NOTICE OF FUNDING OPPORTUNITY
NOFOAFRLAFOSR20250004

QUESTIONS & ANSWERS

The following are the questions and answers received. Duplicated questions were only answered once.

Q. Does a grant recipient retain intellectual property rights for inventions discovered within the scope of the project performance?

A. For the purposes of answering the above question, intellectual property is referred to as § 200.315 Intangible Property per the 2 CFR 200.

Intangible property means property having no physical existence, such as trademarks, copyrights, data (including data licenses), websites, IP licenses, trade secrets, patents, patent applications, and property such as loans, notes and other debt instruments, lease agreements, stocks and other instruments of property ownership of either tangible or intangible property, such as intellectual property, software, or software subscriptions or licenses.

(a) Title to intangible property acquired under a Federal award vests upon acquisition in the recipient or subrecipient. The recipient or subrecipient must use that intangible property for the originally authorized purpose and must not encumber the property without the approval of the Federal agency or pass-through entity. When no longer needed for the originally authorized purpose, disposition of the intangible property must occur in accordance with the provisions in § 200.313(e).

(b) To the extent permitted by law, the recipient or subrecipient may copyright any work that is subject to copyright and was developed, or for which ownership was acquired, under a Federal award. The Federal agency reserves a royalty-free, nonexclusive, and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes and to

authorize others to do so. This includes the right to require recipients and subrecipients to make such works available through agency-designated public access repositories.

(c) The recipient or subrecipient is subject to applicable regulations governing patents and inventions, including government-wide regulations in 37 CFR part 401.

(d) The Federal Government has the right to: (1) Obtain, reproduce, publish, or otherwise use the data produced under a Federal award; and (2) Authorize others to receive, reproduce, publish, or otherwise use the data for Federal purposes.

(e)

(1) The recipient or subrecipient must provide research data relating to published research findings produced under the Federal award and that were used by the Federal Government in developing an agency action that has the force and effect of law if requested by the Federal agency in response to a Freedom of Information Act (FOIA) request. When the Federal agency obtains the research data solely in response to a FOIA request, the Federal agency may charge the requester a fee for the cost of obtaining the research data. This fee should reflect the costs incurred by the Federal agency and the recipient or subrecipient. This fee is in addition to any fees the Federal agency may assess under the FOIA (5 U.S.C. 552(a)(4)(A)).

(2) Published research findings mean: (i) Research findings published in a peer-reviewed scientific or technical journal; or (ii) Research findings publicly cited by a Federal agency in developing an agency action that has the force and effect of law.

(3) Research data means the recorded factual material commonly accepted in the scientific community as necessary to validate research findings. Research data does not include any of the following: (i) Preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This "recorded" material excludes physical objects (for example, laboratory samples). (ii) Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and (iii) Personnel, medical, and other personally identifiable information that, if disclosed, would constitute an invasion of personal privacy. Information that could identify a particular person in a research study is not considered research data.

Q. Does a grant recipient retain the right to use the technical data from the project and any invented technology for commercial use?

A. Under 2 CFR 200, specially § 200.315 (intangible property) and 200.316 (Property Trust Relationship), the rights to technical data and inventions developed under a federally funded grant depend on several factors, including the terms of the award and federal agency regulations.

1. Technical Data (Publications, Research results, and Copyrights)

Per § 200.315, the non-federal entity grant recipient) typically retains the rights to technical data, including publications and research results. However, the federal government retains a royalty-free, nonexclusive, and irrevocable right to use such materials for federal purposes.

This means that while the recipient can commercially use and license the data, the government can also use it without paying royalties.

2. Inventions and Patents (Bayh-Dole Act-37 CFR Part 401)

   If a invention arises from federally funded research, the Bayh-Dole Act (incorporated by reference in 2 CFR 200.315) allows the grant recipient (i.e., university, nonprofit, or small business) to retain ownership of the invention.

   However, the federal agency providing the grant retains "march-in rights", meaning it can require the recipient to license the invention to others if the invention is not being commercialized in a way that benefits the public.

   The recipient must also report inventions to the awarding agency and grant the U.S. government a nonexclusive, paid-up license to use the invention for government purposes.

The recipient generally retains the right to commercialize the technical data and technology. However, the recipient must comply with the reporting requirements and allow the federal government to use the intellectual property without additional compensation. If commercialization is not pursued adequately, the government may exercise its march-in rights.

Q. Are grant recipients permitted to seek patent protections for inventions discovered during the project performance?

A. Yes, grant recipients are permitted to seek patent protection for inventions discovered during the federally funded project per 2 CFR 200.315 and must comply to key requirements set forth by the federal government.

