

## **NASA Unveils Plan to Establish America's First Moon Base**

NASA is embarking on the most ambitious space project in recent history: building a Moon Base. Located at the lunar South Pole, this long-term effort will strengthen American leadership in space, usher in scientific discoveries, and serve as the proving ground for missions to Mars - and NASA will not undertake this endeavor alone. This program will be built alongside our commercial innovators and international partners, whose contributions will be essential to achieving a sustained presence on the lunar surface.

### **Phase 1 (Now–2029): Experiment, Learn**

NASA is kicking off with a rapid series of robotic and early uncrewed missions to scout, experiment, and prepare for surface operations ahead of the astronaut missions in 2028.

- A dramatic increase in lunar activity: Up to 25 missions, including 21 landings
- Crewed and autonomous rovers for basic mobility and surface improvement demonstrations, hopper drones called MoonFall, and communications relay and observation satellites to bring the world along as the Moon Base is constructed.
- Early power, navigation, communication, and nuclear RHU demonstrations to ensure systems can survive the lunar night.
- All the scientific payloads that can be incorporated on every lander and rover.
- The first real "footprint" of the Moon Base effort: four tons of payload delivered to test what works on the surface.

### **Phase 2 (2029–2032): Early Habitation**

By 2029, NASA will transition to assembling semi-permanent infrastructure and begin early habitation and logistics operations.

- Rolling out improved solar and initial nuclear-based power stations (potentially including both fission reactor and RTGs), upgraded rovers, advanced MoonFall drones, and habitation.
- Enhancing surface-to-orbit communications stations to ensure reliable, high-quality connectivity across the lunar South Pole.
- Delivering up to 60 tons of cargo during this phase through up to 24 landings with low, medium and heavy cargo-class landers, providing the mass needed to start shaping a functioning base.

### **Phase 3 (2032 and beyond): Sustained Human Presence**

This phase will scale up to achieve a true enduring presence as crew rotations become routine. This is the era when living and working on the Moon becomes a reality.

- Establishing semi-permanent habitation modules with spacious interior volume for crew living and operations.
- An operational fission surface power station with sufficient power to provide steady, reliable energy through the long lunar nights, leveraging in situ resource manufacturing.
- Operating pressurized rovers that enable long distance exploration and surface travel.
- Building out advanced logistics networks, leveraging a fleet of crewed and autonomous rovers, to keep the lunar base supplied and functioning continuously.
- Delivering up to 38 tons of cargo per year, enough to support habitats, logistics, power stations, and major science outposts, taking advantage of low cost, reusable heavy lift capabilities.

## **Commercial, International Partners at Center of Lunar Build-Up**

NASA's Moon Base strategy is built on commercial and international participation at an unprecedented scale. Together, these efforts will create one of the largest and most diverse opportunities in NASA's history:

- Expanding the CLPS initiative to include larger, more capable landers and rovers, with new task orders issued immediately.
- Multiple classes of LTVs starting on Phase 1, with simplified functionality, developing to more advanced vehicles in later phases that can accomplish many tasks ranging from exploration, surface preparation to logistics.
- Procuring dozens of commercial launches per year through the Launch Services Program to support the steady flow of Moon Base missions.
- Increasing the demand for crew and heavy-cargo beyond Artemis V, with redundant pathways to the Moon and leveraging Human Landing System and HDL Programs.
- Moon Base development campaign will create an unprecedented demand of capability, significantly increasing commercial opportunities, with multiple onramps, for new and existing providers.
- Numerous payload opportunities to demonstrate new technology from surface and orbital relay communication, PNT, observation, in situ resource manufacturing, habitation and all the scientific payloads that mass and volume support.
- Opportunities for all Artemis Accords signatories to contribute technology demonstrations, scientific payloads, and foundational infrastructure in every phase of Moon Base build-up.