Frequently Asked Questions – DEVI Expressions of Intent (EOI)

Note: This FAQ will be updated as needed during the submission process. If you have any questions not listed here, please reach out to energy@schmidtsciences.org.

EOI submission deadline: Friday 14 February, 2025, 11.59pm ET

Informational Webinar: The DEVI team will host two informational webinars on this EOI via Zoom on Monday, 16 December, 2024 at 12 pm ET and Tuesday, 17 December, 2024 at 7.30 am ET. The webinars will be 30 minutes each, and provide an overview of DEVI, information on how to apply to the EOI request, and include time for questions. The same information will be covered in each session. This FAQ document will be updated with recordings of the webinar, slides presented during the webinars and questions asked during webinar sessions.

To register for the webinar on **Monday, 16 December at 12pm ET**: <u>Click Here</u>. To register for the webinar on **Tuesday, 17 December at 7.30am ET**: <u>Click Here</u>.

Office Hours: The DEVI team will offer office hours beginning on Monday, 2 December, 2024. You may schedule a time using **this link**. Please note that many questions may already be answered in this FAQ document.

Teaming Support: To support applicants in building interdisciplinary and multi-institutional teams, the DEVI team can facilitate team formation, if needed. Interested researchers can submit their expertise profiles using **this teaming list** by 31 December, 2024. Please use the link to request targeted introductions or to highlight gaps in expertise you would like to address through collaborations. Note that the teaming list and associate research profiles will be made available (after 31 December, 2024) to researchers signing up for teaming support to enable easy and direct connections based on geography/expertise. If you prefer your details to remain confidential but need teaming support, please reach out to us at energy@schmidtsciences.org.

Schmidt Sciences: Schmidt Sciences, LLC is a 501(c)3 non-profit organization supported by Eric and Wendy Schmidt dedicated to advancing science and technology for positive global impact. You can learn more about Schmidt Sciences at our <u>website</u>.

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Programmatic Questions

1. What is a Virtual Institute (VI)?

Virtual Institutes (VIs) are high-risk, high-impact international networks intentionally formed to pursue timely opportunities to significantly increase our knowledge of interactions between industrial civilization and the Earth system, and apply it for the positive benefit of science or society. VI-supported projects are therefore typically multi-institutional, with one lead institution, a small number of host institutions (2-3 max), and a wider network of partner institutions funded through sub-awards disbursed by host institutions. DEVI is one of five VIs at Schmidt Sciences Climate Institute. Other Climate Institute VIs that the DEVI may interface with are the Virtual Earth Systems Research Institute (VESRI), Ocean Biogeochemistry Virtual Institute (OBVI), and Virtual Institute for the Carbon Cycle (VICC), and the Virtual Institute for Earth's Water (VIEW).

2. What project topics are out of scope for this program?

The scientific focus areas of the DEVI are outlined in the call for EOI provided in the EOI submission portal. EOIs should respond to **each** of the DEVI's targeted opportunities (goals 1-4 in the call for EOI). We are willing to consider projects that are not explicitly covered by these focus areas, as long as they are aligned with DEVI's mission of advancing the understanding and representation of complex interdependencies in decarbonization pathways within computational models. DEVI aims to support transformative research that advances the state of the art in computational modeling of decarbonization. Incremental advances to existing modeling work will be out of scope for this program. Some examples of research topics that will be considered incremental advances include:

- Modeling on a global scale without connecting to specific national or sub-national contexts
- Methods specific to immediate local context without demonstrated broad applicability
- Analyzing specific challenges (e.g. grid transmission) in a country without connecting to other aspects of energy transition
- Application of linear optimization that does not address feedbacks or non-linearities in decarbonization pathways
- Uncertainty assessment limited to sensitivity analysis

If you are unsure whether your project fits within the scope of DEVI, please do not hesitate to reach out and ask us at energy@schmidtsciences.org or sign up for office hours with this.link.

