

. Innovation[X] 2021-2022 Proposal Application

The School of Innovation and Innovation Partners are calling for proposals for the next round of our Innovation[X] Program, which provides grants that allow multidisciplinary teams of faculty, undergraduates, graduate students, and postdocs to work together to address complex real-world challenges.

Faculty may apply for grants of up to **\$20,000** to facilitate year-long projects. The number of grants to be awarded will depend on funding and application levels. Funding begins September 1, 2021.

Additionally, we have partnered with the Mays Innovation Research Center to fund a set of proposals to study the process of innovation itself. Successful proposals for this subset will pursue topics such as, barriers to or preconditions for innovation, the effects of law and policy on innovation, the behavior or psychological requirements for innovation, innovation and health, the social impacts of innovation, international comparisons of innovation, or novel measurements of innovation.

Proposals are due by 11:59 PM on our **newly extended** deadline of **February 22, 2021** and must be submitted using this online form.

NOTE - Only one team leader/faculty member needs to submit a proposal for a given project.

Reminder of Requirements:

- Teams must consist of an interdisciplinary set of faculty members, and must include two (2) faculty members from different colleges/schools.
- Teams must include a multidisciplinary team of 10-20 students, both undergraduate and graduate, from across the university.
- At least 8-10 of these students must be undergraduates.
- The team must include students from at least two (2) different colleges/schools.
- Students must participate in the project for both Fall 2021 and Spring 2022 semesters, with limited exceptions.
- Proposals should demonstrate a team-based approach to a complex problem and include meaningful deliverables.

Please contact Assistant Director Emily Finbow at innovationx@tamu.edu or 979-862-6071 with questions.

. For which tracks would you like your proposal to be considered?

- Track A - Traditional Innovation[X] Project
- Track B - Special Track - "Process of Innovation" Innovation[X] Project
- Both Track A and Track B

. Project Title

Innovation for sustainability: Outlining opportunities to transition Texas A&M to carbon neutrality

. Please provide the following information for the Primary Point of Contact for the Project (Project Leader)

. Prefix

Dr.

. First Name

Tazim

. Last Name

Jamal

. Email Address

tjamal@tamu.edu

. Phone Number

979-845-6454

. Gender Identity

- Man
- Woman
- Trans Man
- Trans Woman
- Genderqueer
- Non-Binary/Gender non-conforming
- Not listed above, please specify
- Prefer not to respond

. Ethnic and Racial Identity

- Hispanic/Latino/a/x
- American Indian or Alaska Native
- Asian/Pacific Islander/Desi-American
- Black/African American

- White
- Bi-racial / Multi-Racial (please specify):
- Not listed (please specify):
- Prefer not to respond

. *Project Information*

. Please provide brief background/context for the issue this project seeks to address. (2,000 character maximum)

Global emissions of greenhouse gases (GHG) have remained high (~10 Gt carbon per year). At the current GHG emission rate, the goal of avoiding global warming near or below two degrees Celsius before the end of the century will not be achieved despite sustainability efforts undertaken by governments, corporations and the public at large. At Texas A&M, progress has been made in reducing Scope 3 emissions (Utilities & Energy Services (UES), 2019 GHG Emission Inventory), mostly via outreach and engagement with the university community to increase campus sustainability. However, the university's dominant carbon emissions arise from systemic Scope 1 and 2 emissions related to fossil fuel consumption directly related to on-campus electricity and heat generation by the campus' co-generation gas power plant, and purchased electricity from third party fossil fuel power generators. Even though TAMU has a highly efficient power plant, purchased electricity originates primarily from coal and natural gas sources with a GHG emission rating of 4.2/8 on the STARS scale. While TAMU plans to purchase 50 MW of renewable energy in 2022, more sustained efforts to reduce carbon emissions are needed, e.g., via alternative transportation fuels. Moreover, the university apparently has no tangible plans to use renewable energy on campus despite a high potential for solar generation. Concerted actions are needed to advance GHG emission reduction and energy transition away from fossil fuels. We aim to advance interdisciplinary approaches for engaged student learning and empowerment to mobilize TAMU's technological and human resources for sustained action toward a carbon neutral TAMU. Involved students and faculty will critically engage with existing sustainability efforts to innovate and enable systemic change across campus. Collaborative teams will work closely with UES, the Office of Sustainability, diverse campus students, faculty, staff and other stakeholders, to mobilize TAMU's potential.

