NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230

NSF 17-100

Frequently Asked Questions (FAQs) for NSF 17-558, Towards a Leadership-Class Computing Facility - Phase 1

The following set of questions and answers refer to Frequently Asked Questions (FAQs) about the NSF 17-558, Towards a Leadership-Class Computing Facility - Phase 1 program solicitation. They are not intended to be a modification of the solicitation.

Before preparing proposals, please read the solicitation and refer to the general information about NSF proposal submission, including the NSF PAPPG.

FAQs about FastLane, the NSF site for submitting proposals, can be found at https://www.fastlane.nsf.gov/NSFHelp/flashhelp/fastlane/FastLane_Help/fastlane_help.htm#fastlane_faqs_introduction.htm. Information regarding Grants.gov can be found at https://www.grants.gov.

1. Please clarify the program solicitation requirement that 95% of the proposal amount should be for the Phase 1 system acquisition cost.
2. Will the Phase 2 system upgrade and facility construction be competed?
3. Please clarify when the leadership-class facility design phases will begin and how these activities will be funded.
4. Please clarify if the system needs to be part of the NSF eXtreme Digital (XD) program.
5. Can the Phase 1 system be hosted at a non-academic institution?
6. Will there be technical support provided for the Sustained Petascale Performance (SPP) benchmark suite?
7. Is there a requirement for the proposed Phase 1 system to have a two to three-fold capacity improvement over the existing Blue Waters system located at National Center for Supercomputing Applications (NCSA) at UIUC?
8. Do industry vendor partners need to be listed as participants in the Letter of Intent (LOI)?

1. **Please clarify the program solicitation requirement that 95% of the proposal amount should be for the Phase 1 system acquisition cost.**

   The program solicitation states that 95% of the *total* NSF requested budget should be for the system acquisition. The system acquisition cost can include the cost of any relevant subsystems that directly contribute to the overall computational capability proposed. For example, this cost can include processing nodes, accelerators, interconnect fabric, input/output (I/O) technologies, storage and memory subsystems, external network connections, and system software licenses. Clear budget justification for equipment costs should be provided, adhering closely to guidance provided in the NSF PAPPG.

2. **Will the Phase 2 system upgrade and facility construction be competed?**

   No, NSF does not anticipate competing the Phase 2 system upgrade and facility construction. However, progress towards the eventual leadership-class system will be reviewed extensively, including through NSF's rigorous merit review process.

3. **Please clarify when the leadership-class facility design phases will begin and how these activities will be funded.**

   NSF expects the leadership-class facility design phase activities to begin in fiscal year (FY) 2019 (i.e., during the

period October 1, 2018, through September 30, 2019). Funding for the design activities will be provided through supplemental awards to the Phase 1 system acquisition award.

4. **Please clarify if the system needs to be part of the NSF eXtreme Digital (XD) program.**

   Proposals are requested to leverage existing services or facilities provided by the wider national cyberinfrastructure ecosystem as appropriate. These services may be associated with the XD program, such as the eXtreme Science and Engineering Discovery Environment (XSEDE) or XD Metrics Service (XMS), or they may encompass services funded by other NSF or federal programs. *As appropriate, proposers should provide plans for leveraging services that complement and enhance the education, outreach and user support and other activities within the national cyberinfrastructure ecosystem.*

5. **Can the Phase 1 system be hosted at a non-academic institution?**

   Yes. However, as stated in the program solicitation, the awardee must be a U.S. academic institution as defined in the NSF PAPPG, and all proposed systems must carefully adhere to the requirements as specified in the solicitation.

6. **Will there be technical support provided for the Sustained Petascale Performance (SPP) benchmark suite?**

   The SPP benchmark suite is provided by the University of Illinois at Urbana-Champaign (UIUC). The codes in the benchmark are provided "as is" (i.e., instructions and scripts are provided to compile and run the individual applications in the suite); no additional technical support will be provided by UIUC or NSF. For clarification on any technical issues, please contact the cognizant NSF Program Officer.

7. **Is there a requirement for the proposed Phase 1 system to have a two to three-fold capacity improvement over the existing Blue Waters system located at National Center for Supercomputing Applications (NCSA) at UIUC?**

   The program solicitation requires that the proposed Phase 1 system have at least two- to three-fold *time-to-solution performance improvement* over the existing Blue Waters system. However,the solicitation does not specify a target requirement for *capacity* improvement.

8. **Do industry vendor partners need to be listed as participants in the Letter of Intent (LOI)?**

   No. Any industry vendor partners must be noted and described in the full proposal submission.