3. What is the expected scope of 'sectoral' and 'economy-wide' projects?

Sectoral modeling projects may focus on understanding and representing interdependencies in specific economic sectors such as industry or transportation at national or regional scales. We expect economy-wide modeling projects that couple sectors and scales to cover all economic sectors (industry, power, transport, agriculture, carbon dioxide removal, households and the built environment) and we encourage economy-wide project teams to situate their modeling efforts in

at least 2 country contexts. Projects that focus on sub-national scales (e.g. states or provinces, urban regions) may be considered if a justification is included on the broader relevance in terms of carbon emissions or related impact.

4. May the plan for proposed work outlined in the EOI be modified at the Request for Proposals (RFP) stage?

Yes; however, we urge project teams to put forward a well-developed EOI. The EOI stage is a critical part of our evaluation. We hope to see a clear indication of the importance and relevance of the research being proposed.

5. If my project is selected, how strictly will we be expected to follow the plan we proposed in the EOI and RFP stages?

While a science plan and roadmap is required in these proposal stages, we anticipate and will be tolerant of surprises and changes in approach based on your initial findings, as one might expect from truly novel endeavors. That being said, the scope of the project should remain commensurate with the initially-requested funding.

6. What project start/end date should we plan for?

We will aim to have DEVI projects start in early 2026. With a five year project span, this would imply an end date of 2031. Please plan for that approximate timeframe, noting that it has some flexibility.

7. Will the selection team be looking for synergies between the selected proposals? Relatedly, do the selected project teams collectively form the Virtual Institute, or is each funded proposal a Virtual Institute in and of itself?

Project teams selected for DEVI will collectively form the one Virtual Institute. In reviewing and selecting proposals, reviewers will consider how the ultimate collection of funded projects contributes to the overall goals of the Virtual Institute. While projects may have different objectives, or specific challenges that they are addressing, we will expect them to collaborate. We will be considering potential synergies between the selected proposals, and will provide additional information at the RFP stage.

8. How will work be integrated across DEVI and how will project teams interact with each other?

Project teams and their work will be integrated with support from the DEVI advisory board and program staff. DEVI staff and advisors will work with project teams to determine helpful integration activities once projects are selected.

Integration and overlap in research activities between projects may take many forms, including:

- Sharing of personnel and expertise
- Sharing of data

- Collaboration to carry out basic work at the interface of data collection and modeling, such as unit conversion, formatting, etc., and to develop productive workflows for data management or analysis (e.g. integration/synthesis)
- Co-design/development of common data platforms and protocols
- Co-design of model structures
- Coordination and co-planning of model validation
- Analytical support
- Co-development of publications
- Co-evaluation of progress towards program goals

Across all DEVI projects, we aspire to facilitate integration via activities such as:

- Convenings
- Early career researcher and community engagement
- Open-access data sharing
- Interaction with other VIs and climate programs, in particular those also relevant to decarbonization planning and action
- 9. Can I submit the same or a similar proposal to DEVI that I submitted unsuccessfully to another Schmidt Sciences Virtual Institute, such as OBVI, VESRI, VICC or VIEW?

Yes, you may submit proposals to DEVI that were previously submitted to another Schmidt Sciences (or Schmidt Futures) program, provided they are within the scope of DEVI.

10. Apart from fundamental science, are there expectations for applied science partners or science communication?

At this stage there are no expectations beyond generating context-specific modeling insights (see goal 4 in the call for EOI document) but we may request more information at the RFP stage for selected proposals.

Team Organization Questions

1. What are Schmidt Sciences' expectations regarding team composition and structure?

We expect demographic, national, and disciplinary diversity within project teams. We also expect project teams to provide opportunities for the participation and development of early career scientists. We strongly encourage collaborative work, particularly through international, multidisciplinary, and multi-institute collaborations.

Research teams based in university, national laboratory, institutes, or multilateral agency settings will all be considered.

2. Will Schmidt Sciences help with creating and assembling multi-institutional project teams?

Yes - we recognize that building interdisciplinary and multi-institutional teams can be challenging. To support applicants in building interdisciplinary and multi-institutional teams, the DEVI team can facilitate team formation, if needed. Interested researchers can submit their expertise profiles using this teaming list by 31 December, 2024. Please use the link to request targeted introductions or to highlight gaps in expertise you would like to address through collaborations. Note that the teaming list and associate research profiles will be made available (after 31 December, 2024) to researchers signing up for teaming support to enable easy and direct connections based on geography/expertise. If you prefer your details to remain confidential but need teaming support, please reach out to us at energy@schmidtsciences.org.