. What are the goals for this project? (5,000 character maximum)

We aim to reduce carbon-intensive consumption on the main campus by engaging with students in interdisciplinary teams to design innovative solutions for sustained and timely action to mitigate and adapt to the negative effects of climate change. Teams of students from different Colleges will engage collaboratively with key stakeholders. Students will use existing data and resources to propose solutions to minimize the adverse effects of climate change (adaptation). They will develop various innovations and promote vital sustainability initiatives in coordination with the TAMU Office of Sustainability and TAMU Utilities (UES). The students' initiatives and innovations will facilitate the adoption and attainment of the Scope 3 goals, the 2018 Sustainability Master Plan and the 2020 Energy Action Plan, including a 50% reduction in greenhouse gas emissions per weighted campus user by 2030, with an eye toward net-zero emissions by 2050. Students empowered and enriched by inclusive, diverse knowledge can contribute actively to help bridge science and policy, engaging key stakeholders, including campus administrators, to advance innovations that would situate TAMU and Texas as leaders in GHG reduction strategies. The project can also contribute to climate justice through the innovation of products and processes, creativity, collaboration, and cross-disciplinary research activities. We aim to address both energy efficiency, resiliency, and GHG reduction initiatives. Student teams will work closely with the Energy Stewardship Program (ESP) and Energy Performance Improvement (EPI) program to educate themselves and campus constituents about energy efficiency. The ESP has a team of Energy Stewards and a supervisor responsible for closely monitoring and managing the campus energy consumption on a daily basis. This team relies on the data from the campus' comprehensive metering system to measure the energy consumption of buildings and to make changes when necessary. The EPI program engages and incentivizes building occupants to take action to reduce energy consumption. Several goals are being proposed as part of the initiative as outlined below, addressing Scope 1 (direct CO2 emissions by Texas A&M), through Scope 2 (indirect CO2 emissions caused by Texas A&M due to its operations) to Scope 3 (indirect CO2 emissions by Texas A&M through its activities and employees) emissions. The overall goals are as follows: (1) Generate and implement innovative ways to tackle Texas A&M's scopes 1, 2 and 3 emissions reductions to make TAMU a carbon neutral institution of higher learning via • Student involvement in inter-college activities through cross-campus collaborative teams (ARCH, GEOS, ENGR, BUSH) • Student-led, faculty-guided design teams to envision 2030, 2040, 2050 stages toward a carbon neutral campus • Student engagement with university leadership to facilitate strategic action, and to implement product innovations and strategic processes. (2) Empower students through engaged learning and knowledge sharing to actively develop creative, collaborative, interdisciplinary innovations towards a carbon neutral TAMU. An important aspect here is mobilizing TAMU's expertise in engaged student learning to facilitate critical thinking using techniques like design thinking to facilitate boundary-spanning, inclusive, diverse students and diverse knowledge domains. For example, Texas A&M scenario analysis tools including the Energy Portfolio Assessment Tool (EPAT) and Water-Energy-Food (WEF) Nexus Tool 2.0 could be deployed by a student team to evaluate the sustainability of different campus energy portfolios, through quantifying CO2 emissions and water usage, among other metrics. (3) Aim for synergies, systemic change, and feasible, fundable outcomes through direct student involvement individually and in classes. For example, the film Wasted illustrates food waste-climate change connections; a curricular unit framed around this, setting a collaborative class project/design team/charette around designing solutions, will directly enable student participation in the process of solution generation. Creative idea generation will aim for structural change, e.g., reducing/eliminating plastics by identifying/innovating 'sustainable' containers, compostable utensils, and tackling the inevitable 'who pays' funding challenge. Outputs may synergistically complement other campus food waste collection and composting initiatives.

