Rocketdyne Receives $65 million from NASA for Next-Generation Space Propulsion Development

The $201.5 million dollars that The Boeing Company was awarded by NASA through the Space Launch Initiative (SLI) last week includes more than $65 million to the Rocketdyne Propulsion & Power unit of the company. The SLI contract calls for Rocketdyne to develop propulsion systems for second-generation reusable launch vehicles.

NASA's Space Launch Initiative is designed to reduce the risk associated with developing a second generation reusable launch vehicle by defining, developing and testing technologies needed to meet safety, reliability and cost goals. New propulsion technology developed through SLI will be central to achieving the goals of a reusable launch vehicle that is 100 times safer, ten times more reliable, and one-tenth the current cost of delivering payloads to orbit.

The Rocketdyne propulsion activity focuses on design of and technology development for a fuel-rich staged combustion engine (FRSC). The Rocketdyne FRSC prototype will be a hydrogen-fueled highly reusable engine in a class similar to the Space Shuttle Main Engine (SSME) developed by Rocketdyne. Under this contract, Rocketdyne will also advance the design maturity of a highly reusable oxidizer-rich staged combustion (ORSC) hydrocarbon engine. In addition, the Rocketdyne SLI award enables research and development toward a hydrogen peroxide engine for upper stage propulsion.

To meet the challenge of next-generation propulsion, Rocketdyne will build on the experience gained from the development of the SSME, as well as the RS-68 engine for the Boeing Delta IV expendable launch vehicle and the Linear Aerospike engine developed for NASA's X-33 reusable launch vehicle.

"This contract represents a great opportunity to capitalize on lessons learned and best practices from SSME, Aerospike and RS-68," said John Vilja, program manager for the main propulsion activity.

The contract calls for initial design work to be completed over a ten-month period beginning in June. At the end of ten months, NASA will authorize a follow-on 14-month option based on successful performance in the prior phase. NASA is planning on testing of a prototype engine to take place by 2005, with first flight of the full-scale development vehicle occurring in 2010. The SLI work will be performed at Rocketdyne facilities in Canoga Park, Calif. Initially, about 80 employees will support the SLI work, increasing to about 120 by 2002.

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