

Carbon Neutrality Acceleration Program 2020 Request for Faculty Research Grant Proposals

Letter of Intent (Required): September 14, 2020

Proposal Deadline: November 2, 2020

The Graham Sustainability Institute's [Carbon Neutrality Acceleration Program](#) offers support for faculty across the University of Michigan (U-M) to pursue innovative and actionable carbon neutrality research. Through novel collaborations across disciplines and with partners poised to advance net zero strategies, we seek to amplify and expand the university's research impact and fuel the breakthroughs needed to combat climate change.

Faculty Research Grants represent a critical component of the program and are intended to support the exploration of new ideas and the advancement of existing work to achieve significant impact in carbon neutrality¹ research and application.

[Grant Overview, Objectives & Research Topics](#)

Faculty Research Grants are intended to target research that has high intellectual value and strong potential for real-world impact. This support may be used as seed funding to develop and pilot new ideas (Objective 1) or to take existing research to the next level (Objective 2), and in either case may include engagement with external (non-academic) partners to inform the research and propel action. We seek to make awards across both eligible project objectives.

Additional program aims include fostering novel interdisciplinary and multisector collaborations among U-M faculty and stakeholders; supporting faculty from diverse units, disciplines, and career stages, including faculty who are new to carbon neutrality research; and providing meaningful opportunities for U-M students.

Eligible Objectives

Proposals must provide an actionable plan to achieve *at least one* of the following eligible objectives.

Objective 1: Developing New Ideas - These early-stage projects explore new ideas and collaborations, and advance work to the point where it can attract external funding.² Potential activities include, but are not limited to: preliminary data collection and analysis, including secondary data analysis; pilot studies; proofs-of-concept; team-building, partnership-building and project-planning activities; and development of clear and actionable plans to pursue external funding.

Objective 2: Amplifying and Advancing Research - These projects build on a solid foundation of existing research, taking the work to the next level or expanding it in a transformative way. The proposed scope of work must be distinct from prior or existing research projects. Potential activities include, but are not limited to: implementation, scale up or transfer of existing research ideas; the integration of different disciplinary approaches; engagement with external stakeholders (or a

¹ Carbon neutrality, or net zero carbon emissions, refers to achieving zero net anthropogenic carbon dioxide emissions through a balancing of carbon emissions and carbon removal. The concept can be extended to include all anthropogenic greenhouse gases, which is referred to as climate neutrality or net-zero emissions. We use these terms interchangeably in this RFP.

² CNAP recognizes that funding patterns vary across disciplines and securing external funding will be of greater significance to certain fields.

broader set of stakeholders) to put research ideas into practice; and initiation of a large cross-disciplinary collaboration expected to lead to substantial external research funding through multi-investigator or center types of grants.

For either objective, teams are encouraged to engage with external, non-academic partners (from business, government, communities, non-governmental organizations) to inform the research ideas, in the conduct of the research, to put research ideas into practice, and/or as part of the findings dissemination.

Research Topics

Projects may span the physical, natural, engineering and social sciences, as well as arts and humanities, and are open to a wide range of topics, sectors, methods and geographies. While incremental reductions in net emissions are important, we are most interested in projects that explore and advance scalable strategies with the potential to radically accelerate low-carbon transitions. Possible topics include, but are not limited to:

- technology application and adoption, policy and politics, economics, finance, land use, behavior change, and social justice;
- approaches that lend themselves to scalability, particularly with engaged partners in the Great Lakes region;
- key gaps, questions, and transferable strategies emerging from the [President's Commission on Carbon Neutrality](#); and
- learnings from the COVID-19 crisis that can inform pathways to carbon neutrality.

Funding Amount and Project Duration

Awards will range between \$60,000 and \$300,000 (direct cost) for a project period up to 2 years. The budget range and project duration are intended to meet the needs of projects from different disciplines and with different objectives, and to allow researchers to explore new ideas or directions in research rather than plugging gaps in existing work. In general, budgets closer to \$300,000 are expected to be most appropriate for projects that involve multiple investigators from different disciplines and units and Objective 2 projects (Amplifying and Advancing Research).

