NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 20-125

Frequently Asked Questions (FAQs) for the Community Instruments and Facilities (CIF) Program Solicitation (NSF 20-596)

GENERAL CIF QUESTIONS

1. What is the intent of the CIF solicitation?

2. How do CIF differ from other Facilities that the Directorate for Geosciences/Division of Atmospheric and Geospace Sciences (GEO/AGS) supports?

3. How many CIF awards will be made?

4. If I propose to have my instrument/facility as a CIF, what would be required of me and my institution?

5. What are the benefits of being an NSF CIF PI?

6. What is the expected yearly usage of the CIF?

7. Do I need to provide all the staff needed to operate the CIF for a user request?

8. Can or should I, as a CIF PI, also be a PI on a user request for my instrument/facility?

9. Can a user request come from my own institution?

10. Why are new instruments or facilities not allowed in this solicitation?

11. I have an instrument or facility in the development or pre-acquisition stage. Am I eligible for the CIF solicitation?

12. Can a CIF be a collection of instruments?

13. Can I cordon off time for my own use of the CIF?

14. What happens if an NSF user and a third-party user both request the CIF for the same period? Does the NSF user have priority?

PROPOSAL INSTRUCTIONS QUESTIONS

15. What is the difference between CIF award funding and funding from user charges?

16. The Management and Operations Plan section requires a breakout of projected user charges. How can I provide an estimate without knowing what type of user request I will receive?

17. Should I attach Letters of Collaboration from potential users of the system to prove community interest in my CIF?

18. How much technician time can be requested on a CIF proposal?

19. What is meant by "minor" repairs and/or upgrades in the proposal? Is there a dollar limit?

20. Can costs for training and software be included in the CIF budget?

21. What does it mean by the statement that "it is anticipated that long-term data management and archiving will be provided by NCAR?"

22. Do we need to send data to NCAR for archiving even if the CIF data is already being archived in another publicly accessible location?

GENERAL CIF QUESTIONS

1. **What is the intent of the CIF solicitation?**

   The intent of the CIF solicitation as stated in the synopsis of the program is "to provide the NSF-sponsored atmospheric sciences research community with access to specialized instrumentation for field and laboratory-based studies." NSF would like to broaden the user base of observational and laboratory-based instruments and facilities to include a more diverse field of researchers, inclusive of early-career researchers, underrepresented minorities, and users from non-R1 institutions.

2. **How do CIF differ from other Facilities that the Directorate for Geosciences/Division of Atmospheric and Geospace Sciences (GEO/AGS) supports?**

   CIF are intended to be unique instruments or facilities that provide a research capability that is not otherwise commonly available to the scientific community. NSF will provide baseline funding to make a CIF available for community use, but it is otherwise maintained and managed by the Principal Investigator (PI) or the host institution. The personnel required to maintain and deploy the CIF should be commensurate with the

budget range allowed by the CIF solicitation ($50k-$250k per year).

3. **How many CIF awards will be made?**

   The anticipated funding amount as stated in the solicitation is $750,000 to $3,000,000 subject to the availability of funds. This works out to a range of 3 to 15 awards, depending on the mix of award sizes and durations.

4. **If I propose to have my instrument/facility as a CIF, what would be required of me and my institution?**

   As described in the solicitation, the CIF PI would be required to maintain the instrument in a state of readiness for community use, manage/respond to community inquiries, provide cost estimates for the use of the CIF, and deliver quality-controlled data to the user PI and to the National Center for Atmospheric Research (NCAR) for archival.

5. **What are the benefits of being an NSF CIF PI?**

   NSF recognizes that institutions sometimes struggle to support technical staff and instrument maintenance, thus this funding could provide support to keep instruments/facilities running and productive. Broader use of a CIF PI's instrument/facility may enhance the CIF PI's career and provide valuable experience in management activities. The scientific community of user PIs will benefit from the availability of additional, unique instrumentation for experimental studies.

6. **What is the expected yearly usage of the CIF?**

   There is no set guidance for expected usage. Projected CIF usage may be highly variable depending on the type of CIF. For example, it may be appropriate for an advanced remote sensing system to be remotely deployed once a year for 1-2 months and host one or two local educational deployments, whereas a laboratory system could host a number of shorter visits throughout a year.

7. **Do I need to provide all the staff needed to operate the CIF for a user request?**

   This depends on the ease of use of the CIF and user experience/training. It is acceptable to request participation from the user PI team to conduct the observations, especially for remote or continuous use. The possibility for limited or no staff to operate the CIF would need to be clearly described and justified in the proposal.

8. **Can or should I, as a CIF PI, also be a PI on a user request for my instrument/facility?**

   You may write a science proposal to use your CIF, which would be subject to separate NSF merit review.

User PIs are not required to involve you as a scientific PI on a request, and there must be no pressure applied by the CIF PI to become a user PI on a science project that uses the CIF.

9. **Can a user request come from my own institution?**

Yes. However, the intent of the program is to broaden access across the scientific community to specialized instruments and research. A CIF that does not demonstrate such effort during the award period, may jeopardize future funding.

10. **Why are new instruments or facilities not allowed in this solicitation?**

The objective of the CIF solicitation is to provide funding to enable access to existing instruments and facilities by a broader base of researchers in the atmospheric sciences. NSF continues to support significant instrument and facility development and acquisition through the Major Research Instrumentation (MRI) and regular science programs. As stated in the CIF solicitation, preference will be given to instrumentation/facilities that were acquired or developed under NSF funding, but this is not exclusionary.