3. Are we able to replace team members if they need to drop off the proposing team?

Yes.

4. Is there a limit to the number of institutions or partners on a project team?

We do not specify a minimum or maximum number of team members or partners. However, we note that VI projects tend to have teams of more than one institution.

5. Can we make additions or changes to the team beyond those listed in the Expression of Intent?

Teams may make significant changes in the team composition/structure from what is originally proposed in the EOI. In the EOI, project team members are to be presented as preliminary suggestions and can be changed at the RFP stage, as well as during the award lifecycle, due to availability and/or fit.

6. Can scientists who don't have a permanent position at the time of submission still act as PI for their institution (assuming that their salary is guaranteed for the project duration)?

Yes.

7. Can one institute submit multiple EOIs?

Yes.

8. Is there any limit on the number of EOIs an individual can be involved in?

No. An individual can be a PI on multiple EOI submissions. An individual PI of one proposal can be a partner or PI on another proposal and serve on multiple EOIs.

9. Is there a minimum or maximum team size? Do PIs have to be a professor or hold a PhD?

There are no restrictions on the number of team members you may include. Prior experience suggests that lead PI duties for a VI project are significant and not to be taken lightly. Teams should identify a single lead PI, but may include multiple Co-Is. We don't have any particular requirements regarding the credentials of the PIs.

10. Do proposals need to be led by or include U.S.-based research centers?

Proposals do <u>not</u> need to be led/coordinated by U.S.-based research centers, and they do <u>not</u> need to include U.S.-based institutions or partners.

11. Can the team contain an industrial partner or a partner from a non-profit organization?

Yes, the team can contain industrial and NGO partners. For-profit companies are eligible to apply as part of a consortium of researchers, academics, and other parties.

12. Can the lead PI be an early career researcher? Is previous experience managing large projects a requirement, or can the team argue for the capacity to succeed without prior experience?

Yes, the lead PI can be an early career researcher. That being said, collectively, each team must demonstrate the scientific ability, relevant expertise, scientific project management experience, and capacity of the PIs and partner institutions to run a large project. We are looking for teams that have the relevant expertise to advance their work. Bringing on someone with that experience would help demonstrate that your team has the capacity to do so. However, please keep in mind that EOIs will undergo a blinded review, and that it will be possible to make additions or changes to team composition after the EOI stage.

13. Can PIs and partners be any nationality?

We encourage submissions from across the globe, and will consider applications for activities within and outside the US. However, ultimately we must be in compliance with applicable law, which is informed by the <u>US Office of Foreign Assets Control</u>.

Financial Questions

1. What level of detail is requested in proposal budgets at the EOI stage? Are detailed cost breakdowns and justifications required?

Detailed budgets are not to be included at the EOI stage; high-level budget information will suffice for the EOI stage, including intended budget items such as salaries, students, staff, and computing. A budget template with further instructions will be provided to those teams invited to submit a full proposal.

We expect projects smaller in scope (e.g. sector-specific context) to have a budget of up to USD 3 million over 5 years and projects that propose multi-sectoral modeling integrating local or sectoral and economy-wide scales may propose a budget of up to USD 10 million over 5 years. Projects with scope between sector-specific (USD 3 million) and economy-wide (USD 10 million) modeling may be considered. Project teams invited to submit a full proposal will be expected to provide a preliminary, more detailed budget of total expenses across all subprojects, and all proposal budgets will be negotiated if considered for finalist award selection.

2. Would funding go directly to one institution which is then responsible for subcontracts, or will Schmidt Sciences distribute the money to each institution within an awarded project?

We prefer the funding to go directly to one institution as this tends to be most efficient. However, we understand that each situation is unique; and if necessary, we can split this up into 2 or 3 awards for a research consortium.

3. Should the budget maximum include indirect costs?

Yes. Schmidt Sciences caps indirect costs at 10%. So, for a \$10M project budget, no more than \$1M of that budget (and for a \$3M project budget, no more than \$300k of that budget) should be taken up by indirect costs.

