



National Science Foundation
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GENI PROJECT OFFICE INFORMATION BRIEFING FREQUENTLY ASKED QUESTIONS

1. What roles does NSF anticipate for universities?

Universities are eligible to participate in GPO activities as the submitting organization or as subawardees. In addition, we anticipate that college and university faculty with interests in using the GENI facility to further their research agendas will have a significant voice in influencing the GENI design and subsequent construction and operations through the GENI Science Council and other community fora.

2. Has NSF already identified a GPO awardee?

As is NSF's tradition, this is an open competition, the outcome of which will be determined using NSF's merit review process.

3. Is the GENI planning group accessible? For teaming? For questions? As an organization prepares a proposal?

The GENI design products being developed by the GENI Planning Group are in the public domain and are being posted to the geni.net web site as they are developed, for community comment and input. They are freely accessible to all proposers. If a proposer wishes to discuss planning efforts with members of the GENI planning group, they are free to contact them.

4. It seems a technical proposal is not requested? Is this correct?

The solicitation indicates that NSF is soliciting proposals from organizations wishing to lead GENI pre-construction planning, and then, on successful completion of the final design phase, to be responsible for GENI construction and operations.

NSF is NOT asking for proposals that define or refine the GENI technical design as it is currently described on the publicly accessible geni.net web site. Rather, NSF has requested proposals that describe the project management approach a proposing organization will use to lead the continuation of the iterative GENI design process, with advice provided by the GENI Science Council, in the months following the GPO award.

NSF is looking for proposals from organizations who are clearly capable of assuming responsibility for GENI pre-construction planning, and ultimately construction and operations, and who clearly understand that this must be guided by the scientific priorities of the GENI research community.

5. Is the GPO excluded from submitting proposals for future design/prototyping/construction projects?

Let us first address prototyping.

As described in the solicitation, NSF expects to make up to \$10 million/year available to the GPO for development/prototyping or proof of concept demonstrations in the pre-construction phases of GENI. Also noted in the solicitation, NSF expects that development and prototyping activities will be competitively bid in a process led by the GPO. In some cases however, the GPO may build due to unique capabilities of the GPO. The process a proposer plans to use to identify development/prototyping priorities and to either make subawards or to build themselves, must be defined in the proposals submitted to this competition.

Please note however, that a specific development/prototyping plan for GENI will be requested of the GPO after the GPO award is made. Such a plan should NOT be submitted in proposals to establish the GPO.

Now on to the construction related issues.

As the solicitation indicates, NSF expects that if all goes well in pre-construction planning, the GPO will assume responsibility for GENI construction. The process for managing a competitive GENI construction project will be developed by the GPO with advice from the GENI Science Council in the pre-construction planning activities leading up to construction. The competitive construction process the GPO develops will be reviewed in the Preliminary Design Review and later, in the Final Design Review.

6. What is the role of the Computing Community Consortium (CCC)?

NSF will work in partnership with the CCC to charter and provide administrative support to the GENI Science Council such that the membership includes leaders in the GENI research community, and is broadly representative of that community.

7. Who decides on the awarding of future GENI contracts? Design/prototyping? GPO/NSF?

The GPO Project Director will recommend design/prototyping priorities and sub-award selections, in some cases informed by advice provided by the GENI Science Council. These priorities or recommendations will be reviewed and approved by NSF when the subaward \$ value is greater than \$250k. In some cases, recommendations made by the GPO Project Director will be reviewed by expert panels convened by NSF, such as in the formal reviews defined in the MREFC Guidelines.

8. How much will GENI build on EMULAB/PLANETLAB/ORBIT/DETER?

GENI uses a number of ideas from Planetlab, Emulab, DETER, and ORBIT, builds on the experience of creating shared facilities, and uses them for prototyping and demonstrating some of the key capabilities needed for GENI. Thus, these facilities do serve as the foundation for GENI. However, GENI goes well beyond these facilities as explained in the GENI design documents and the current draft of the Project Execution Plan (PEP).

9. Should proposers show expertise in EMULAB/PLANTLAB/ORBIT/DETER?

Proposers should describe expertise in the areas described in the solicitation – e.g. demonstrated ability to work collaboratively with and provide service to the computing research community; effective management of advanced networking infrastructure projects, including planning, construction and operations; effective management of large-scale, software-intensive projects, including design, development, implementation and lifecycle management; etc.

10. What is an example of a large-scale software-intensive project that has been effectively managed?

Proposers should describe their own relevant experience and expertise. Software-intensive projects that might be considered examples are the Firefox browser, which is a robust, tested and featureful open source software system developed under a product project management system approach; and the Community Climate System Model, a very large and very widely used oceanographic model which has a formal project management structure.

11. Should the proposal address the design/construction of GENI? Approach, cost, schedule, evolution?

The proposal should describe the proposer's prior experience in the areas noted in the solicitation, and the process by which the proposing organization will work with

the GENI Science Council and the broader community it represents to the successful completion of GENI pre-construction planning. The construction project will be funded in a separate, but related award instrument. The scope and level of effort of the construction project will be developed by the GPO with advice provided by the GENI Science Council during the pre-construction planning activities to be led by the GPO award.