. What are anticipated outcomes from this project? (e.g., publications, website, app, data collection for further research/grant) (2,000 characters maximum)

Students and Team Leaders will jointly study the potential impacts of the following interventions to reduce CO2 emissions: Scope 1 emission reductions - mitigation and adaptation • Interdisciplinary teams will study the potential impacts of the implementation of “green technologies” on the campus carbon footprint • Student team to study sustainable electricity on campus, e.g. ◦ solar power to shade parking lots, aid in rainwater harvesting ◦ solar power on selected campus buildings to offset power requirements • Student team to study alternative/biogas sources, e.g. ◦ on-campus biomass digester study to produce biogas for the co-gen plant ◦ Study the possibility of building a pipeline to use BCS landfill gas in co-generation plant Scope 2 emission reductions - mitigation • student team to identify strategies for ‘green’ electricity purchasing • student team to advance building energy efficiencies through collaboration with UES on ESP and EPI programs • student team to study xeriscaping on campus to reduce water-waste and nitrous oxide emissions by converting the A&M campus’ excessive lawn areas Scope 3 emission reductions - mitigation and adaptation • Green Event team and classes develop a “Green Event” planning and implementation framework, undertake “green” transformation of 4 RPTS student-organized events on campus (e.g., RPTS Spring Graduation Banquet) focusing on waste reduction (food waste, plastics, packaging), plus initiate outreach for engaging and empowering Student Organizations to undertake waste reduction at their events. Outputs will pave the way to address “Green Events” in the STARS report. • Charettes and Student initiated energy conservation competition (spring ARCH Hackathon) designing fact sheets, game/apps, other innovations to understand and engage with campus carbon emissions. • Model code (model green energy overlay zone) that may be used by local governments to incentivize use of green technologies and facilitate synergies with TAMU.

. Is this proposed project an extension of existing work or a new endeavor? (1,200 character maximum)

This is a new endeavor engaging several colleges and students to advance toward a carbon neutral campus. The main aim is to reduce fossil fuels consumption and GHG emissions at the main TAMU campus. Interdisciplinary student teams and classes will examine existing initiatives and innovate new strategies and prototypes for advancing building efficiency, green energy options, waste reduction. Some are noted in the intended outcomes section, and include identifying feasible strategies and funding options to advance to administrators and key stakeholders. As befitting wicked problems like climate change, accomplishing these aims involves adopting engaged learning approaches like transformative learning and design thinking to facilitate creative, critical action for sustainable solutions. Our warming planet calls for courage to inclusively, innovatively, harness our technologies and serve the public good before our societies and species experience a tipping point. The recent winter storm in Texas shows the importance of proactive action and this project will showcase TAMU’s ability to take leadership in mitigating future weather and climate disasters.

. Is Institutional Review Board (IRB) approval required for this project?

Individuals on the team will submit separate IRB applications for the portions of the activities that seek to collect human subjects data.

. *Team Participants*

. Please list all Team Leaders below (including yourself), including Prefix, Name, Title, and Department/School.

Gunnar Schade, Associate Professor, Atmospheric Sciences, College of Geoscience Jorge Alvarado, Professor, Engineering Technology and Industrial Distribution, College of Engineering Tazim Jamal, Professor, Recreation, Park and Tourism Sciences (RPTS), College of Agriculture Dawn Jourdan, Professor and Executive Associate Dean, College of Architecture Sarah Gatson, Associate Professor, Sociology Kelly Wellman, Director, Office of Sustainability Bassel Daher, Assistant Research Scientist/ Adj. Assistant Professor, Energy Institute/ BAEN, Energy-Water-Food Nexus specialist

. Do any of the team leaders listed above have plans for a sabbatical or other extended leave away from campus during the 2021-22 academic year? Note: Selecting “yes” will not automatically disqualify a team, but rather will indicate that we need to have a discussion with your team about the nature of the planned leave in relation to the project.

Yes. Dr. Gunnar Schade will be on leave in Fall 2021. He has kindly offered to distance advise students as needed during this period. Dr. Jourdan has applied for sabbatical leave in Fall 2021. Given the extension of Dean Vanegas’ term, it is possible that this sabbatical will be delayed more than one year.

