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AD ASTRA ROCKET COMPANY AND COSTA RICA'S RECOPE UNVEIL CLEAN ENERGY HYDROGEN TECHNOLOGY PROJECT.

[Liberia, Guanacaste, Costa Rica – for immediate release] – Ad Astra Rocket Company, through its wholly-owned subsidiary, Ad Astra Servicios Energéticos y Ambientales, Costa Rica, SRL (AASEA), in partnership with Costa Rica's state-owned Petroleum Refinery, RECOPE, unveiled today the country's first hydrogen generation and storage facility, a pilot project focusing on clean, renewable energy with applications in the transportation sector. The state-of-the-art facility constitutes the first of several steps the partnership intends to take to explore the viability of a hydrogen-based transportation infrastructure in Costa Rica, the fundamental goal of which is to reduce the nation's reliance on imported oil. Hydrogen is a clean, renewable fuel produced by wind and solar- generated electrolysis of water. In its next phase, the Liberia facility is envisioned as a pilot service station, designed to supply fuel cell and battery electric vehicles in the local area.

The hydrogen production and storage facility features an electrolyzer that breaks down water using electricity, producing two separate streams of highly pure hydrogen and oxygen. The oxygen is vented to the atmosphere while a low pressure storage tank captures the hydrogen at a pressure of 15 atm. A high pressure stage further compresses the gas and delivers it to five small state-of-the-art tanks at 700 atm. The high pressure tanks each can hold up to one kg of hydrogen in a volume no larger than that of a conventional propane cooking cylinder. Each such tank could provide enough fuel to achieve a 100 km range in a fuel cell vehicle. Other storage technologies are envisioned for later study, including cryogenic storage and in advanced hydrogen "sponges" called metal hydrides.

The Ad Astra/RECOPE hydrogen project is one component of a larger program in renewable energy initiated by Ad Astra which includes two other elements: 1) an exploratory program with Earth University and Cummins, Inc. in the use of hydrogen and methane mixtures to boost the efficiency of bio-digestor gas as a renewable fuel for electrical power generation; and 2) the manufacture of low-cost, medium-power wind turbines by Ad Astra to supply local markets in distributed power and integration in turn-key commercial power generation systems.

"This is an important technical achievement for our partnership and a valuable step in the introduction of this potentially game-changing technology in the region" said Dr. Franklin Chang Díaz, Ad Astra's Chairman and Chief Executive Officer, "I congratulate the Ad Astra/RECOPE team on their outstanding accomplishment and the contribution they are making to develop a clean, reliable and economical energy source for the region," he added.

ABOUT AD ASTRA

Established in 2005, Ad Astra Rocket Company is the developer of the Variable Specific Impulse Magnetoplasma Rocket (VASIMR®) engine, an advanced plasma space propulsion system aimed at the emerging in-space transportation market. Ad Astra also owns and operates Ad Astra Servicios Energéticos y Ambientales (AASEA) and Ad Astra Rocket Company, Costa Rica, respectively supporting research and development subsidiaries in the US and Guanacaste, Costa Rica. Through its subsidiaries, the company also develops earthbound high technology applications in renewable energy, advanced manufacturing and applied physics. Ad Astra has its main laboratory and corporate headquarters at 141 W. Bay Area Boulevard in Webster, Texas, USA, about two miles from the NASA Johnson Space Center.