Eligibility

Proposed projects must be led by a U-M researcher or faculty member from the Ann Arbor, Dearborn or Flint campus who is eligible to serve as a U-M Principal Investigator (PI).³

Preference will be given to interdisciplinary projects with investigators from distinct disciplines and from multiple U-M academic and/or research units.⁴ Faculty new to carbon neutrality research or for whom the proposed work represents a new research direction are encouraged to apply.

A faculty member or researcher can be listed as a PI on only one proposal, but may be listed as a PI on one proposal and a Co-I on another proposal or a Co-I on up to two proposals. Collaborators from other academic institutions are permitted, but cannot receive funding from the program. Funding can be used to support non-academic partners/collaborators on engagement-focused projects.

³ The definition of a U-M PI can be found at <http://orsp.umich.edu/principal-investigator-pi>.

⁴ Refer to the U-M faculty handbook (<http://provost.umich.edu/faculty/handbook/3/3.1.html>) for a list of academic units. Refer to the websites of the U-M Office for Research (<https://research.umich.edu/umor-units-and-initiatives>) and Office of the Provost (<http://www.provost.umich.edu/units/institutes.html>) for lists of research units.

Key Dates

Date	Activity
Friday, July 17, 2020	Request for proposals (RFP) released
Monday, September 14, 2020	Mandatory letter of intent (LOI) due
Monday, November 2, 2020	Proposals due
February 2021	Funding notifications
March 1, 2021	Anticipated project start date

Supporting Documents

All supporting documents can be found at the grant opportunity webpage:

www.graham.umich.edu/carbonneutrality/apply

Letter of Intent Requirements

Applicants are required to submit a brief Letter of Intent (LOI) by 11:59 p.m. EDT on Monday, September 14, 2020. Proposals submitted without first submitting an LOI by this deadline will not be considered.

The LOI is not binding but is required to submit a full proposal. The primary reason for its use is to help gauge the size and range of the competition in order to guide the recruitment of reviewers. Program staff may initiate discussions with applicants based on information provided in the letters; however, applicants do not need an invitation to submit a proposal.

LOIs should be provided as a single pdf file that includes the following information:

1. *Principal investigator* – Name and contact information
2. *Planned team members* – Names and institutions. Team members may be added or removed at the proposal stage, but the PI should remain the same.
3. *RFP objective* – Indicate the primary [RFP objective](#) the proposed work will address.
4. *Project summary* – Provide a 250-word description of the proposed project including the barrier or opportunity the project proposes to address, the project's objectives, planned outputs, and anticipated outcomes. The project's relevance for accelerating low-carbon transitions should be clear.
5. *Potential reviewers* (optional) – Provide a list of 2-3 qualified technical reviewers you anticipate could review the proposal. This list may be updated at the proposal stage. It is at the discretion of the program staff whether or not these suggestions will be used.

To submit an LOI, access the application page by clicking the "Begin your application" button on www.graham.umich.edu/carbonneutrality/apply. Once you have logged in, enter the team information into the online form, upload your LOI as a single PDF, and save your application. All entries in the form can be updated at the proposal stage.

You will receive a confirmation email when you have successfully saved your LOI. You may continue to edit your LOI submission by updating the form fields and uploading revised PDFs until the deadline. Your saved LOI will be submitted automatically at 11:59pm EDT on September 14, 2020. If you do not receive a confirmation email, your LOI was not saved properly and you should resave or contact us directly at graham-cnap@umich.edu. Your LOI confirmation email will include a unique URL specific to your application. **Save this email – you will need this URL and login credentials to submit your proposal.**

Proposal Requirements

Proposals must be submitted by 11:59 p.m. EST on Monday, November 2, 2020. Only applicants who have submitted an LOI will be eligible to submit a proposal.

Proposals (cover sheet, project narrative, and appendices) must be submitted as a single PDF file using 12-point Times New Roman font, with no less than single spacing and one-inch margins, and organized using the headers below. Except where noted, proposals should use clear writing appropriate for non-specialists and make a strong case for the importance of the project to reviewers outside the discipline.

