

Shackleton Energy enabling Space Resources Exploitation on the Moon within a Decade

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Abstract

Access to in-space natural resources is a key requirement for increasing exploration and expansion of humanity off Earth. In particular, making use of the Moon's resources in the form of lunar polar ice to fuel propellant depots at key locations in near Earth space enables dramatic reductions in the cost of access and operations in space, while simultaneously leveraging reusable in-space transporters essential to opening the new space highway system. Success of this private venture will provide for a sustained balance of our terrestrial economy and the growth of our civilisation.

Establishing the cis-Lunar highway required to access lunar sourced water from the cold traps of the polar craters provides the backbone infrastructure for an exponential growth of a space-based economy. With that core infrastructure in place, space-based solar power generation systems, debris mitigation capabilities and planetary protection systems plus scientific and exploratory missions, among others, can become commercial realities in our lifetime.

Shackleton Energy was founded from the space, mining, energy and exploration sectors to meet this challenge as a fully private venture. Following successful robotic precursor missions, our industrial astronauts combined with a robotic mining

capability will make first landings at the South Pole of the Moon and begin deliveries of propellant to our depots in within a decade. Customers, partners, technologies and most importantly, the investor classes aligned with the risk profiles involved, have been identified and all the components for a viable business are available. Infrastructure investment in space programs has traditionally been the province of governments, but sustainable expansion requires commercial leadership and this is now the responsibility of a dynamic new industry. The technologies and know-how are ready to be applied. Launch services to LEO are available and the industrial capability exists in the aerospace, mining and energy sectors to enable Shackleton Energy to build an in-orbit and Lunar infrastructure on a fully commercial basis.