. Please list all Team Contributors below, including Name, Title, and Department/School. *Please exclude anyone you already listed as a Team Leader.*

Susan Scott, Associate Department Head, Lecturer and Internship Coordinator, Dept. of Recreation Park and Tourism Sciences, College of Agriculture
Dr. Stephen Caffey, Associate Department Head / Coordinator of MS and PhD Programs Department of Architecture, College of Architecture Sai Brindha
Kapalayam V.S. (Utilities & Energy Services) Dr. Jonan P. Donaldson, Postdoctoral Research Associate, Center for Teaching Excellence, TAMU Dr.
Leslie Ruyle, Associate Research Scientist and Assistant Director of the Scowcroft Institute of International Affairs, The Bush School of Government and
Public Service

. Do you plan to assign someone other than a faculty leader as a “project manager” for your team (i.e., a graduate student, postdoc, staff person)?

- Yes
 No
 Not sure yet

. What would be the ideal composition of team members for this project? What majors, disciplines, skills, backgrounds, or perspectives would you like to have on the team? (2,000 characters maximum)

Close coordination and collaboration between physical and human sciences (Weber’s Naturwissenschaften and Geisteswissenschaften) is integral to enable an interdisciplinary (some might argue post-disciplinary) approach that transcends historically entrenched dualisms and facilitate student engagement to creatively and critically advance carbon neutral actions and initiatives. Innovative learning approaches that facilitate such interdisciplinarity are aimed at co-constructing knowledge, strategies, solutions, through co-constructed action-oriented learning. An “ideal” team gathers these innovative perspectives, and given the limited grant funds, we have endeavored to develop a preliminary representation of these principles in the rich mix of our team members. Our Team Members and Team Contributors therefore include key colleges (ARCH, RPTS, SOCI, GEOS, ENGR, COALS), Office of Sustainability, UES, Energy Institute, plus a learning sciences expert based at the Center for Teaching Excellence. Bush School students will be invited to participate in various projects through programs, classes and internships they are engaged in within the areas represented in this proposal. Success in this project will help to expand and involve other colleges and units in future to further engage with and advance the science to policy steps. The activities listed in the Intended Outcomes will include graduate and undergraduate students from all participating colleges listed. They will participate directly through the classes and professional certificate programs listed. Graduate students retained on the proposal will work closely with Team Leaders. Undergraduate student workers retained on the project will undertake research-related tasks as needed to fulfil Scope 1, 2 and 3 objectives. Our diverse Team Contributors are integral to facilitating the carbon neutrality and engaged learning goals of this collaborative, interdisciplinary project.

. Will your team also include any external organizations or individuals as either partners, clients, study subjects, beneficiaries of the work, etc.?

Dr. Jourdan seeks to work with city planners in Bryan and College Station as possible clients for the ordinance drafting project taken on by her graduate students in PLAN 640. Students involved in looking at “green electricity” and Green Events will collaboratively engage with other key stakeholders on and off campus for knowledge exchanges, ideas, potential participation in creative outputs, e.g. Aggieland food vendors supplying the four pilot events to be “greened,” College Station Utilities on their green energy (Windwatts) program, other Texas wind/solar producers.

. *Travel*

. Does your proposal include travel for students beyond Bryan/College Station?

- Yes
 No
 Not sure yet

. Where would the team travel?

. When do you anticipate that this travel would take place? (e.g., Fall 2021, Spring 2022, some other academic break, TBD)

. Do you expect that all students selected for the team would be able to travel, or just a select number?

. *Collaboration with Students*

. Ideally, how many undergraduate students would you select to participate on this team? (Numeric responses only, please)

Approximately 200: 6 undergraduate students (student workers) plus 190-195 undergraduate students through coursework and cross-campus initiatives specified in the proposal.

. Ideally, how many graduate students would you select to participate on this team?

At least 34: Four graduate students on hourly retainer (see budget), 30 graduate students from the Master's of Urban Planning PLAN 640 (ordinance project).

. Ideally, how many professional or doctoral students would you select to participate on this team?