Cover Sheet

1. *Project title*
2. *Principal investigator* (primary contact for project) – Name, title/position, U-M unit, telephone, mailing address, and email address
3. *Additional team members* – Name, title, and institution/organization
4. *Budget request* – Total request must fall within the range of \$60,000 to \$300,000.
5. *Project duration* – Projects should start no earlier than March 1, 2021 and end no later than February 28, 2023.
6. *Project summary* – Provide a 250-word summary suitable for a non-technical audience that describes the barrier or opportunity the project proposes to address, the project's objectives, planned outputs, and anticipated outcomes. The project's relevance for accelerating low-carbon transitions should be clear.

Project Narrative

Narratives should not exceed 7 pages (including figures and tables, excluding appendices) and should be organized using the following headings. Approximate suggested page lengths are provided.

1. *Problem Statement & Project Objective (1-1.5 pages)*
 - a) Provide relevant context for this work and a clear description of the carbon neutrality barrier or opportunity the project proposes to address.
 - b) Specify which of the [eligible RFP objective\(s\)](#) you seek to achieve. For Objective 1 proposals, explain how the proposed work will allow you to develop innovative ideas or approaches. For Objective 2 proposals, explain how the proposed work is distinct from and represents an innovative and significant advancement of existing research.
2. *Outputs and Outcomes (1-1.5 pages)*
 - a) List and describe the planned outputs and anticipated outcomes, clearly distinguishing between the two. Refer to the guidance at the end for definitions and examples.
 - b) Be sure to explain how the work will advance scholarship. If applicable, explain how the proposed activities will contribute to the development of a more competitive proposal to outside sponsors. Identify prospective funders, how the proposed research topic fits with their priorities, and a timeline for submission.
 - c) Be sure to describe the connection between the anticipated outcomes and real-world impact. That is, describe how the project will contribute to approaches, interventions, programs and/or policies that advance carbon neutrality.
3. *Project Approach (3-4 pages)*
 - a) Describe how the team will implement the proposed activities. This should include the core research question(s), methods, and data sources. Technical language suitable for experts in

- the sub-area of the research is appropriate. Include plans for dissemination. Be sure to use consistent language between the narrative and the activities/outputs listed on the timeline in the appendix.
- b) For projects that include engagement with external (non-academic) stakeholders, the description should clearly identify partners and their role in the work, including opportunities to provide input and feedback to shape the research and the outputs.
 - c) Describe how the team will evaluate the implementation and outcomes of the project, including clear and appropriate measures of success. Teams are encouraged to consider how they can use evaluation to improve the project as it unfolds and inform future work. Refer to the guidance at the end for additional details.
 - d) If applicable, explain how the project will create opportunities for U-M students.
4. *Project Team (0.5-1 page)* – Briefly identify and describe the role/contribution of each team member (tables can be used effectively for this purpose) and explain how your team is uniquely positioned to deliver results. If applicable, describe how the team will integrate insights from multiple perspectives (e.g., disciplines, UM units, sectors) and why that is necessary to address the issue and achieve the intended outcomes.

Appendices

1. *References (up to 2 pages)*
2. *Proposal approval form (PAF)* – Complete the [PAF](#) available on the grant opportunity webpage. **Signatures of the department/unit head and the dean or director of the college/school/unit are required.** Please allow time to route this form for signatures according to the policies and procedures in your campus unit.
3. *Timeline* – Using the [timeline template](#) identify start and end dates for the proposed work and list significant tasks and outputs, connecting directly to those identified in the narrative. Projects should start no earlier than March 1, 2021 and be completed no later than February 28, 2023.
4. *Budget* – Provide an itemized budget for the overall project using the [budget template](#) found on the grant opportunity webpage. The budget may be divided among years according to the needs of the project but the total may not exceed \$300,000. Funds may be used to support normal research expenditures. Equipment purchases over \$5,000 are discouraged. **No indirect costs will be allowed.** Include a separate budget for each subcontract using the same budget template.
5. *Budget narrative* – Provide a budget narrative to justify expenses in all budget categories. Personnel costs must be broken out by individual and include number of months and percentage of time requested. A separate budget narrative is required for each subcontract.
6. *COVID-19 contingencies (up to 1 page)* – Describe potential adjustments to the project plan that may be required due to COVID-19 related impacts. This does not need to be extensive or detailed, but it should highlight where the team has proposed approaches robust to potential impacts and identify critical project elements that may need to be adjusted to deliver the proposal outputs and outcomes. You may find it helpful to consider a low-impact scenario (i.e., social distancing guidelines, some campus/laboratory restrictions) and high-impact scenario (e.g., shelter-in-place requirements, campus/laboratory closures, severe travel restrictions). Elements may include project scope, overall timeline, types and/or timing of activities. Building in buffer and mechanisms for being flexible and adaptive is encouraged.
7. *Resumes* – Include a brief (2-page) CV for each team member (PI, Co-Is, and any senior project personnel).