11. **I have an instrument or facility in the development or pre-acquisition stage. Am I eligible for the CIF solicitation?**

A CIF needs to have a demonstrated record of being a research quality instrument or facility that can be reliably used for atmospheric research. If a CIF has not been operational, it will be difficult to determine the level of community interest and provide a good estimate of the costs and personnel needed to make the CIF viable. If you have a potential CIF without a significant research track record, we encourage you to contact NSF early in the proposal process to assess the eligibility of the request.

12. **Can a CIF be a collection of instruments?**

Yes, if the instruments are tightly coupled and the proposed science topics require an integrated set of measurements. The CIF definition is similar to that of the NSF MRI solicitation. The MRI solicitation states that "individual components that when combined serve as a single research instrument" are allowed. For the CIF, examples could potentially include a set of remote sensing instruments on a trailer or different separation/ionization devices for molecular/elemental analyses with mass spectrometry.

13. **Can I cordon off time for my own use of the CIF?**

Yes, within reason. If you have a CIF that is particularly suited for studying a problem that has a certain seasonal or time-dependent use, such as hurricane landfalls, a proposal that excludes that time period from potential external users would likely not fare well in the review process.

14. **What happens if an NSF user and a third-party user both request the CIF for the same period? Does the NSF user have priority?**

   NSF is generally going to defer to the CIF PI on matters of scheduling. There will necessarily be a back and forth between the CIF PI and the user PI prior to any submission of a proposal, and this discussion can be used to attempt to work around any scheduling issues. As stated in a prior FAQ, if the CIF PIs do not demonstrate broad use of the CIF by the NSF-sponsored research community, then justification of the instrumentation as a community resource is more difficult to achieve.

PROPOSAL INSTRUCTIONS QUESTIONS

15. **What is the difference between CIF award funding and funding from user charges?**

   Proposals to the CIF solicitation will include a budget that provides for well-justified personnel support for managerial and technical activities, minor repairs and upgrades, and travel for outreach.

   The CIF PI will define a "user charge" in the proposal that includes costs that would be incurred during the use of the CIF. For laboratory measurements, this could include personnel time and expendables. For field measurements, this could also include travel, lodging, shipping, and other costs to conduct the experiment. If an institution has a well-defined recharge rate (or similar) for the instrument, that may be included as part of the user charge. The "user charge" costs will be requested in the user PI science proposal as a subaward to the CIF provider.

16. **The Management and Operations Plan section requires a breakout of projected user charges. How can I provide an estimate without knowing what type of user request I will receive?**

   The solicitation states that user charges may vary by each use case. In the proposal, you should describe the types of costs that would go into a user charge. It is not required by the solicitation, but an example use case budget could prove useful to the reviewers.

17. **Should I attach Letters of Collaboration from potential users of the system to prove community interest in my CIF?**

   No. Letters of Collaboration from potential users are prohibited. The only Letters of Collaboration that are allowed are from AGS's existing Lower Atmosphere Observing Facilities (LAOF) providers. These Letters of Collaboration are mainly targeted toward aircraft instrumentation where NCAR or Wyoming personnel would need to verify the

ability of the CIF to be integrated into the aircraft platform.

18. **How much technician time can be requested on a CIF proposal?**
There is no set limit to how much technician time can be requested. In the solicitation, the terms "limited" and "well-justified" are used. It is also stated that "the CIF award is intended to augment ongoing funding streams and not be used as the main source of support for the CIF."

19. **What is meant by "minor" repairs and/or upgrades in the proposal? Is there a dollar limit?**
There is no specific dollar limit to the upgrades or repairs, but it should be a small percentage of the overall proposal cost. This program is not meant to provide refurbishment to aging facilities. The proposed CIF should be in good operational shape when the proposal is submitted. We encourage you to discuss this aspect with NSF prior to submission of the proposal.

20. **Can costs for training and software be included in the CIF budget?**
Yes, within reason. PIs are encouraged to budget for training that can expand the user base and help the CIF reach a broader community of users. Reasonable software expenses related to the use of the CIF may be requested. However, the CIF budget should not pay for an expensive software package that would be primarily used by personnel outside of the CIF, such as a broader lab/department.

21. **What does it mean by the statement that "it is anticipated that long-term data management and archiving will be provided by NCAR?"**
Observational data and laboratory measurements can have a long research lifetime, potentially being useful far beyond the time frames in the CIF program. To enable long term access of quality-controlled CIF data and to make data management easier for the CIF PI, the user PI, and potential users of CIF data, NSF has engaged NCAR to host the final, quality-controlled dataset for CIF use. Data passed to NCAR for long term archiving will need to meet community data standards and metadata requirements. NCAR will implement a Digital Object Identifier (DOI) for appropriately archived, publishable datasets to facilitate dataset citation in publications using CIF data. Additionally, NCAR will provide data cataloging, search capability, data download capability, data subsetting service if the nature and format of the data permit, and reporting of data access metrics. Specific questions about data archiving can be addressed to gdex@ucar.edu.

22. **Do we need to send data to NCAR for archiving even if the CIF data is already being archived in another publicly accessible location?**

Quality controlled CIF data along with adequate metadata must be submitted to NCAR for long term archiving to enable broader access to CIF data. It is understood that PIs may have their own preferred repository for storing CIF data. While NSF does not restrict PIs from archiving data in their preferred repository, PIs must also submit their data to NCAR for archiving.