NATIONAL SCIENCE FOUNDATION
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NSF 21-024

Frequently Asked Questions (FAQs) for the Addressing Systems Challenges through Engineering Teams (ASCENT) Program Solicitation (NSF 21-521) - FY 2021

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I. QUESTIONS ABOUT BUDGETS AND AWARDS

1. **What is the individual award amount?**

   ASCENT awards are expected to be between $1,000,000 to $1,500,000 for a period of four years. Each project requires at least three PI/Co-PIs.

2. **Does ASCENT allow for the acquisition of equipment and if so, is there a maximum allocation of budget for it?**

   ASCENT does not have specific restrictions limiting acquisition of a specialized piece of equipment critically needed and fully justified for a project's success. It would be discouraged however, if a large percentage of the ASCENT proposal budget, e.g., greater than 20% of the average annual budget, is taken up by equipment. Instrumentation acquisition is more appropriate through larger centers and facilities and through specialized equipment programs in selected disciplinary fields.

3. **What are the expected budget components for ASCENT? Is postdoc support or faculty summer salary allowed? Is any travel supported?**

   An ASCENT proposal can have the same budget components, including undergraduate and graduate students support, postdoctoral researcher support, and educational outreach, as a proposal submitted to any of the ECCS core programs. ECCS recommends no more than 1-month summer salary for PI's in a project (no more than 2 months summer salary for PI's at RUI's) and limits to no more than 2-months maximum salary support for any PI in all NSF funded projects. PIs should be careful in developing a realistic project budget that is consistent with the proposed activities, which ensures successful execution of the ASCENT project while remaining in the scope of the solicitation.

   Proposed budgets must include funds for travel by at least one PI or co-PI and at least one graduate student or researcher to attend a biennial one-day grantees' meeting in the Washington, DC area, held within the first two years of the award and two years thereafter.

4. **Can I submit an ASCENT proposal as well as a core program proposal, assuming that the research topics in the proposals are sufficiently distinct?**

   Yes, the only restriction is that a PI cannot be involved with more than one ASCENT proposal (PI, co-PI, or senior personnel) in a given review cycle.

5. **Can our team resubmit a proposal that was not recommended for funding under**

the previous ASCENT solicitation?

Yes, your team may submit a new ASCENT preliminary proposal based on a revised prior submission, following the guidelines specified in the current ASCENT solicitation.

6. **Are there specific instructions given on COVID-19 impact on proposal submission or project management?**

   Requirements defined in the ASCENT solicitation remain unchanged unless announced by NSF. PIs are advised that NSF may provide temporary guidance for proposals submitted or due during the ongoing COVID-19 pandemic. Links to the impacted solicitations and a brief description of the change(s) can be found at NSF's "Coronavirus Information" web site. Proposers are encouraged to check NSF's website regularly.

7. **Can a team write and submit a proposal with a duration less than four years?**

   All ASCENT proposals are expected to have a period of performance of four years.

II. QUESTIONS ABOUT TOPICS

8. **Is there further guidance regarding what areas of research the ASCENT solicitation intends to fund?**

   The ASCENT solicitation does not focus on particular topics; rather it encourages projects addressing engineering research challenges by interdisciplinary teams. The solicitation encompasses all the research areas in the core programs of ECCS, described online in ECCS Division Programs under CCSS (Communications, Circuits, and Sensing-Systems), EPCN (Energy, Power, Control, and Networks), and EPMD (Electronics, Photonics, and Magnetic Devices) programs. Specific evaluations regarding the scope and appropriateness of an ASCENT proposal will be the purview of the reviewers, subject to guidelines in the solicitation.

9. **We are considering submitting an ASCENT proposal on a specific topic. Would that be in the scope of the ASCENT solicitation?**

   The ASCENT program intends to challenge the community to go beyond the research normally supported by individual ECCS unsolicited or core programs and to develop innovative and interdisciplinary projects with larger scopes. PIs are also encouraged to contact the relevant program director for additional guidance.

10. **Will the ASCENT solicitation fund applied or fundamental research? If applied, what level of maturity is desired?**

    ASCENT funds ambitious and far-reaching fundamental engineering research projects. Fundamental research includes both basic and applied research. The ASCENT program

is not intended to support technology translation; thus, proposals that are of developmental in nature are not appropriate for ASCENT.

11. **Where can one find some examples of ASCENT funded projects?**

    You can take a look at ASCENT homepage under "What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)" or use the Advanced Award Search (see https://www.nsf.gov/awardsearch/advancedSearch.jsp) to see what ASCENT projects have been awarded by ECCS. Note ECCS has updated the requirements for the ASCENT 2021 solicitation.

III. QUESTIONS ABOUT TEAMS

12. **Are interdisciplinary teams preferred? Are there specific expectations about what a competitive ASCENT team would be like?**

    ASCENT projects are interdisciplinary, and the makeup of the team should reflect that. The ASCENT program supports interdisciplinary engineering research teams, which does not preclude incorporation of other expertise as necessary.

13. **The solicitation also referred to convergent engineering research, can you explain the relation between interdisciplinary and convergent research?**

    NSF identifies Convergence Research as having two primary characteristics:

    a. research driven by a specific and compelling problem. Convergence Research is generally inspired by the need to address a specific challenge or opportunity, whether it arises from deep scientific questions or pressing societal needs.
    b. deep integration across disciplines. As experts from different disciplines pursue common research challenges, their knowledge, theories, methods, data, research communities and languages become increasingly intermingled or integrated.

