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1. Improve the Pool of Mission Proposal Reviewers

1.1. Name of Submitter and Contact Information

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1.2. Statement of the Issue

Overly restrictive conflict-of-interest rules exclude many of America’s most qualified reviewers from contributing to proposal evaluation panels.

Presently, conflicts of any amount of future money to anyone in an institution disqualifies everyone at that institution from reviewing. While proposing institutions and lead NASA centers are presently and should remain conflicted, the quality of Step-1 proposal review in particular would be improved by broadening the reviewer pool.

1.3. Rationale for Significance of the Issue to a Wide Range of Proposers

Given the composite effort that goes into the production of mission proposals in terms of both sweat and treasure, having the best, most experienced reviewers evaluate proposals is in the interest of every proposing team. Furthermore, it is in the interests of NASA and the US Government to assure the highest quality review possible in order to ensure that the result of the review drives selection of the highest quality science for the taxpayers’ dollars.

The present rules end up excluding a broad range of experienced, knowledgable, and well-qualified potential reviewers at American institutions. For instance, under the present system a Co-I in one department at an institution leads to the disqualification of every other researcher at that institution, even one who may be in a different department from and perhaps not even known to a potential reviewer. Due to the concentration of American planetary scientists a relatively few institutions, essentially only lone wolves at small institutions are left.

Because those that reside in the US understand our system the best and are stakeholders in NASA’s vision, they would be the best possible choices for recruitment onto review teams. Resorting to recruitment of European reviewers to avoid present conflict-of-interest rules results in uninformed reviews.
1.4. Impact of not Resolving the Issue

Step-1 reviews are conducted by only peripherally-associated planetary scientists, and as such are not now and would not in the future be adequate for the purposes of achieving a qualified review.

At present Step-2 reviews can include people at institutions that were conflicted in Step-1 but for whom there is no conflict on Step-2. While this system does pass the bar as being qualified, it is not as good as it could be.

1.5. Suggested pathways to Resolve the Issue

1.5.1. Make Conflict-of-Interest Rules More Rational

At present otherwise-qualified reviewers at institutions with a Co-I on just one of thirty proposals, where that Co-I might be penciled in to receive a paltry amount of money 10 years from now, are considered conflicted. Instead, reasonable limits on the total amount of funding that would trigger an institutional conflict of interest could be instituted. Similarly, a time limit such that if the institution were to receive money only after 5 years, for example, might not constitute an institutional conflict of interest. These reasonable limits make even more sense when considering that Co-I money will follow the person, not the institution, in the not-improbable case where the Co-I would change institutions during the course of a prospective mission.

Additionally, a reviewer at a presently-conflicted institution could be deemed unconfl cted if the institution’s proposal is being reviewed in a different sub-panel. Thus a reviewer could review a proposal about Titan even if his institution has a Co-I on an asteroid mission, for instance.

1.5.2. Separate Step-1 and Step-2 from a Conflict-of-Interest Standpoint

Alternatively, the proposers could be asked to supply an explicit separate proposal for what they would do with the money should they be selected in Step-1. One mechanism to do this might be to have separate lists of Co-Investigators for the proposal and for the mission. The people listed as mission Co-I’s would get money only if the mission is selected to move forward after Step-2. The proposal Co-I’s would be eligible for study money after Step-1. Because Step-1 money will generally be concentrated among the mission’s engineering group and leadership, rather than among the full list of mission Co-Investigators, dramatically fewer people would be conflicted for the Step-1 proposal. Therefore fewer institutions would be conflicted when considering review panels for Step-1 proposals. The actual named Co-Investigators on the mission themselves should still be considered conflicted, but their
institutional colleagues would not.

1.6. Potential Impacts of the Suggested Solutions

The solution outlined in Section 1.5.1 might run afoul of immutable federal procurement rules and thus be unworkable without an act of Congress.

The second solution, described in Section 1.5.2, would entail an increased burden on proposers to outline a separate Step-1 budget. It might also reduce NASA’s flexibility with respect to the amount or timescale for the pre-phase-A studies to be funded by Step-1.