mining can quickly become commonplace as industry, academia and government capitalize on cislunar activities. There is a vast frontier waiting to

be tapped by mining, science, manufacturing, research, and technology, all enabled by transportation innovations.

This presentation describes ULA's next generation second stage, ACES (Advanced Cryogenic Upper Stage), and ULA's business case for purchasing propellant. ACES has game-changing technologies, enabling space commercialization, science, research, and exploration. ACES can utilize propellant extracted from the Moon, making ULA a primary customer for lunar derived propellant (hydrogen and oxygen). ULA has publically stated their intent to purchase propellant. With reliable and regular cislunar transportation, the space beyond LEO is accessible and affordable, and with propellant customers the cislunar economy moves toward self-sustainment.