Title: OPAG 13. Radioisotope Power Systems for outer planet missions

Respondent and contact information

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Statement of the issue

There are many potential planetary missions that require use of Radio-isotope Power Systems (RPS), including all that would venture beyond Jupiter. The cost of such power systems severely limits what can be proposed under the Discovery program, and impacts New Frontiers as well. Providing any RPS power system (e.g. ASRG, eMMRTG) as GFE, along with a credit for associated NEPA costs, will enable additional competed missions.

Impact of not resolving the issue

Without affordable RPS systems, exploration beyond Jupiter will be limited to Flagship-class missions and some New Frontiers missions.

Suggested pathway(s) to resolve the issue

In the Discovery and New Frontiers programs, supply any allowed RPS (e.g. ASRG or eMMRTG) as Government Furnished Equipment, along with associated costs such as those for NEPA.

Potential impacts of the suggested solution(s)

Providing radio-isotope power systems and associated costs as GFE will enable Discovery-class missions to the outermost solar system, and will increase the reach of the New Frontiers program. While there are some missions enabled specifically by ASRG technology, we note that others are enabled by less aggressive RPS technologies, such as eMMRTGs. To maximize the presence of the outer solar system in competed missions, it is therefore important to offset the costs of any allowed RPS.