

**Statement by Kevin Conole, United States Representative, on Agenda  
Item 14, “Use of Nuclear Power Sources in Outer Space”  
February 5, 2024**

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Thank you, Chair. The United States calls on Member States and international intergovernmental organizations that are considering the use of space Nuclear Power Sources to implement the joint Safety Framework developed in 2009 by this Subcommittee, in partnership with the International Atomic Energy Agency. The United States actively participates in the NPS Working Group, which provides a useful forum to discuss specific aspects of the Safety Framework’s guidance and to learn from presentations and papers. Our experience of more than 30 missions involving space NPS during the last 60 years allows us to offer mission-specific experiences implementing the guidance of the Framework.

Since 1961, nuclear power has opened the solar system to exploration, allowing us to observe and understand dark, distant planetary bodies that would otherwise be unreachable. For the last three years, the Mars 2020 Perseverance rover, powered by radioisotope power, has been exploring Mars, seeking signs of ancient life and collecting samples of rock and regolith for possible future return to Earth. Perseverance brought with it the world’s first extraterrestrial rotorcraft “Ingenuity,” which just recently ended its mission at the Red Planet after surpassing expectations and making dozens more flights than planned.

Another example of exploration uniquely enabled by nuclear power in space is the Dragonfly mission. Scheduled to launch to Titan in 2028 and arrive at Saturn in 2035, Dragonfly adds nuclear power to enable unlimited flight with eight rotors to fly like a large drone on multiple sorties through the atmosphere. The United States is also developing a partnership with the European Space Agency on the Rosalind Franklin Mars rover mission, which is enabled by heat from radioisotopes.

Chair, use of nuclear power sources for in-space propulsion of spacecraft is a potential technology for crew and cargo missions to Mars, and scientific missions to the outer solar system, enabling faster and more robust human and robotic missions. Expanding into a new era for space exploration depends on mass-efficient, high-energy solutions to power deep space vehicles, operate in

harsh environments, and increase mission flexibility. NASA nuclear technology investments are targeting power for surface operations and propulsion for fast-transit, deep space missions, all with the ability to reliably operate without the need for repair or refueling. NASA and the U.S. Department of Energy are partners in ensuring the safe use of these vital space power technologies that enable and enhance such ambitious and exciting exploration missions for the benefit of humankind.

Chair, the United States believes the Principles and the Safety Framework provide a comprehensive foundation to support the safe use of nuclear power in space. The Safety Framework allows for States and international intergovernmental organizations to innovate new approaches based on the expansion of knowledge and best practices gained from experience, and thereby continuously improve safety.

The United States supports continued opportunities and efforts to allow for the sharing of information in order to promote further understanding and awareness of effective processes to ensure the safe use of nuclear power in space. Accordingly, the United States supports the new five-year workplan for the NPS Working Group. To further support these objectives in the NPS user community, the United States also supports the collection and analysis of relevant technical information about potential future uses of NPS in outer space, particularly those involving nuclear reactors, by inviting more member States and international intergovernmental organizations, in particular, the International Atomic Energy Agency (IAEA), to join the working group; collecting information about potential future uses of Nuclear Power Systems in outer space; and analyzing the safety implications of gathered information. In this regard, we are pleased to share Conference Room Paper 22, which highlights the Evolution of NASA's Nuclear Flight Safety program.

Chair, the United States Delegation extends our gratitude to Austria for its chairmanship of the NPS Working Group, and to the Secretariat for facilitating the work of the NPS Working Group and for the excellent translation services. Thank you, Chair.