1-3 (at least one PhD is on the team, two more may be added)

. How will you facilitate collaborative inquiry on the team? How often and in what format will the team meet? How will you divide tasks? How you will ensure effective management of the project (e.g., appoint a student as a project manager, assign that role to a faculty leader, etc.)? (2,500 character maximum)

Dr. Jamal will assist with project coordination with the help of two graduate students and student workers. She will work closely with Team Collaborators and Team Leaders, organize monthly meetings, and follow up with them on progress with intra-departmental and cross-college tasks and teams. She will also liaise with the Office of Sustainability and UES on various joint projects. Dr. Jourdan will work with Dr. Jamal to facilitate the charette, hackathon, and ordinance drafting projects. Dr. Jourdan, as the Harold L. Adams Interdisciplinary Professor in Landscape Architecture and Urban Planning, will work with colleagues to create a charette styled experience where students in participating programs may come together to design fact sheets, games and/or apps where users understand the impact of energy use on individual carbon footprints and modifications available to a person wishing to reduce their personal footprint. This activity will use a design thinking approach and include about 50 undergraduate students across the 5 undergraduate degree programs in the College of Architecture. PLAN 640 will undertake the ordinance drafting project under Dr. Jourdan (fact sheets will assist the class). Dr. Jourdan will also work with the College's Diversity Committee to request inserting the project into the annual universitywide Hackathon hosted by the College of Architecture. The Hackathon involves nearly 100 undergraduate students from multiple colleges. Dr. Jamal's RPTS 426 class will engage collaboratively on the above. These activities will occur in spring 2022. Synergies with other Scope 1, 2, 3 projects will be facilitated by Team Leaders and Team Contributors. The team will also serve as an external jury for the charette and the hackathon. While we are hopeful that spring events will be face-to-face onsite, these spring activities can be undertaken online. The "Green Event" team (mix of graduate/undergraduate students from RPTS, SOCI plus other project team members) will meet monthly (virtually in fall, in-person during Spring). Design thinking will be used. Weekly Zoom meetings will be scheduled as needed. The 8 student workers will undertake research on Scope, 1,2, 3 under their respective Team Leaders. These projects can advance successfully online as needed in the fall. Onsite implementation activities in spring can be modified to enable outreach online, as well as designing an online implementation plan if needed.

. What might students gain from their participation (e.g., conducting research directly with subjects, contributing to publications, using language skills)? What unique and differentiated learning opportunities would be available for graduate students? (2,500 character maximum)

Students will have an opportunity to work closely with Team Leaders, Office of Sustainability and UES on data harvesting, methodological and knowledge building skills, through engaged learning approaches that facilitate empowerment and leadership on sustainability and climate innovation. All team members have this unique co-constructive opportunity as the project adopts a human-centered approach where participants come together to negotiate and co-construct new meanings and innovations. Learning lies in the action, the doing of sustainability, in a meaning-making journey -- building rapport, understanding the problem from participant (stakeholder) perspectives, ideating and co-constructing strategies, knowledge and solutions together -- understanding values of inclusivity, vulnerability (in sharing and ideating, etc.) and empathy. Students will also enhance their critical thinking and participatory, inter-disciplinary skills--transcending academic silos to engage meaningfully with diverse knowledge, worldviews, and methodological approaches. Meaningfulness drives engaged action, including seeking policy change and administrative support to advance climate neutral processes and prototypes developed. Graduate and undergraduate students will be invited to jointly write research articles and present their journey and efforts at sustainability conferences. For example, the interdisciplinary "Green Events" team of students from RPTS, ARCH and SOC participants is a direct action project. Participants (students, faculty, other stakeholders) will collaboratively explore implementable strategies for "Green Events", e.g. focusing on waste reduction (food waste, plastic and packaging waste from vendors). This team includes students from RPTS 320, 321, plus other students working with Team Leaders. A design thinking process will be adopted (guidance to be sought from Dr. Donaldson), which provides students a unique opportunity to learn vital design thinking, practice-based, interviewing and participatory skills. Undergraduate students in one section of RPTS 320 (fall, 60 students) that are in the Professional Events Management certificate continue into RPTS 321 (spring, 60 students). They will plan four "green" campus events (RPTS related) which will be implemented in Spring 2022 via RPTS 321. Skills of multi-stakeholder collaborative planning will be learned as students engage with key stakeholders (e.g., with Aggieland food vendors) in planning and implementation.

. *Timeline and Budget*

. Identify the timeline for the project, including start, completion and major project milestones.

NOTE - You may use the text box or upload a table or file in the next question.

