



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 14-070

Frequently Asked Questions (FAQs) for **NSF 14-536**, High Performance Computing System Acquisition: Building a More Inclusive Computing Environment for Science and Engineering

1. Does the 30 page limit in the solicitation refer to both a proposal for a single computational resource as well as to a proposal for a combined resource constituted of a new computational resource/capability and an upgrade of an existing system to encompass new capabilities?
2. If a proposal is submitted for both a deployment of a new computational resource/capability and the upgrade of an existing system to encompass new capabilities, how do we make a clear separation so that, should the panel wish to recommend funding for only one of the two, that recommendation can be made?
3. How does the latest version of the GPG affect submissions?
4. How does the prohibition against inclusion of voluntary committed cost sharing influence what proposers should put in the body of their proposals and in the budgets?
5. If a combined resource consisting of a new computational resource/capability and the upgrade of an existing system to encompass new capabilities is proposed and the panel recommends that only one or the other be funded, would that be entertained by NSF?
6. Please further clarify the solicitation's requirement that each proposer provide evidence that their proposed system will perform as described in their proposal.
7. Please further clarify the solicitation's requirement that the acquisition be supported with appropriate project management processes.
8. Please further clarify when the NSF expects the acquired resources to be deployed.
9. Please further clarify the solicitation's requirement that limits potentially requested user support and operating costs.
10. Please further clarify the solicitation's requirement that the acquired systems will serve as resources within the NSF eXtreme Digital (XD) program.
11. The solicitation refers in many places to a proposal's "innovative capability". What does this mean specifically, in terms of the objectives and criteria described in the solicitation?

1. Does the 30 page limit in the solicitation refer to both a proposal for a single computational resource as well as to a proposal for a combined resource constituted of a new computational resource/capability and an upgrade of an existing system to encompass new capabilities?

Yes.

2. If a proposal is submitted for both a deployment of a new computational resource/capability and the upgrade of an existing system to encompass new capabilities, how do we make a clear separation so that, should the panel wish to recommend funding for only one of the two, that recommendation can be made?

The project description should make a compelling case that if only the new computational

resource/capability or the upgrade of an existing system to encompass new capabilities were to be funded, that the impact of the separation would be minimal. The budget pages should clearly separate the two resources so that it is easy to see how to proceed.

3. How does the latest version of the GPG affect submissions?

Attention is drawn to http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/gpg_sigchanges.jsp. The recent changes to the NSF GPG were fairly substantial. You are strongly encouraged to closely consider this updated guidance in every detail before submitting a proposal.

4. How does the prohibition against inclusion of voluntary committed cost sharing influence what proposers should put in the body of their proposals and in the budgets?

Prospective PIs should discuss this issue with their sponsored project office, which should be able to provide the necessary guidelines to properly frame the proposal. In addition, PIs may want to reference NSF's guidance on preparing the Facilities, Equipment and Other Resources section of the proposal. That guidance is found in Chapter II.C.2.i of the GPG (http://www.nsf.gov/pubs/policydocs/pappguide/nsf14001/gpg_2.jsp#IIC2i).

5. If a combined resource consisting of a new computational resource/capability and the upgrade of an existing system to encompass new capabilities is proposed and the panel recommends that only one or the other be funded, would that be entertained by NSF?

Yes. NSF would be prepared to fund one part of a combined proposal if the recommendations from the panel were sufficiently compelling. It is important for PIs to consider how their proposals are constructed to allow the panel to make those recommendations in a clear and compelling fashion. In addition, the budgets must be constructed to make the separation straightforward.

6. Please further clarify the solicitation's requirement that each proposer provide evidence that their proposed system will perform as described in their proposal.

Notably, while in past solicitations benchmarks have played an important role, for this solicitation, given the emphasis on nontraditional HPC as well as possible "cloud-like" computation solutions, and the potential breadth in targeted scientific impacts, NSF has opted not to require a set of NSF-provided benchmarks. Nonetheless, NSF will still require that each proposer provide a convincing demonstration, with hard data, that their system will perform as described in their proposal.

7. Please further clarify the solicitation's requirement that the acquisition be supported with appropriate project management processes.

Attention is drawn to the requirement that the proposer present the acquisition implementation, project management, and mitigation of acquisition risks in the context of the anticipated cooperative-agreement award type. Potentially, this presentation could include a proposed project manager who would provide expertise to the submitting organization in the management of awards of this scale.

8. Please further clarify when the NSF expects the acquired resources to be deployed.

Attention is drawn to the solicitation's important requirement that the hardware acquisition must provide a high degree of stability and usability by no later than January, 2016. Acquisition and deployment of the full system should be finished before the end of FY16, i.e., September 2016. The end of FY16 should be interpreted as a not-to-exceed date. It is perfectly acceptable to begin full deployment earlier, or to begin partial deployment earlier and ramp up. Again, this will be negotiated in the cooperative agreement, as it could be dependent on the nature of the resource

proposed and funded. The number of years that the proposed system will be deployed can vary with the nature of the proposed resource, but in most cases it is anticipated to be part of XD for at least 4 years.

9. Please further clarify the solicitation's requirement that limits potentially requested user support and operating costs.

Attention is drawn to the requirement that user support and operating costs per annum will be no larger than 20% of the acquisition cost for each deployed HPC system. These costs will be covered in a separate funding action and the size will depend on the nature of the resource deployed.

10. Please further clarify the solicitation's requirement that the acquired systems will serve as resources within the NSF eXtreme Digital (XD) program.

Awards anticipate that 90% of the capacity/capability of the delivered systems will be available to the open science community through the national allocation process, XRAC.

11. The solicitation refers in many places to a proposal's "innovative capability". What does this mean specifically, in terms of the objectives and criteria described in the solicitation?

This will involve a subset of the seven bullets listed in Section II, Program Description, of the solicitation. A competitive High Performance Computing and Data (HPC&D) proposal must address one or more of those seven items. As stated thereafter in the solicitation, in FY 2014 NSF is interested in receiving innovative proposals for production XD computational and data resources capable of complementing recent NSF HPC investments.