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UNOOSA: Topic #2- Nuclear Power Sources in Outer Space
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Nuclear energy is one of the most fiercely debated topics in many areas of international law, and outer space is no exception. In 1961, nuclear energy made its first appearance in outer space as the United States Navy began utilizing a Transit 4A navigation satellite that is powered by a radioisotope thermoelectric generator (RTG).¹ Since then, nuclear energy, and its uses in space, has continued to be researched and developed, sparking debate and controversy throughout the international community.

Nuclear energy itself is not necessarily harmful when utilized properly and effectively. Nuclear energy has allowed for deep space missions, such as Voyager 1 and 2, which are still active decades after launch. These missions would not have been possible without the use of an RTG. Countries looking toward future space exploration and possible colonization of Mars require nuclear power sources to obtain enough power to support all the systems necessary for these missions; as solar power alone is not enough. Finally, the use of nuclear power allows for faster transit times which would decrease the amount of fuel necessary for spacecrafts, allowing for more room for scientific and medical equipment.

There are, however, many concerns regarding allowing the use of nuclear power in space. Unfortunately, not every launch into space nor every space mission is successful. If an accident were to occur during launch or at any point during a space mission where nuclear energy is involved, the results could be catastrophic; radioactive material could be released into the Earth's atmosphere. Furthermore, while the Outer Space Treaty² bans using nuclear weapons in space, there is still a concern that allowing any form of nuclear energy in space could lead to weaponization and, without proper regulation, could be incredibly dangerous and the risk of allowing it is too high and not worth the potential benefits.

¹

<https://www.energy.gov/articles/history-nuclear-power-space#:~:text=EARLY%20NUCLEAR%20SPACE%20POWER%20SYSTEMS,10%2C500%20built%2Din%20solar%20cells.>

² <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html>



In 1992, the General Assembly adopted the Principles Relevant to the Use of Nuclear Power Sources in Outer Space (NPS Principle). It states that all Member States are required to inform the Secretary-General of all safety assessments carried out prior to launching nuclear-powered objects into space in order to publicize it to both the Member States and to the public. While the NPS Principle helped make strides toward regulation in this area, there is still much more to do, with many feeling that new, up to date regulations are necessary.

When writing your paper, please consider the following:

- Pros and Cons
 - Do the pros of using nuclear energy in space outweigh the cons, or should it be disallowed altogether?
- Legal Framework
 - Does the current legal structure of the Outer Space Treaty as well as the NPS adequately address the risks and uses of nuclear energy in space, or is a new legal framework necessary?
 - What does your country think about the NPS Principle? Is it enough?
- Environmental Safety
 - What safety standards should be required before nuclear materials are launched into space?
 - Should information about space missions utilizing nuclear energy be publicly available, or restricted for security reasons?
- Security
 - Is there truly a risk that allowing the use of nuclear power sources in space will lead to weaponization? If so, what measures can be taken to prevent this?
 - How can UNOOSA monitor compliance and respond to violations of possible security measures?

Remember that your job is to represent your country's views, not your own. Please be sure to cite your sources and not to plagiarize or use AI to write your paper. If you have any questions, please feel free to reach out to me at perri.sterman@mail.yu.edu. I am looking forward to reading your papers and working together to develop solutions to this pressing issue.



Sincerely,

Perri Sterman

Chair, United Nations Office of Outer Space Affairs

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