See uploaded file

. Timeline Upload (if needed)

[Innovation X grant 2021 Timeline.pdf](#)

61.6KB

application/pdf

. Total Budget Request (numeric response only, please). As a reminder, the maximum amount that can be requested is **\$20,000**.

20,000

. You may upload a budget table here encompassing the categories below, or you may complete the fields below through this form as applicable.

For each item listed below or on your budget table upload, please enter both dollar amount and any relevant notes/justification.

[Innovation X grant 2021 Budget.pdf](#)

25.1KB

application/pdf

. GRADUATE OR RESEARCH ASSISTANTSHIP (PHD) (*Suggested range: \$15-18/hour; note: RAships for students in graduate school should include costs for tuition remission and fees*)

. RESEARCH ASSISTANTSHIP (*Suggested range: \$12-15/hour*)

. INSTRUCTION (Teaching) - PHD STUDENT

. POST-DOCTORAL OR STAFF EFFORT

. UNDERGRADUATE STUDENT STIPEND OR WORK STUDY (*Suggested range: \$11-14/hour*)

. INSTRUCTIONAL, RESEARCH OR OFFICE SUPPLIES

. COMPUTERS AND MINOR EQUIPMENT

. TRAVEL - DOMESTIC

. TRAVEL - INTERNATIONAL

. CONTRACT WORK

. MEETINGS - BUSINESS

. OTHER - MISC.

. Please briefly note below any other sources of project funds. *(Projects that match or leverage additional funds are strongly encouraged. Please note any such funds, awarded or proposed, here so that we understand the comprehensive outlay for the project.)*

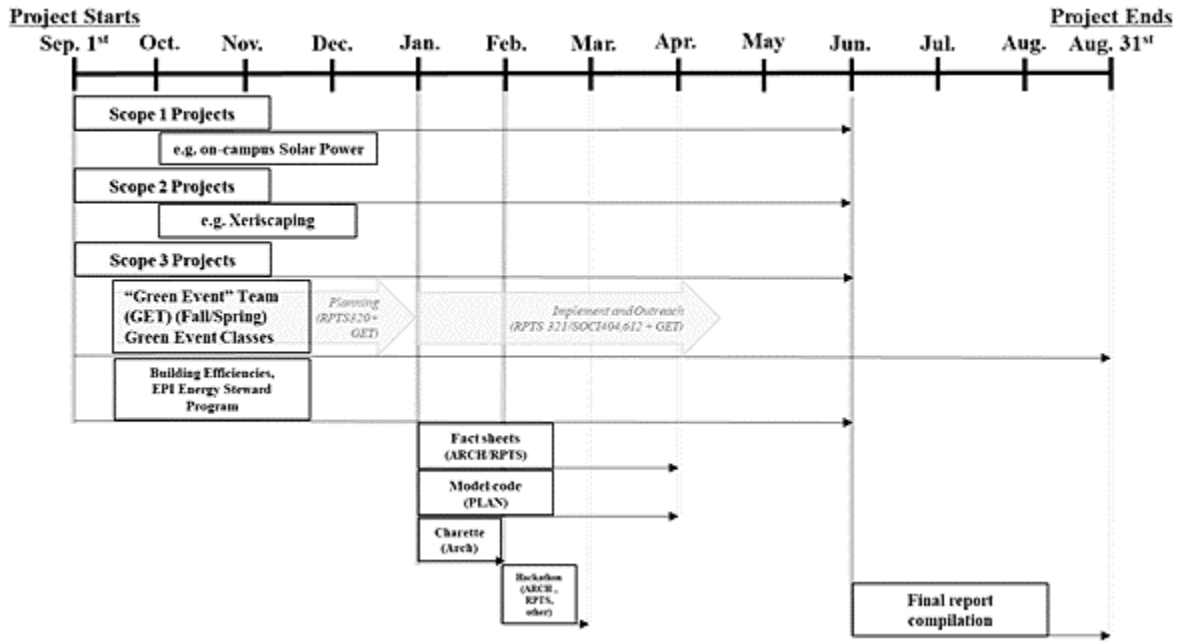
. Please name a Unit/Business Manager who could administer funds for project, if requested. Include their name, email address, and phone number:

Location: ([51.146697998047](#), [-114.31330108643](#))