1. Ownership and Patent Filing Rights-The grant recipient may elect to retain title to any invention made under a grant.
2. Obligation to Notify the Federal Agency-The Recipient must disclose any invention to the awarding federal agency within two months of discovery. If the recipient elects to retain title, they must notify the agency within two years of disclosure.
3. Government Rights ("March-in Rights")-The federal government retains a nonexclusive, royalty-free license to use the invention for governmental purposes. The government can exercise march-in rights if the invention is not being commercialized in a way that benefits the public.

4. Preference for the U.S. Manufacturing -If an invention is licensed for exclusive commercial use, the license must manufacture the product substantially in the U.S. unless a waiver is granted.

If the recipient chooses not to retain ownership or fails to file a patent within the required timeframe, the federal government can take ownership of the invention and decided whether to patent the invention.

Q: Can a corporate entity be on the grant?

A. Yes, a corporate entity can be on the grant. Please note that the rules of the grant apply to all awards and sub awards. Grants prohibit fee/profit.

Q: Are white papers required?

A: The white paper submission is strongly encouraged but it is not a prerequisite to the full proposal submission. They are required if proposers expect feedbacks on their research idea and technical approaches from the government evaluators prior to the full proposal submission.

Q: Are research consultants permissible on projects?

A: The subawards (including international institute) and consulting fees are permissible direct costs for the full proposal.

Q. Can DoD laboratory agencies be part of the proposal?

A. DoD Service Laboratories are NOT eligible to apply as the lead institution but can serve as an unpaid collaborator.

Q. Are Military Educational Institutions (e.g. USNA, NPS, USMA, USAFA) eligible (to apply)?

A. Military Educational Institutions are NOT eligible to apply as the primary recipient.

Q. Can an FFRDC or National Laboratory be part of the university team for this proposal?

A. Yes, at the subaward level. To further clarify:

Ineligible Entities

None of the following entity types are eligible to submit proposals as primary award recipients under this announcement. These entities may participate at the subaward level.

(1) Federally Funded Research and Development Centers (FFRDCs)

(2) Individual persons or people

(3) Federal agencies (to include Military Educational Institutions)

Q. I am considering to be a PI for a proposal, and I have a green card but I am not a US Citizen. Can I be the PI or is US Citizenship required?

A: You do not need to be a US citizen to be part of this effort. It may pose coordination challenges if non-US citizens propose research efforts on the DoD facilities.

From the Virtual Information Webinar

Q. Do you envision that research conducted under INQS will be fundamental research?

A: The INQS NOFO explicitly "invites proposals for basic research into solid-state qubits for quantum computing".

Q. What type of award instrument do you envision for this NOFO? ie grant vs contract?

A: The INQS awards are grants.

Q. Must the applicant be a US citizen? **Q.** can you confirm what types of institutions are eligible for this NOFO? **Q.** Is a small team of PIs, all based in Europe, eligible to apply for this call? Or is it required or strongly recommended to include a partner from the US?

A: The NOFO doesn't have the requirement for the citizenship and permanent residency. For the complete information, please Section B.1.a on Page 7 of the NOFO.

Q. What are the requirements of the teams applying? Is it possible to have US and non-US partners in a team? **Q.** Can level 1 and 2 be a multi-team and multi-institution proposal?

A: Yes, it is permissible to have US and foreign eligible institutions/organizations on the same team/project. For the complete information, please read the NOFO in its entirety.

Q. If I read the NOFO correctly, federal labs (e.g. NIST) are not allowed to be the primary contractor on a proposal. Is there a way to advertise our interest in collaborating with other

proposers though? Assuming we have overlapping interests. **Q.** Can industrial and national labs participate and/or be lead performers?

A: FFRDCs and Federal agencies are not eligible to submit proposals as primary award recipients. For the complete information, please Section B.1.a on Page 7 of the NOFO.

Q. I understand that funded federal agency support is not allowed in this call - is unfunded federal agency support allowed?

A: We welcome unfunded collaborations with federal agencies. It is neither encouraged nor expected.

Q. Can a single performer be a part of several proposals for INQS? **Q.** Can one be part in multiple proposals? **Q.** Is it possible to be involved in more than one application?

A: Yes, it is permissible for a PI to be on several proposals/teams. It is encouraged that the PI clearly delineates his/her contributions to different projects.

Q. Can the applicant be a postdoc?

A: We advice the applicant to check his/her organization/employer whether he/she is eligible to serve as a principal investigator

Q. Is it encouraged for academic teams to work with industry, and what are the expectations for industrial collaborators, if any?

A: We welcome industrial collaborations. It is neither encouraged nor expected.