4. Can student (plus tuition) and postdoctoral support be part of the budget?

Yes, students (including tuition and stipends), postdoctoral, and technical staff support can be included in budgets.

5. Are there any restrictions on what we can use the funding for that we should be aware of?

Restrictions include those limited by law and regulations, including scientific collaborations with those in sanctioned nations.

Beyond that, one of the intentions of this DEVI program is to provide research awards with relatively flexible funds over 5 years. Previously awarded projects in other Schmidt Sciences Virtual Institutes have used these flexible funds to, amongst other things, support graduate students, postdocs, and other scientists; to facilitate conferences, meetings and exchanges between personnel at the collaborating institutions; to obtain software engineering support and cloud computational infrastructure (cloud compute/GPU, cloud storage); and for other standard research expenses. We also accommodate changes in affiliation of personnel over the course of the project.

6. Do you provide computational/data resources?

No, we do not provide additional computational/data resources. Support for these items may be included as part of your project budget.

7. Can a project budget include equipment purchases? Is there a limitation for percent of budget that can go towards equipment/hardware?

Yes, projects can include equipment purchases within the budget.

8. Is there a minimum amount that you will fund for a project?

The projects we support tend to span multiple institutions in multiple countries and our traditional awards have been between 3 and 10 million USD.

Formatting Questions

1. What should be included within the 3-page EOI?

The body of the EOI should be no more than 3 pages in length. The EOI must be written following the template provided in the 'Crafting your proposal' section of the call for EOI document (available in the submission portal).

The EOI should be written in English, with 1-inch margins and include no more than 3 pages of body text typed, single-spaced, and no smaller than 10-point font. <u>Citations may be listed on a separate page</u>; please keep reference citations short.

The EOI should be formatted as a .pdf.

2. Should we include names of PIs or partner institutions in the EOI?

Please do not include any PI, team, or partner names and affiliations in the 3-page EOI. Schmidt Sciences staff will return proposals and ask you to redact any names included in EOI submissions before sending them to reviewers, as we will be setting aside this information during the evaluation process.

Instead, please list the PI, team, and partner names and affiliations separately where requested in the submission form itself.

3. How should we speak to scientific ability, track record and the capacity of PIs to lead without listing PIs names or partner institutions?

In the EOI, please speak to the collective scientific ability, track record, and capacity of PIs to lead in general terms, excluding names or other specific details to the greatest extent possible. We understand that it may in some cases be impossible to do this without revealing identifying details. Some useful examples of anonymizing proposals can be found here, which may provide guidance as you write your EOI. Schmidt Sciences staff will ultimately redact any identifying information that you include in EOI submissions (in the section on teams, as well as in any reference citations) before forwarding them to reviewers. We would like to understand the collective expertise and diversity of perspectives that your team may bring to the DEVI while preserving our blinded review process.

In the EOI submission form, you will have the opportunity to provide names of any team members that you would like to list.

Other Questions

1. What is the review process for the EOIs?

The anonymized EOIs will be sent for a blinded evaluation by a committee of external reviewers, the advisory board, and Schmidt Sciences staff.

2. What criteria will the proposal be evaluated on?

Proposals will be evaluated in the following categories:

- a. Significance of the challenges identified and addressed in the proposal
- b. Innovation of the solutions provided
- c. Potential impact of the proposed work to science and society
- d. Feasibility and technical merit of the proposed approach
- e. Collaborative approach

3. Can you provide reviewer feedback from the EOI review to project teams?

Unfortunately, we cannot share specific reviewer feedback for equity and confidentiality purposes.

4. How many teams will be invited for full proposals?

The number of teams invited to submit full proposals is dependent on the number and quality of EOIs we receive. As a rough estimate, we intend to fund up to four DEVI projects this year with an expected budget between \$3 to \$10 million budget for each project (depending on the scope of the project), with more to potentially follow in future years.

5. Where can I find more information about Schmidt Sciences?

Please see common questions about Schmidt Sciences, a 501(c)3 nonprofit of Eric and Wendy Schmidt, here.