8. *Related research* – Use the [related work template](#) found on the grant opportunity webpage to provide a combined list of all current and pending projects relevant to this proposal for all investigators on the team.
9. *Reviewers* – Include a list of 2-3 qualified technical reviewers who could review the proposal. You may also list up to 3 persons you would prefer not review your project and indicate why. Whether or not these suggestions will be used is at the discretion of the program staff.
10. *Other supporting documents (optional, 3 pages maximum)*

How to Submit Your Proposal

To submit a proposal, use the unique URL to log in and access the application created when you submitted your LOI. Note that the login credentials must be the same as those used to submit the LOI. Review and update the team information as needed in the online form, then scroll down towards the end of the page to the proposal upload field, upload your complete proposal, and click on the "save" button.

You will receive a confirmation email the first time you successfully upload and save your proposal. The email will include a link you may use to return to your application and make edits (the same link you received after submitting the LOI). If you do not receive a confirmation email, your proposal was not saved properly and you should resave or contact us directly at graham-cnap@umich.edu. Your saved application will be automatically submitted at 11:59 p.m. EST on Monday, November 2, 2020. You will not receive a second confirmation email at that time.

Review Process & Evaluation Criteria

Review Process

Proposals meeting the minimum requirements will be matched to experts from U-M and other institutions with knowledge of the research area who will conduct written reviews according to the evaluation criteria listed below. A subset of the experts conducting the written reviews will form an interdisciplinary review panel that will convene to discuss the outcomes of the written reviews and make recommendations for funding. Final awards will be determined on the basis of the panel's rank order recommendations and program goals.

Evaluation Criteria

1. *Project approach* – The extent to which the plan for carrying out the proposed activities is well-reasoned, well-organized, sufficiently-detailed, and technically sound, and incorporates a mechanism to assess success.
2. *Project team* – The degree to which team has adequate expertise, experience, and well-defined roles to complete the proposed work. If applicable, the extent to which the proposal provides evidence of the team's ability to work together in an interdisciplinary/multisector fashion and the likelihood that the proposed interdisciplinary/multisector approach will yield new insights into the problem being addressed.
3. *Feasibility* – The likelihood that the work plan will be achieved within the project period and proposed budget.
4. *Research significance* – The overall significance and scientific merit of the work, including the extent to which the project will advance knowledge and understanding within the research field(s) involved, stimulate additional research, and/or enhance the scholarly distinction of the University.

5. *Potential impact* – The potential real-world impact of the approach or issue in advancing the transition to carbon neutrality.

Award Conditions

A summary of award conditions is shown in the bulleted list below. Full awards terms and conditions will be provided upon selection notification.

- Recipients will submit brief semiannual written progress reports, participate in two phone check-ins annually, and submit a final report no later than 30 days following the end of the award period. Report guidance will be provided.
- Recipients will participate annually in a Carbon Neutrality Acceleration Program sponsored event to share findings.
- Publications, presentations of results, and formal project communications (e.g., press releases, social media, etc.) arising from work supported by this grant should acknowledge the University of Michigan Graham Sustainability Institute's Carbon Neutrality Acceleration Program.
- Recipients will notify program staff if a significant outcome of this grant award is realized at any time (e.g. grant submissions, acquisition of a grant, publication of a significant piece of work, an invention, a key creation or performance, etc.).
- Recipients will respond to program surveys about project details and the impact of funding and staff support.
- If invited, recipients agree to serve as a reviewer for a subsequent grant cycle.
- Recipients certify that the appropriate compliance offices on campus (e.g., IRB) will be made aware of the proposed activities before initiating any work.
- No-cost extensions may be granted if justified, but prior approval must be sought. Changes in scope or budget must also be sent to program staff for prior approval. Guidance for these requests will be provided.
- Award amounts are final. Overruns and disallowances are the responsibility of the individual recipient and academic unit. At the end of the project period, unexpended funds will be returned to the Graham Sustainability Institute.
- Faculty may not retain the award if they leave the University of Michigan.