12. Will NSF continue to fund the planning group? If so, at what level?

The GENI Planning Group is funded through the spring of 2007 to allow for a seamless transition of responsibilities from the Planning Group to the GPO and GENI Science Council. This transition should coincide with the timing of the Conceptual Design Review.

13. Does the GPO evaluate the design of the planning group? What is NSF's role in the evaluation?

At this stage, GPO proposals need not evaluate the current conceptual design of GENI as developed by the Planning Group. However, proposers may wish to identify perceived risks in the design in the Risk Mitigation Plan component of proposals - that is at the proposers's discretion.

14. Should a proposal address the "build" process - plan/budget/evaluation/subcontracts?

No. The construction project will be defined by the GPO working in collaboration with the GENI Science Council and the broader research community in the months following the initial GPO award.

15. In some places, the solicitation notes "Provide rationale for why these activities are identified, who will lead.", but then later it says "(cite type of backgrounds, rather than specific participant names.)" This sounds contradictory?

A proposer should identify by name personnel who will play leadership or critical roles in the proposed project. For other identified project activities, if the proposer does not have specific personnel already on board, then the background, expertise etc. of personnel to be hired should be provided.

16. Does NSF have preferences as to whether the GPO subawards prototype and development work or perform this work in-house (make vs. buy)?

The solicitation asks proposers to describe the processes they will use to identify, prioritize and support necessary development and prototyping activities. NSF expects the GPO to identify the best performer for the required work. This may be the GPO itself or may be a subawardee.

17. What organizational conflict tests will GPO personnel, including consultants, be required to meet when proposing to perform prototype and development work either as part of the GPO or as part of a proposal for a subaward? What about their home organizations in the case of consultants?

As part of the description of the processes the proposed GPO will use to support development and prototyping and development activities, proposers are expected to describe how they will manage organizational conflicts of interests. The processes defined will determine to what extent GPO personnel, including consultants, may be involved in development and prototyping awards.

18. The principal award will be a cooperative agreement. What form will development subawards take? Will these awards come from the GPO or from NSF?

Subcontracts for development activities will be awarded by the GPO. NSF consent to the award (if necessary) must be obtained in accordance with the Cooperative Agreement Supplemental Financial/Administrative Terms and Conditions Article 48.

19. The solicitation calls for a Project Development Plan (PDP) to take the project through Final Design Review. Does the PDP have to address details of the PEP's content or just how the PEP will be developed.

It should describe how the PEP and other documents critical to preconstruction planning will be developed, working in some cases (such as the PEP) from input drafts. An outline mapping of document content to pre-construction processes may be presented.

20. The solicitation indicates that collaborative proposals are not permitted, but then indicates that an organization may make subcontracts. This appears contradictory.

NSF does encourage prime/sub proposals.

A "separately submitted collaborative proposal" as defined in NSF's Grant Proposal Guide is submitted simultaneously by multiple "collaborating" organizations, and

all organizations “collaborating” on the project will receive an award directly from NSF if the project is selected for funding. NSF has determined that the GPO project is too administratively complex to allow for the effective management of the “collaborative” awards that would result in such a case.

21. May a for-profit company include fee in the budget proposal?

Fees may be included at a rate not to exceed seven percent (7%) of the total direct and indirect project costs. The actual fees will be mutually agreed by the parties.

22. What is included in administrative costs?

In the preconstruction planning activities, administrative costs are defined as all project costs that are NOT development and prototyping costs.

23. Do you think it is feasible to establish the GPO, and within two months (co-)host the Conceptual Design Review, and in a further four months host a successful Preliminary Design Review?

NSF recognizes that the schedule described in the solicitation is an ambitious one. It reflects the timeline needed for GENI construction consideration in NSF’s FY09 budget formulation process.

To prepare for a Conceptual Design Review within two months of GPO award requires that the GENI Planning Group and the new GENI Project Office work intensively to transition products and processes developed by the Planning Group to the GPO. During the transition process, if it becomes clear that more than two months is required to ensure both a successful transition and an optimal Conceptual Design Review, then more time will be accorded. The time between Conceptual Design Review and Preliminary Design Review will depend on the recommendations and findings generated in the Conceptual Design Review. A more accurate projection of the timeline from Conceptual Design Review to Preliminary Design Review will be developed collaboratively by the GPO and NSF following the Conceptual Design Review.

24. May we propose operations support staff and operations activities in the pre-construction phase of GENI for funding against the development and prototyping funds? Are those funds limited to software and hardware prototypes?

Staff and operations systems which are used for managing a portion of the GENI facility, such a prototype segment, or a resource for experimenters, are not within the GPO's administrative role. They would support prototyping or development of the GENI facility and could be proposed for those funds.

- 25. The solicitation states "The lead Principal Investigator (PI) will serve as the "Project Director" for the GPO, will work full-time on the project, and thus will have direct day-to-day involvement in the effort." Are these guidelines or hard and fast requirements?**

Due to the intensive nature of the GPO, NSF views the PI/"GENI Project Director" as an absolutely key leader. His or her full attention will be needed in order for GENI to be established. Within the Cooperative Agreement, it may be possible for an awardee to phase the PI up to full-time over a short period, due to transition requirements or pre-existing projects.