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**NSF 23-155**

## Frequently Asked Questions (FAQs) for for Track 3 of the Major Research Instrumentation (MRI) Program Solicitation ([NSF 23-519](#))

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1. What is Track 3 of the MRI solicitation?
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### 1. What is Track 3 of the MRI solicitation?

The MRI program has been an important program to increase access to multi-user scientific and engineering instrumentation for research and research training. In November 2022, the MRI solicitation ([NSF 23-519](#)) was updated “to include the

purchase, installation, operation, and maintenance of equipment and instrumentation to reduce consumption of helium.” Dedicated helium conservation and recovery equipment is not “scientific instrumentation” as the term is used by MRI. As a result, the MRI program instituted an additional track, Track 3, as an exclusive proposal submission track for helium conservation equipment that supports existing scientific instrumentation. Proposals for research instruments that also incorporate options that reduce the consumption of helium should be submitted as Track 1 or Track 2. Summarizing:

- A proposal for a research instrument that requires helium and has integrated components for helium conservation and/or recovery that is appropriately sized for the needs of the instrument proposed must be submitted as Track 1 or Track 2.
- A proposal for equipment for which the sole purpose is to conserve and/or recover helium from existing research instruments should be submitted as Track 3.

**2. What constitutes a 'helium-related' Track 1 or Track 2 proposal and what details should be addressed in these plans?**

Please see the previous question as to what constitutes a ‘helium-related’ Track 1 or Track 2 proposal. Additionally, as specified in the MRI solicitation, *"Proposals in Track 1 and Track 2 that request support for an instrument that requires the use of helium must describe plans for the conservation, and/or recovery and reuse of helium; ..."* (NSF 23-519, Section V.A.1.e: Management Plan).

**3. If an organization submits a Track 1 or Track 2 proposal for a research instrument that requires and consumes helium, can it then request helium recapture/recovery with a separate Track 3 proposal?**

No, A Track 1 or Track 2 proposal requesting support for a research instrument that requires helium must demonstrate efficiency in the use of helium, include integrated conservation and/or recovery equipment, or include plans to use existing helium conservation and/or recovery equipment that is appropriately sized for the needs of the instrument proposed. The MRI solicitation addresses this as follows:

*"Proposals in Track 1 and Track 2 that request support for an instrument that requires the use of helium must describe plans for the conservation, and/or recovery and reuse of helium; Plans to submit a separate Track 3 proposal are not sufficient for this purpose."* (NSF 23-519 Section V.A.1.e)

**4. If a proposal for a research instrument operating at cryogenic temperatures includes equipment to reduce consumption of helium, does that qualify as Track 3?**

No.

Note: Track 3 could add or replace cryogenic accessories to existing research instrumentation in order to reduce consumption of helium. However, Track 3 support does not include the research instrument itself.

**5. Can a Track 3 proposal request helium recovery equipment to support multiple instruments in separate laboratories?**

Yes, but ... Section II.A.b of the MRI solicitation ([NSF 23-519](#)) lists items that cannot be supported by MRI, which include modifications to facilities and infrastructure (e.g., a plumbing system for helium transfer). We recommend you consider your plans in light of this list and contact the cognizant MRI Program Director (they can be found on the [MRI Program web page](#)) to discuss whether your project falls within the limitations of MRI.

**6. If Track 3 does not fund a research instrument, how does one describe the intellectual merit the equipment provides?**

You should describe the intellectual merit as you would in any other proposal, following the guidance contained in Chapter III.A.2 of the [NSF Proposal & Award Policies & Procedures Guide](#). Your proposed helium recovery would support scientific instrumentation and its scientific objectives, so the intellectual merit would describe how helium conservation would contribute to those objectives.

**7. Is having more operational time available considered part of intellectual merit or broader impacts?**

It depends. Enabling continued and new science in fields typically supported by NSF with the supported research instruments falls under intellectual merit. On the other hand, if having more research instrument operation time increases the number of users, education and training opportunities, usage by industry, and/or for research in fields not typically supported by NSF, these would be examples of broader impacts.

**8. How does the required Management Plan apply to Track 3?**

First, following the solicitation ([NSF 23-519](#) Section III), *“For all helium-related acquisition requests, proposers should request a 36-month project duration, while development requests should request a 60-month project duration; these durations will allow time for reporting of impacts and efficiencies gained.”* Beyond that, the Instrument Management Plan should describe how the project will monitor usage statistics and metrics reporting requirements for helium-related proposals as described in Section VII of the solicitation:

- “Current and anticipated helium expenses and use projections with and without recovery systems installed, including impacts and efficiencies gained;
- The volume and price of helium purchased;

- Changes in pricing and availability of helium;
- Any supply disruptions impacting the availability of helium.”

Additionally, *"Proposals in Track 1 and Track 2 that request support for an instrument that requires the use of helium must describe plans for the conservation, and/or recovery and reuse of helium; ..."* ([NSF 23-519](#) Section II.A).

**9. Are there special reporting requirements for Track 3?**

Yes. Please see Section VII of the MRI solicitation for details.