Additional Project Support

All awardees will receive additional support from the Graham Sustainability Institute during the project period. Check-ins with Graham staff will identify roadblocks, facilitate solutions, and connect teams with additional resources, including other funded teams. In addition, Graham staff will assist teams in developing translational materials and leveraging relevant university communications resources to support knowledge dissemination and impact.

Diversity, Equity & Inclusion

At the Graham Sustainability Institute, our dedication to academic excellence for the public good is inseparable from our commitment to diversity, equity, and inclusion. Our mission of engaging, empowering, and supporting faculty, staff and students to foster sustainability solutions includes ensuring that each member of our community thrives. We believe that diversity, equity, and inclusion are key to empowerment, and the advancement of sustainability knowledge, learning, and leadership.

Further Information and Program Contact

Questions: Questions should be directed to Maggie Allan at maallan@umich.edu or 734-763-0749.

Guidance

The following offers detail and clarification regarding key terms used in this RFP.

Project Outputs and Outcomes

Project **outputs** are specific products created or services delivered during the project or upon its completion. There may be several outputs associated with a project. Project teams are strongly encouraged to include plans to publish and disseminate results in peer-reviewed literature and more broadly. Example outputs include, but are not limited to:

- workshops;
- scientifically produced datasets and analyses;
- a refined research question informed by preliminary data collection;
- publications, presentations or other scholarly work;
- a grant proposal for (or a detailed and actionable strategy for pursuing) continued funding; and
- translational products that support dissemination of findings and/or decision-making such as white papers, guides, briefs, op-eds, factsheets, social media, or local media engagement.

Project **outcomes** are the expected impacts of the project process and outputs; there may be several outcomes associated with a project. Outcomes can occur over the short- or long-term. They include how the work will change or influence knowledge, behavior, practices, procedures, or policy to advance sustainability. Proposed project outcomes should include at least some of the following:

- advancements in understanding;
- new or strengthened collaborative relationships;
- maximized faculty competitiveness for external funding through clear and actionable plans to pursue funding;
- additional capacity among external partners to advance carbon neutrality.

Evaluation

Applicants are encouraged to design their evaluation to be useful by considering who will use the results and for what purpose. For instance, evaluations can help project teams improve the project, communicate results, or inform future work, and they can support external partners' decision-making.

Proposals should describe initial plans for assessing both project implementation and outcomes.

- Implementation evaluation – assesses the extent to which the project is functioning as planned, measures what and how much was accomplished (e.g., outputs), and identifies major challenges and successful strategies
- Outcome evaluation – focuses on outcomes, including unintended effects, to judge the overall effects of a project.

Specifically, proposals should identify overarching evaluation questions (i.e., which aspects of implementation and outcomes will be assessed), the general method(s) for answering those questions, and clear and appropriate measures of success. Recognizing that project evaluation efforts and reporting will be completed during the project period, a focus on outputs and short-term outcomes is expected; however, applicants should consider how longer-term outcomes and impacts to which the work contributes could be assessed. In addition to evaluation at the end of the project, applicants are strongly encouraged to include a formative evaluation or feedback component during the project to allow adjustments to improve the project design and implementation.

Measures of success

Measures (indicators or metrics) of success are specific and observable accomplishments or changes that show the effect of the project. They may be quantitative or qualitative, and they may focus on the extent to which an anticipated output/outcome is achieved or the quality of the processes leading to that output/outcome.

Scholarly work

Activities (publications, presentations, creative works) which disseminate project outputs and outcomes, and advance U-M faculty scholarship.