

## **Project Title**

Transition to a Greener UVM Fleet

## **Person who proposed it**

Clare Nelson (Intern for Transportation and Parking Services and the Office of Sustainability, Civil Engineering Undergraduate, Expected Graduation May 2022)

## **Decision**

Funding Approved

## **Budget**

\$10,900

## **Project explanation**

The Green Fleet Procurement Procedure created by UVM Transportation & Parking Services (TPS) and the Office of Sustainability (OoS) supports departments in selecting the most efficient vehicle available for the job. However, the increased efficiency of alternatively fueled or hybrid vehicles comes at a price (literally!). In conversations with twenty UVM fleet managers, the expense of electric vehicles and access to charging stations were listed as primary reasons for not already owning an electric model. These concerns were particularly relevant for smaller departments with fewer resources. Without financial assistance, fleet managers struggle to cover the cost differential between a traditional combustion vehicle and an electric or hybrid vehicles, often resulting in a missed opportunity to contribute a meaningful step towards reducing greenhouse gas emissions on campus. EV incentives are available to Vermonters through the Burlington Electric Department (BED) Rebate (Up to \$1,800) and the State or Federal Electric Vehicle (EV) programs. However, due to our status as a State University, we cannot take advantage of the state and federal incentives. If this proposal is accepted, we can establish an SCF-sponsored EV Incentive Bank to compensate for the lack of state incentives, effectively doubling the financial assistance currently available to UVM departments through BED.

Once approved, this funding proposal will go towards subsidizing departmental EV and hybrid purchases. The incentive cap per vehicle will be \$2,000, resulting in at least five ICE vehicles being replaced from our campus fleet. A department purchasing an EV can also utilize the incentive to fund a fleet EV charging station, giving flexibility to the incentive based on

departmental/school needs.

This student-led project combines direct feedback from UVM fleet managers, analyses of UVM vehicle data, and information from university and statewide greenhouse gas emissions reductions goals to propose an effective and efficient pathway for incentivizing electric and hybrid vehicle purchases. Overall, a Green Fleet Incentive Fund will create better departmental equity and represents quantifiable progress towards the UVM's vision of becoming a green university.

#### Project Action Items and Budget:

Upon the awarding of this grant, the TPS intern will start promoting this program, notifying all fleet managers and the UVM community at-large about this opportunity. One-on-one support will be given to departments to help navigate the vehicle selection process. Three months after a department receives the incentive and purchases an EV or hybrid vehicle, they will be required to complete a survey about the incentive and their experience with the vehicle, including their likelihood of purchasing additionally alternatively fueled vehicles in the future.

As this is a student fund, we will provide preference to departments that engage students in the vehicle request and/or have student who utilize the vehicles.

#### Benefit to UVM Community and Students:

This grant will provide an exciting opportunity for a student intern to engage in greening the UVM fleet and collaborate across the University with many different departments and schools. As this is a student fund, we will provide preference to departments that engage students in the vehicle request and/or have student who utilize the vehicles.

By increasing the number of electric vehicles on campus, particularly in departments with large student involvement, we are exposing students to exciting, green technologies and hopefully impacting their lifestyle choices after they leave the university (e.g., working in environments with available EVs and EV charging, purchasing a personal EV, advocating for EV subsidies and infrastructure in their local communities).

And finally, by transitioning the university area away from gas vehicles, we are supporting the university's vision of having a clean air space, similar to how smoking is banned across campus. This creates a healthier environment for the entire campus

community.

**Importance:**

According to the 2020 Annual Energy Report for the State of Vermont, out of the three major categories of energy use (transportation, power, and heating), “Vermont has made the least progress towards our transportation-related goals” due to “relatively small” improvements.

As Vermont’s flagship university, we are responsible for helping the state reach these goals, but UVM has repeatedly fallen short in transportation sections of the STARS (Sustainability Tracking Assessment & Rating System) report. In the most recent report, the university had reached 40% of its Building Energy Efficiency goals but was at less than 10% of the Campus Fleet Goals. Currently, of the 218 UVM fleet vehicles, only 11 are electric or hybrid vehicles. The small investment of this award will increase alternatively fueled vehicles on campus by nearly 50%!

The Vermont Department of Energy created a model to compare efficiency, transportation, and renewable energy measures. They found that investing in plug-in hybrid electric vehicles (PHEVs) and all-electric vehicles (AEVs) ranking second and fourth, respectively, for carbon savings per public dollar invested. Therefore, investing in electric vehicles is one of the most efficient pathways to decreasing greenhouse gas emissions at the University of Vermont.

Investing in electric and hybrid vehicle purchases is not a one-time savings. It creates reinforcing loops of greenhouse gas reductions and electric vehicle purchases (e.g., more EVs on campus leads to greater incentive to install EV charging infrastructure which leads to greater incentive to drive EVs to campus, and on and on). Through this preliminary investment, UVM can get the ball rolling on a secured sustainable transportation future.

**Budget table**

<b>This Money will Supply</b>	<b>Requested funds</b>	<b>Justification</b>
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Electric Fleet Vehicle Incentive Bank	\$10,000	Up to \$2,000 per vehicle request (vehicle purchasing or charging station costs)
Student Intern Time	\$900	Promotion and management of program, surveying of participants, report creation, 60 hours