    ASCENT project teams are envisioned to solve compelling research problems that demand a connected portfolio of multiple integrated ECCS research areas, which is characteristic of convergent engineering research.

14. **Do all PIs/Co-PIs have to be from ECCS core areas, or can they come from different disciplines (physics, materials science, e.g.)?**

    The team for an ASCENT proposal should be appropriate for the project. The integration of disciplinary expertise not typically engaged in ECCS-funded projects is allowed.

15. **Is it necessary to have the PI/co-PIs each represent one area of device, circuits**

and systems?

Each field of research, such as devices, circuits, and systems, hosts many disciplinary areas and it is not necessary that all three areas must be represented in every proposal. The three PI and co-PIs meeting the minimum number of PI/co-PI requirement, however, are expected to have a complementary, distinguished, and synergistic knowledge and skill set that represents the needed expertise for the proposed multidisciplinary research. Proposals for which the research topic or the set of skills of the PIs is primarily within one research area are not appropriate for ASCENT.

16. **Is there an expectation that the three PIs will be from different Institutions of Higher Education (IHEs)?**

    No. Collaborative proposals can be from a single IHE or from multiple IHEs. The proposing team, however, must be interdisciplinary.

17. **Are early career PIs/Co-PIs encouraged in teaming and considered in evaluation? Is a mix of senior and junior faculty preferred?**

    The proposing team should have the appropriate expertise to execute the project. Reviewers for all NSF proposals are asked to consider how well qualified the individual, team, or organization is to conduct the proposed activities. The solicitation has no specific expectations with regards to PI/co-PIs' professional career stages or seniority.

18. **Is the predominant outcome of ASCENT supposed to be the development of new groups which get early results then to go on to pursue larger funding opportunities?**

    The ASCENT solicitation encourages forming collaborative teams, but the team forming is not the end goal. Successful ASCENT research may form sustained interactions across multiple communities, which could strengthen competitiveness for the team in seeking future funding opportunities.

19. **Can an ASCENT team include a collaborator based outside the United States?**

    The ASCENT program does consider proposals involving international collaborations, though NSF generally provides support only to U.S.-based organizations. The PAPPG contains important information regarding eligibility of submitting organizations (PAPPG Chapter I E) and specific requirements regarding cooperative projects involving support for U.S. and foreign organizations.

    Please note that an unfunded collaborator does not count as one of the three PIs on the proposal as required by the ASCENT solicitation.

IV. QUESTIONS ABOUT THE PRELIMINARY PROPOSAL

20. **Can an ASCENT team include a collaborator of National Labs?**

    Collaboration with National Labs are encouraged. However, as ASCENT submission eligibility is limited to IHEs, the National Lab collaborator will not be financially supported and does not count as one of the three PI/Co-PIs on the proposal as required by ASCENT solicitation.

21. **Can ASCENT team include an industrial collaborator?**

    Research collaboration with industries are encouraged and may be documented by Letter of Commitment. However, as ASCENT submission eligibility is limited to IHEs, the industrial collaborator does not count as one of the three PI/Co-PIs on the proposal as required by ASCENT solicitation. If the industry participant provides critical research expertise, without which the likelihood for success of the ASCENT project would be diminished, the Grant Opportunities for Academic Liaison with Industry (GOALI) type of proposal can be used in conjunction with this solicitation. The industrial Co-PI with complementary expertise can serve as one of the minimum three PI/Co-PIs required. See the ASCENT solicitation and PAPPG Chapter II.E.4 for additional information and guidance.

22. **What is expected from a preliminary proposal?**

    Preliminary proposals should demonstrate the responsiveness to the solicitation by identifying the fundamental research problem and intended impact of the research. Equally important is to establish its scientific soundness and document the team's ability to carry out the proposed work. Given the 5-page limitation, review of the preliminary proposals will have emphasis on the potential transformative nature and impact of the proposed idea on solving a pressing engineering systems challenge.

23. **What feedback will I receive for my preliminary proposal?**

    After you preliminary proposals are reviewed by ad hoc reviewers and/or by a panel with disciplinary expertise, you will receive a panel summary, as well as individual reviews. If you are invited to submit a full proposal, you will have this feedback to help you in preparing the full proposal. You are strongly advised to take this feedback into account, both in full proposal preparation and in any resubmission of the preliminary proposal. Note, however, that preliminary proposal and full proposal reviews will be conducted independently.

24. **After submitting the preliminary proposal, can we make changes to the subject of research or composition of the team?**

You may include recommended or elected changes in your full proposal submission, as long as the research theme, the lead institution, the lead PI, and the scope of the project remain intact as reviewed.

25. **If our preliminary proposal is not recommended for invitation, can we still submit a full ASCENT proposal?**

    No, ASCENT full proposal submission is by invitation only.

V. QUESTIONS ABOUT THE REVIEW PROCESS

26. **How will ASCENT proposals be reviewed?**

    Both Preliminary and Full Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review.

27. **What will be the evaluation criteria for ASCENT proposals?**

    All proposals submitted to the NSF are evaluated for their Intellectual Merit and Broader Impacts according to merit review criteria approved by the National Science Board and described in the PAPPG. Additional solicitation specific review criteria are described in the ASCENT solicitation.

VI. WHAT IF MY QUESTION IS NOT ADDRESSED IN THIS FAQ?

Email your questions to ascent@nsf.gov.