Q. May the 'final timeline' be faster than the current one?

A: It is unlikely that the “final timeline” is faster than the ones listed in the NOFO, and we encourage the applicants to check the future update/amendment.

Q. Do you expect to have the same or similar call next year?

A: We anticipate the same or similar call on INQS program for FY26.

Q. Will the full proposals be invited only for selected whitepapers? Or can anyone who submitted a whitepaper can submit a full proposal?

A: The white paper submission is strongly encouraged but it is not a prerequisite to the full proposal submission. They are required if proposers expect feedbacks on their research idea and technical approaches from the government evaluators prior to the full proposal submission.

Q. Can projects fall in between theme 1 and theme 2?

A: The proposers need to select the most appropriate theme/level to apply.

Q. Can you please clarify the Feb 24 deadline versus the Whitepaper deadline?

A: After Feb 24 2025, the inquires/questions regarding whitepapers may be not be answered. The white papers submitted after March 17 2025 may not receive the feedbacks from the government evaluation team.

Q. Is there a white paper template (due 3/17) for Government feedback?

A: There is not a specific format/template for the white paper.

Q. Do we need to express intention before submitting white paper?

A: No, it is not required.

Q. Can an Imagine proposal combine proof of principle experiments with a theory effort?
A: Please follow the guidance for "Imagine" level to address the focus.

Q. Can the same group submit to more than one level?
A: Yes, there is no limits on the number of white papers that one group can submit.

Q. Is speed of a gate important? One can have higher coherence qubit but very slow gate?

A: Please address technical advantages and disadvantages of your proposed approach in your whitepaper/proposal.

Q. Does development of a memory qubit for superconducting qubits qualify for this?

A: Yes, it is suitable.

Q. Can the qubit be a photonic qubit, or is it limited to a solid-state qubit? **Q.** Is photon qubit or atom-photon qubit platforms not at all of interest?

A: This NOFO supports basic research on solid state qubits.

Q. If we plan to try a new approach experimentally, but we don't have simulation results. Which level does this fit?

A: The proposers need to determine the appropriate level for their proposed research effort and must be responsive to the entrance criteria. The government evaluators cannot make the recommendation based on this question.

Q. Should we consider spins in diamond as new or renew qubits?
what are criteria: higher fidelity gates or higher coherence time or both

A: Without understanding the technical approaches, I cannot answer this question satisfactorily.

Q. Do electrons on Neon/Helium constitute a solid state qubit?

A: Yes, electrons on the surface of Neon/Helium do constitute as solid state qubits.

Q. Neutral atom qubits are also excluded? The distinction between sufficiently many neutral atom qubits and solid state qubits can become fuzzy for sufficiently many qubits (?)

A: This NOFO supports basic research on solid state qubits.

Q. Could you clarify more the difference between evolutionary improvement and renew qubits (operation change, etc.)? **Q.** Can you give examples of 'evolutionary' proposals? **Q.** Do you expect one proposal to focus on one specific platform or would it be a plus if a team addresses two platforms with a similar approach?

A: We decline to comment on these specific questions.

Q. Does Microsoft-type qubit fall into new qubits or renew qubit categories?

A: We encourage the proposers to use the information that has been provided in the NOFO, which includes the statement for “Out of Scope” qubits for Theme 1 and Theme 2. Furthermore, proposers are encouraged to review the entrance and exit criteria for each Level.

Q. Can highly scalable cryogenic control/readout integrated with qubit (e.g. fluxonium) be considered

A: This NOFO specifically targets revolutionary approaches to qubits. Classical control and readout systems are out of scope.

Q. Will this program fund efforts aimed at significantly improving the scalability and connectivity of existing solid-state qubits?

A: Without understanding the technical approaches, I cannot answer this question satisfactorily.

Q. Does introduction of new or exotic materials into existing broad qubit archetypes always belong in the "renew" theme rather than "new qubits"?

A: Without understanding the technical approaches, I cannot answer this question satisfactorily.

Q. Can you clarify the distinction between novel and renewal? Would a new qubit encoding but using the same material novel or a renewal? What about the same encoding but new material?

A: We encourage the proposers to use the information that has been provided in the NOFO, which includes the statement for "Out of Scope" qubits for Theme 1 and Theme 2.

Q. Can we talk to the PM about the idea before submitting the whitepaper?
A: We are doing our best to accommodate your questions/requests.

Q. Could you clarify the difference between basic research in this specific goal towards FTQC and the applied research which is not supported?

A: We encourage the proposers to use the information that has been provided in the NOFO, which includes the definitions for basic and applied research.

Q. If you get accepted into level 1 but work quickly, can you repropose into level 2 before the end of the 2-year period?

A: We don't yet plan for this scenario and will work with the performers if this occurs.