

**Statement by Kevin Conole, United States Representative, on Agenda
Item 14, “Use of Nuclear Power Sources in Outer Space”
April 20, 2021**

Thank you, Madame Chair. The United States calls on Member States and international intergovernmental organizations that are considering the use of space Nuclear Power Sources (NPS) to implement the joint Safety Framework developed in 2009 by this Subcommittee, in partnership with the International Atomic Energy Agency.

Since its inception, the U.S. has actively participated in the NPS Working Group, which has provided a useful forum to discuss specific aspects of the Safety Framework’s guidance and to learn from presentations and papers. We are pleased that the current work plan provides an opportunity for further presentations on experiences implementing the Safety Framework’s guidance and in satisfying the safety intent of the 1992 Principles on NPS in Outer Space; and for Member States and intergovernmental organizations with experience with NPS missions to discuss advances in knowledge and practices and their potential for enhancing the technical content and scope of the Principles. 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 Safety Framework. The U.S. recommends allowing the extension of the mandate of the NPS Working Group for one year to develop of a comprehensive final report.

Since 1961, NPS applications have played a critical role in the exploration of space, enabling missions of scientific discovery to destinations across the solar system. These amazing voyages have helped to unlock the mysteries of outer space and spark the imaginations of people all over the world. Radioisotope power is currently powering the Mars 2020 Perseverance rover along with its payload, the world’s first extraterrestrial rotorcraft “Ingenuity.” Perseverance successfully launched in July 2020 and arrived on Mars in February 2021. It is part of NASA’s Mars Exploration Program and will address key questions about the potential for life on Mars. Another example of the exciting potential for exploration uniquely enabled by nuclear power in space is NASA’s New Frontiers program, which continues to develop the Dragonfly mission following the same successful safety processes as Mars 2020. Dragonfly, the world’s first nuclear powered rotorcraft, will have eight rotors and will fly like a large drone on multiple sorties through the atmosphere of Titan, Saturn’s largest moon. It is scheduled to launch in 2027 and when it arrives in 2035, it will begin to unlock the mysteries of that frigid

world through sampling and examination, looking for chemical evidence of the building blocks of life. Such an application highlights the exciting potential for exploration uniquely enabled by nuclear power in space. All NPS missions have been, and will continue to be, implemented using processes consistent with the Safety Framework and in the spirit of the Principles.

The U.S. remains committed to the Safety Framework and the safety intent of the Principles as we continually improve our processes to be more efficient and effective. In terms of national policies on this topic, the Mars 2020 Perseverance Rover mission became the first NASA mission to receive launch approval under the August 2019 policy, “Presidential Memorandum on Launch of Spacecraft Containing Space Nuclear Systems,” following established safety guidelines and a tiered risk acceptance approval for launches with nuclear payloads. This publicly available policy establishes updated safety policies, requirements, and a risk-informed process for launching space nuclear systems that are funded or licensed by the U.S. Federal Government, including those developed and implemented by U.S. commercial entities. NASA and the U.S. Department of Energy partner to ensure safety as we provide these vital space power technologies to enable and enhance such ambitious and exciting exploration missions for the benefit of humankind.

The U.S. believes the Principles and the Safety Framework provide a comprehensive foundation to support the safe use of nuclear power in space. The guidance provided by the Safety Framework enables new approaches to safety based upon continuing advances in knowledge and practice since the adoption of the Principles. 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 therefore continuously improve safety. To date, the NPS Working Group has not identified any challenges to implementing the Safety Framework that would require any modifications or additions to the Safety Framework. The practical application of the Safety Framework satisfies the safety intent of Principles, and therefore is sufficient guidance to States and international intergovernmental organizations seeking to ensure the safe development and use of nuclear power in space. Our robust experience leads us to believe that the widespread adoption of the Safety Framework will provide assurance to the global community that space NPS applications are being developed, launched, and used in a safe manner. For these reasons, the U.S. strongly encourages national implementation of the Safety Framework. As the current mandate for the Working Group comes to conclusion, the US supports maintaining the NPS agenda item to allow for the sharing of

information among UNCOPUOS Member States and international intergovernmental organizations planning or considering NPS involvement, and Member States with experience in NPS, on implementation and application of the Safety Framework in order to promote further understanding and development of effective processes to ensure the safe use of nuclear power in space.

Madame Chair, the United States Delegation extends our gratitude to the Secretariat for facilitating the work of the NPS Working Group and for the excellent translation services.

Thank you, Madame Chair.