

### ACS PRF Review Guidance & Rubric

Please use the rubric to document the strengths and weaknesses of each of the review criteria for yourself. Based on these notes, craft your review comments in three sections: 1. General, 2. Strengths, and 3. Weaknesses. Please phrase weaknesses as suggestions for strengthening the proposal for future submissions.

**Do’s of Peer Review:**

- Read the entire proposal once before evaluating it.
- Provide specifics, not vague comments.
- Frame suggestions as questions.
- If you find that you are unable to review this proposal, notify your Program Officer as soon as possible to enable them to seek other peer experts.

**Don’ts of Peer Review:**

- Don’t use inflammatory language.
- Don’t make any personal references.
- Don’t write things like “I don’t believe it” without stating the reason(s) for this opinion.
- Don’t be late with submitting your review.
- Don’t discuss the proposal with others. The review process is confidential.

**Review Rubric (for your personal use only):**

|   |   |
|---|---|
| <p><b>Fundamental Research in Petroleum</b><br/>         Is the proposed research both fundamental and related to petroleum or fossil fuels?<br/> <b>Strengths:</b><br/><br/> <b>Weaknesses:</b></p>  | <p><b>Rating</b><br/> <b>1 = very high</b><br/> <b>5 = very low</b></p> |
| <p><b>Testable, Hypothesis-Driven Proposal</b><br/>         Is the proposal focused, and will it address well-defined scientific questions? Will the experiments, measurements, modeling, and/or proposed simulations lead to a successful outcome?<br/> <b>Strengths:</b><br/><br/> <b>Weaknesses:</b></p> | <p><b>Rating</b><br/> <b>1 = very high</b><br/> <b>5 = very low</b></p> |



|  |   |
|--|---|
| <p><b>Scientific Merit</b><br/>What is the significance and perceived impact of the proposed research? If conducted, will the research enhance our understanding of the phenomenon being studied? How novel is the research, and will it result in technical innovations?</p> <p><b>Strengths:</b></p> <p><b>Weaknesses:</b></p>   | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |
| <p><b>Displayed Knowledge of the Subject Area</b><br/>Did the PI demonstrate a good grasp of the literature in this field, and did they compare and contrast the proposed research with what has been accomplished in the past? Does the PI have sufficient knowledge and experience to accomplish the proposed research, or have they paired with collaborators/co-investigators to augment the necessary expertise?</p> <p><b>Strengths:</b></p> <p><b>Weaknesses:</b></p> | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |
| <p><b>Budget and Timeframe</b><br/>Can the proposed research be accomplished within the requested budget and timeframe? Is the proposal too ambitious or not ambitious enough? Note that the grant amount and PI salary are fixed by PRF.</p> <p><b>Observations:</b></p>  | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |
| <p><b>Safety</b><br/>In your review, please confirm that potential risks or hazards have been appropriately identified and suitable mitigation procedures presented.</p> <p><b>Observations:</b></p>   | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |
| <p><b>Viability for Future Funding:</b><br/>Would the results generated from ACS PRF funding enable the PI to submit a competitive proposal to a sustaining funding agency?</p> <p><b>Observations:</b></p>  | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |



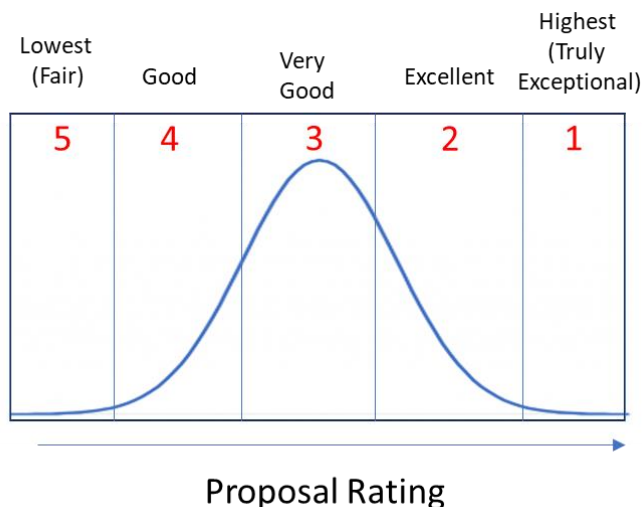
|   |   |
|---|---|
| <p><b>New Directions (ND) Proposals Only:</b><br/>Is the proposed work truly a new research direction for the PI?<br/><b>Observations:</b></p>  | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |
| <p><b>Doctoral New Investigator (DNI) and Undergraduate New Investigator (UNI) Proposals Only:</b><br/>Is the proposed research different from what the PI conducted for their PhD dissertation or during a Postdoctoral Fellowship?<br/><b>Observations:</b></p> | <p><b>Rating</b><br/>1 = very high<br/>5 = very low</p> |

**Review Summary Sheet:**

Please reflect on your notes from the previous pages and synthesize the three-part review. Copy and paste these comments into the ACS PRF Review System <hyperlink>.

|                                 |
|---------------------------------|
| <p><b>General Comments:</b></p> |
| <p><b>Strengths:</b></p>        |
| <p><b>Weaknesses:</b></p>       |

Every six months, ACS PRF makes funding recommendations with input from expert reviewers like you. We know that many proposals deserve funding. However, funds are limited, and only some outstanding proposals will receive support. To help ACS PRF make informed funding recommendations, please assess the overall quality of this proposal. ACS strives to have a rating distribution for all proposals, as shown below.



Based on your holistic assessment, where should this proposal fall on the spectrum, and what is its numerical rating?

**Overall Rating:**

Please add this number as your holistic review rating and overall comments (general, strengths, and weaknesses) above into the ACS PRF review system.

Thank you for your contributions to ACS PRF and the fundamental research community.