**Funding Criteria**

**A. General Rules**

1. Students, faculty, and staff are encouraged to submit requests for funding. Student-led projects require a faculty or staff sponsor in order to have funds awarded.
2. Funding can only go to university-affiliated projects from students, faculty, staff, and departments.
3. All SSC projects must make a substantial impact on students. All SSC funding is 100% from student green fees, so the projects funded by the students must benefit them.

**B. Things SSC Can Fund, On A Case-By-Case Basis**

1. SSC can fund feasibility studies and design work; however, it must work toward ultimately addressing a sustainability need on campus.
2. SSC can fund staff positions that are related to improving campus sustainability. Strong preference will be given to proposals receiving matching funding from departments and/or plans for maintaining continuity of the position after the end of the initial grant.
3. SSC can fund outreach events with a central theme of sustainability, provided their primary audience is the general campus community.
4. SSC discourages requests for food and prizes but will consider proposals on a case by case basis.
5. SSC can fund repairs and improvements to existing building systems as long as it works toward the goal of improving campus sustainability.
6. SSC can provide departments with loans for projects with a distinct payback. Loans will require a separate memorandum of understanding between SSC and departmental leadership pledging to repay the award in full and detailing the payback plan.

**C. Things SSC Will Not Fund:**

1. SSC will not fund projects with a primary end goal of generating revenue for non-University entities.
2. SSC will not fund personal lodging, food, beverage, and other travel expenses.
3. SSC will not fund any travel expenses.
4. SSC will not fund tuition or other forms of personal financial assistance.

**Instructions**

*Submit this completed application and one map, graphic, or picture to* [*Sustainability-Committee@Illinois.edu*](mailto:Sustainability-Committee@Illinois.edu)*. Please adhere to the session word counts. The committee holds the right to decline applications over the designated word counts. If you have any questions about the application process, please contact the Student Sustainability Committee Coordinator at* [*sustainability-committee@illinois.edu.*](mailto:sustainability-committee@illinois.edu.)

**Project Name:**  Air quality testing of HVAC system

**Total Amount Requested from SSC:** $30,000-$50,000

**Primary & Secondary Project Leader Name & Email:**  Dhruvaraj Gambhire (primary) & Ali Khan (Secondary)

Email: [dvg3@illinois.edu](mailto:dvg3@illinois.edu), [alifk2@illinois.edu](mailto:alifk2@illinois.edu),

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| **Project Abstract:** In less than 100 words, briefly describe your project. |
| **Covid has drawn our attention towards efficient building ventilation. Existing solutions are inadequate to test air quality result in safety and facility professionals operating blindly with enormous building safety, occupational health, and financial consequences at stake. We will be collaborating with a company called SafeTraces. The project intends to verify ventilation and filtration performance in indoor spaces with real-world data. We will verify engineering controls and HVAC performance for airborne pathogens to keep people safe in any indoor environment.** **Balancing energy efficiency while delivering human life safety require some new tools.** |

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|  | Education | Energy | Food & Waste | Land & Water | Transportation |
| Project Category |  |  |  |  |  |

**Project Team Member List** (student projects must include their faculty/staff advisor’s information)

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| --- | --- | --- |
| Name | RSO/Department | Email Address |
| Ali Feroz Khan | Energy Systems, NPRE | alifk2@illinois.edu |
| Dhruvaraj Gambhire | Energy Systems, NPRE | dvg3@illinois.edu |
| Morgan White | F&S, Sustainability | mbwhite@illinois.edu |
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| Questions | Yes | No |
| Is this a student-led project? | y |  |
| If applicable, have you received approval from Facilities & Services and/or site manager? | y |  |
| Do you have a plan for ongoing funding beyond SSC? (SSC cannot guarantee ongoing financial support) | y |  |
| Beyond SSC, do you have sources contributing funding or support (ex. staff time, external grants, etc.) to this project? | y |  |
| Have you applied for SSC funding previously? |  | n |

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| **Project Timeline** |
| SSC funding agreements remain active for two years. Please list your project’s timeline and/or milestones. |
| * 1. **Getting the vendor on contract- (Jan2022-July -2022)**   2. **Run the test/pilot on a specific building (July 2022-Dec 2022)**   3. **Perform Analysis on building data (Dec 2022- Jun 2023)** |

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| **Project Description** |
| In 250 words or less, describe your project. What does your project hope to accomplish? What are your project’s deliverables? Bullet points welcome. |
| **In collaboration with Safe traces, we aim to** **verify ventilation and filtration performance in indoor spaces with real-world data.**  **veriDART® a patented technology by SafeTraces, is based on DNA science, technology, and analytics to provide critical information on aerosol mobility and the infectious aerosol exposure risk in buildings.**  **veriDART’s proprietary airborne tracers safely mimic the chemical composition, particle size distribution, and mobility of viral emissions from coughing and sneezing.**  **Professionals release tracers in designated test areas for dispersion throughout a building and air ducting. Air and surface samples are collected and tested at selected points and time periods.** **Based on assessment results, data analytics visualize exposure risk based on the DNA signal strength in the tracers.  Final client reports include heat maps, clearly communicating results and informing real-world safety decisions.  We will identify a building on campus which has higher student interactions. This analysis will help us to understand how well our HVAC and filtration systems handle the air that circulates in the buildings. This will equip us with relevant data to take better decisions in the future regarding the safety of the students and greater efficiency.  Our project deliverables will be : 1) Recommendations about relevant changes in the HVAC filtration systems in the specific building  2) Report which we will publish on the iCAP Portal, informing the public about air quality and subsequent changes in the campus infrastructure.** |

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| **Environmental Impact** |
| In 200 words or less, how does your project increase environmental stewardship at UIUC? If applicable, what is the carbon, water, waste, and/or energy savings? Does your project relate to the iCAP? Bullet points welcome. |
| **The transparency from information of indoor air quality, energy efficiency and preventive maintenance will provide us with clarity. The project enables us to make better decisions: 1. Air conditioners use about 6% of all the electricity produced in the United States, at an annual cost of about $29 billion to homeowners. As a result, roughly 117 million metric tons of carbon dioxide are released into the air each year. This shows the sheer impact inefficient HVAC systems can have. We will identify inefficient HVAC filtration systems in campus. We can observe energy consumption of these devices.** **Thus, we can identify low performing devices and suggest maintenance or replacement. It is also an effective way to reduce exposure to indoor airborne pathogens 2. Increase in air quality will make the indoor environment safer. This will reduce anxiety. People who feel less anxious are likely to be more cooperative, and will increase productivity.** |

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| **Student Impact** |
| In 200 words or less, how will this project benefit students? How will students be involved with this project? What educational components are in your project? Bullet points welcome. |
| **This is a project which will be led by two masters’ students from the Energy systems department in the College of Engineering. As it is related to our program we are better placed to collaborate with multiple stakeholders (Facilities and Services, the company – SafeTraces and the facilities liaison for the building). We are determined to see the project through its entirety, past our class project requirement.  We also intend to write a report detailing the problem statement, project and our impact metrics. It will be available to all students on the ICAP portal. We hope it will be a valuable resource for students to educate themselves.** |