

View results

Respondent

4

Vineet Patel

59:34

Time to complete

Instructions:

Please adhere to the session word counts. Project leads must attend one SSC working group meeting post step 1 application submission. If you have any questions about the application process, please contact the SSC at [Sustainability-Committee@illinois.edu](mailto:Sustainability-Committee@illinois.edu).

1. Have you attended a SSC working group meeting? \*

Yes

No

2. Project Name: \*

G6 Max

3. Total Funding Requested From the SSC. \*

10000

Please enter a number less than or equal to 10000

4. Project Lead Full Name: \*

Vineet Patel

5. Project Lead University Email Address \*

vnp3@illinois.edu

6. Project Abstract: (In less than 100 words, briefly describe the project.) \*

G6 Max is going to be the supermileage vehicle that addresses all of the shortcomings of Eco Illini's previous vehicle G6 with the goal of breaking the school record's on energy efficiency. G6 Max will also serve those students who contribute to its development by fostering the values of sustainability and energy efficiency in every aspect. G6 Max will feature more electrical components than ever before to push the vehicle's limits. G6 Max's improved body panels will provide a seamless and lightweight aerodynamic design. The mechanical and powertrain systems will increase energy efficiency by reducing friction, drag, and weight with a focus on testing and optimizing.

7. Project Category \*

- Education & Justice
- Energy
- Food & Waste
- Land, Air & Water
- Transportation & Infrastructure

All rolling application require a faculty/staff advisor.

Faculty and Staff Advisor

8. Full Name: \*

9. RSO/Department \*

10. University Email Address: \*

11. Do you have additional members? \*

- Yes
- No

UIUC Financial Contact

Financial Contact (Must be full-time UIUC employee)

12. Full Name: \*

13. RSO/Department \*

Mechanical Engineering and Science

14. University Email Address: \*

sfpower2@illinois.edu

### Project Questionnaire:

15. Is this project student led? \*

- Yes
- No

16. If applicable, have you received approval from Facilities & Services and/or site manager? \*

- Yes
- No
- N/A

17. If additional funding is required, do you have a plan for ongoing funding beyond SSC? (SSC cannot guarantee ongoing financial support) \*

- Yes
- No

18. Beyond SSC, do you have sources contributing funding or support (ex. staff time, external grants, etc.) to this project? \*

- Yes
- No

19. Have you applied for SSC funding previously? \*

- Yes
- No

## 20. Project Timeline:

(SSC funding agreements remain active for two years. List your project's timeline and major milestones.) \*

10/15 - Order machined parts for to all powertrain systems  
 11/5 - All Body components designed and manufactured  
 11/5 - Design and Manufacture all mechanical systems  
 11/12 - First Drive Day  
 11/26 - Finish Design and order all electrical components  
 2/11 - Finish modular testing and redesign  
 2/18 - Second Drive Day  
 4/14 - Competition

## 21. Project Description:

(In 250 words or less, describe your project. What does your project hope to accomplish? What are your project's deliverables?)

\*

Eco Illini Supermileage is a student design team that competes twice a year to design and build the highest efficiency vehicle possible. We currently hold the school records in gasoline and battery system efficiency with 1137 MPG and 152 Mi/KWh. G6 Max will be the improved version of the 6th generation car, G6, by addressing the shortcomings of G6 found during testing and competition last year. Some key goals for G6 Max will be to feature a smaller more efficient powertrain system, a custom engine control unit, improved body components, and real-time telemetry, and many more mechanical improvements. The goal is to bring this vehicle to competition in April 2024 and June 2024 where we will be competing against similar teams from around North America. Through this competition our members develop a lot of practical engineering skills to help them further their career as well as highlight the engineering challenges related to efficiency and sustainability.

## 22. 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?) \*

As mentioned before the goal of this project is to highlight the potential of engineering when designing with sustainability as a focus. Our record of 1137 MPG is enough to take a vehicle from Chicago to Orlando on one gallon of fuel! Additionally, we also have created an electric vehicle that is about 40 times more efficient than the average electric vehicle at about 152 Mi/KWh! It is results like this that inspire our members and those around us to focus more on sustainability in their engineering due to the high benefits. We also hope that many of our members will continue their focus on engineering sustainability into their careers. Lastly, by participating in events like Quad Day or Robot Day we aim to inspire the local community to focus on sustainability in their lives.

## 23. iCAP Objective Correspondence:

(In 200 words or less, does your project aim to advance one or more of the Illinois Climate Action Plan's (iCAP) objectives? If so, how?)

A full list can be found here: <https://icap.sustainability.illinois.edu/objectives>

G6 Max would aim to advance the 2.2 iCAP objective of increasing energy efficiency. The goal of this project is to create a vehicle to push the limits of energy efficiency by traveling a very large distance with as little energy as possible as mentioned before. The project will allow various engineers to gain experience in learning aspects to increase energy efficiency that is applicable in various industries.

## 24. 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?)

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All the students working on the project will gain real-world engineering experience working on real projects with real goals. Every student will learn what it means to take on challenging problems and apply their skills learned in class to actual application. Beyond that students will hopefully be inspired by this challenge of efficiency and sustainability and take this onto other phases of their life including their career. Furthermore, this club serves as an entry point into sustainable engineering for many of our members and can hopefully inspire students to consider sustainable mindsets when designing and engineering in their later career.