U.S. NATIONAL SCIENCE FOUNDATION
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NSF 24-126

Dear Colleague Letter: Research Coordination Network for the National Discovery Cloud for Climate (RCN-NDCC)

September 06, 2024

Dear Colleagues:

With this Dear Colleague Letter (DCL), the U. S. National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) announces its interest in receiving Research Coordination Network (RCN) proposals to establish a coordinating organization for the National Discovery Cloud for Climate initiative. NSF expects to make one award for up to five years and $500,000/year, subject to the availability of funds and quality of proposals.

OVERVIEW: NATIONAL DISCOVERY CLOUD FOR CLIMATE

The National Discovery Cloud for Climate (NDC-C) is an NSF initiative that will cooperatively advance cyberinfrastructure and climate research through awards that support collaborations between computer scientists, cyberinfrastructure developers and operators, and climate researchers from the geosciences, biosciences, engineering, and other disciplines. NDC-C promotes these collaborations through co-funding of proposals submitted to existing programs and solicitations from the Office of Advanced Cyberinfrastructure (OAC) and the Division of Computer and Network Systems (CNS) in the CISE Directorate and the Division of Research, Innovation, Synergies, and Education (RISE) in the Geosciences directorate. Existing solicitations and programs, such as the Cyberinfrastructure for Sustained Scientific Innovation (CSSI) and Training-based Workforce Development for Advanced Cyberinfrastructure (CyberTraining) programs provide significant opportunities for interdisciplinary proposals that span multiple NSF directorates. NDC-C awards cover the full climate cyberinfrastructure spectrum, including general purpose data management, cataloging, discovery, and transport infrastructure; extensible platforms that provide end-user environments that integrate computing, data, and user interfaces for climate scientists and students; and cyberinfrastructure-enabled climate research that builds on these and other systems. A list of current NDC-C award recipients is available from the NSF NDC-C website.

A well-managed RCN can enable these individual awards to achieve a collective impact that is greater than what they will be able to achieve independently. RCNs are intended to promote inter-disciplinary research, foster new collaborations, coordinate overlapping efforts for broader impact such as student outreach and broadening participation in computing, and identify new opportunities for research and the translation of research to practice. The March 2024 NDC-C workshop report provides an overview and initial identification of opportunities for project-to-project collaborations and the potential for collective impact among the awardees through the creation of a backbone organization.

PROPOSAL GUIDANCE AND SUBMISSION INSTRUCTIONS

Proposals should be prepared in accordance with the guidance contained in the Research Coordination Networks (RCN) program solicitation. As per the solicitation, **prospective proposers must consult first with the cognizant program officer prior to submission** and must include an email in the proposal's Other Supplementary Documents section indicating the cognizant program officer's approval to submit the RCN proposal. Proposals without approval from the cognizant program officer will be returned without review.

When submitting the proposal in research.gov, select the RCN solicitation and then select the CISE Directorate's Office of Advanced Cyberinfrastructure (OAC); choose the "CYBERINFRASTRUCTURE" program. Proposal titles should begin with "RCN-NDCC:" followed by a substantive title. **RCN-NDCC proposals must be received by December 18, 2024 (due by 5 p.m. submitting organization's time) for consideration**.

Submissions must comply with the instructions contained in the RCN program solicitation, including the seven guidance items outlined in Section II, Program Description. Within the context of the general guidelines provided by the solicitation, RCNs relevant to the NDC-C initiative should address issues such as the following that will help NDC-C awardees achieve collective impact:

- Establish and operate communication channels among NDC-C awarded projects and with the broader climate research community.
- Organize and promote student and researcher exchange programs between NDC-C funded projects.
- Conduct regular online and in-person award recipient meetings, including annual all-hands meetings for NDC-C funded projects, with clear agendas for identifying recipient research collaborations and other concrete outcomes.
- Coordinate undergraduate student education programs among NDC-C funded recipients. This may, for example, define multi-year undergraduate student opportunities that allow students to move through various outreach programs and internship opportunities conducted by award recipients.
- Connect NDC-C recipients with other significant, related investments in

cyberinfrastructure, climate research, and climate education by the NSF and other federal agencies.
- Guide NDC-C award recipients on translation of research to practice through public and private sector participation.
- Establish a Web presence for the NDC-C RCN.

REVIEW AND AWARD INFORMATION

Proposals should be prepared and submitted to NSF as described above. NSF will manage and conduct the review process of proposals in accordance with standard NSF policies and procedures. NSF anticipates issuing one award for up to five years for up to $500,000/year, subject to the quality of proposals and availability of funds. Proposal budgets are expected to have significant funds set aside to cover participant costs, travel funds, and other activities associated with a research coordination network.

QUESTIONS

For questions about this DCL, please contact the cognizant program officers at ndcc-queries@nsf.gov.

Sincerely,

Gregory Hager
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