ECAPS

ANNUAL REPORT FISCAL YEAR 2013
DIRECTORS’ REPORT

ECAPS AKTIEBOLAG

Org. No 556602-7446

Registered office: Solna

Ownership

ECAPS AB since July 1, 2006 a wholly owned subsidiary of the Swedish Space Corporation, (org. No. 556 66-5836, based in Kiruna).

The Company’s operations

The objective is to develop rocket engines and propulsion systems for environmentally friendly, liquid and storable propellant based on ammonium dinitramide (ADN). This technique is called High Performance Green Propulsion (HPGP) and since 2010 has this been successfully demonstrated during the mission for the Swedish PRISMA satellite in Earth orbit. ECAPS fuel LMP-103S is used with ECAPS 1 Newton (1N) thrusters on PRISM. The results of PRISMA-mission verifies that the performance of the HPGP is higher than with a conventional hydrazine-based propulsion system.

Skybox Imaging is the first commercial customer who signed a contract with ECAPS on a propulsion system to their third satellite SkySat-3 with 1N engines, fuel LMP-103S and refueling of the satellite at launch base. The system design is complete and the next step is the manufacture of the system. ECAPS is now negotiating additional propulsion system for subsequent SkySat satellites.

The interest from market is great. ECHA (European Chemicals Agency) still hold hydrazine in the candidate list (which is part of the Chemicals Regulation REACH) of substances that can have serious effects on human health or related to the environment, known as “Substances of Very High Concern” or SVHC. The European Space Agency ESA and the European space industry sees propellant LMP-103S from ECAPS as the primary alternative to replacing hydrazine in a reasonable time in case a ban (or restriction in the use of) hydrazine takes effect. A program of general qualification of LMP-103S and 1N engines for future ESA missions lies in the budget for 2014. Cooperation with CNES, France, relating HPGP satellite platform Myriade Evolution continues.

ECAPS has in 2013 improved the production equipment for rocket engines and propulsion systems, and further developed the test facilities for rocket engine tests. The development of larger engines in sizes 5N, 22N progress and during the year the Space Agency signed an agreement with NASA, USA, on cooperation and supply of fuel LMP-103S, and 5N and 22N engines for engine testing in the United States. ATK, which is ECAPS partner in the United States, during the year to work on the testing of a 5N engine.
ECAPS

Studies and tests on materials compatibility between LMP-103S and system components is in progress and also have additional characterization of LMP-103S conducted including tests of JAXA, Japan.

Patents and protecting intellectual property rights is an important issue for ECAPS and also in 2013 has ECAPS broadened and clarified the patents previously sought and these the company raised in previous years. The company is certified to ISO 9001:2008.

Funding

The Company's operations are funded primarily by the mission of ESA, Space Board and businesses in Europe and the U.S., as well as through contributions from the parent company SSC. For 2013, the group contributions was about 20.25 million SEK.

Board, Executive Director

During the reporting period, the Board held four meetings. The Board has adopted rules and issued instructions for the CEO.

Proposed distribution of earnings

The company is showing for the year a loss of 15.786 million SEK. As a result of group contributions received, amounted to AGM's disposal agent to 9 thousand SEK. The Board proposes that the amount is carried forward.