Source: GeolIP Estimation



(i) Timeline Figure



ii) Table to accompany Timeline Figure 1

Figure 1 supplement	Intended outcomes, participants, processes
Scope 1	<p data-bbox="488 520 1211 550">Scope 1 emission reductions - mitigation and adaptation</p> <ul data-bbox="537 590 1386 894" style="list-style-type: none"><li data-bbox="537 590 1386 716">• Interdisciplinary teams will study the potential impacts of the implementation of “green technologies” on the campus carbon footprint and prepare fact sheets to distribute online and drive knowledge-to-action,<li data-bbox="537 726 1386 789">• Faculty and graduate students leaders of undergrad student teams dominantly in ARCH, GEOS, ENGR, BAEN<li data-bbox="537 800 821 829">• Multi-step process<li data-bbox="537 831 1386 894">• Outcomes include fact-sheets, feasibility studies, and visions of TAMU 2030, 2040, 2050
Scope 2	<p data-bbox="488 974 1062 1003">Scope 2 emission reductions – mitigation</p> <ul data-bbox="537 1043 1386 1579" style="list-style-type: none"><li data-bbox="537 1043 1386 1201">• Interdisciplinary student teams to identify strategies for “green” electricity purchase, to advance building energy efficiencies through collaboration with UES on ESP and EPI programs, or to study xeriscaping on campus to reduce water-waste and nitrous oxide<li data-bbox="537 1211 1386 1474">• Working with team leaders, teams will identify and evaluate ‘green’ energy options (solar, wind, other), feasible funding mechanisms and plan to approach TAMU administration to advance implementation action; e.g. student workers in RPTS and GEOS could work with Team Leaders to undertake information gathering and evaluation for a xeriscaping strategy, then reach out to Horticulture, Landscape Architecture, UES.<li data-bbox="537 1484 821 1514">• Multi-step process<li data-bbox="537 1516 1386 1579">• Outcomes include feasibility studies, possibly experiments, and impact analyses.

(continues on next page)

Scope 3 emission reductions – mitigation and adaptation

Scope 3

- Initiate Green Event team plus classes (RPTS 320 fall, RPTS 321 spring, SOCI 404/612, spring) to address food waste collection and composting at events. They will develop a “Green Event” planning framework, undertake “green” transformation of 4 RPTS student-organized events on campus (e.g., RPTS Spring Graduation Banquet), plus commence an outreach strategy for engaging and empowering Student Organizations to green their events. They will also dialogue with event clients and Aggieland vendors to advance the above. Outputs will pave the way to address “Green Events” in the STARS report.
- Student initiated energy conservation competition (spring ARCH Hackathon), designing game/apps to understand campus carbon footprint and engage directly with campus carbon emissions and reducing fossil fuel consumption
- Model code (model green energy overlay zone) that may be used by local governments to incentivize the use of green technologies and will help facilitate synergies with TAMU’s energy innovations.
- Outcomes include fact sheets/games/apps to distribute online and use as needed; and engaged learning experiences for undergraduate students in five interdisciplinary programs in the College of Architecture (design thinking approach will be used)

Final Report

- Final report completion: August 31, 2022.
 - Final project report and action items for forward movement towards carbon neutral TAMU to be presented to TAMU administrators by the project team and undergrad/grad student representatives) by August 31, 2022 (extend into September, 2022, as needed)
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Budget

Expense category	Amount (\$)	Type	Notes
	2,000	Charette and Hackathon	Awards to student innovators in charette and Hackathon (ARCH)
Instructional, Research or Office Supplies	4,000		"Green Event" implementation and outreach (RPTS); four community events @ \$500 each for purchase of compostable & other reduced-impact party goods, and outreach to campus-wide student organizations
	2,000	RPTS 302/321	
Undergraduate Student Stipend or Work Study	6,000	Student workers	6 student workers across departments (\$1,000/student @ \$15/hr)
Graduate or Research Assistantship	8,000	SOCI / RPTS / GEOS / ENGR	4 students (\$2,000/student); 1 each SOCI, RPTS, ENGR, GEOS, active mostly via the Aggie Research Leadership Program
Meetings- Business	2000	Conference Participants	4 undergrad/grad students (\$500/student) among all areas involved in proposal
Total	20,000		
