Title  Electric Carts for UAF Sustainability
Submitted by: Brandon Hoover  bshoover@alaska.edu  (810) 265 0334, 5/25/2011

Amount Requested

$21,850

Proposal Summary

We wish to purchase two electric powered utility vehicles to supplement our use of full size trucks from facilities services. The first vehicle would allow us to reduce our recycling program's emissions and fuel consumption by cutting back our use of gas powered vehicles to off campus recycling pickups and winter time pickups. The second vehicle would be used for our operations at the greenhouse, our invasive plants program, and any other grounds, gardening or landscaping programs that the Office of Sustainability takes on. These vehicles would make our students more productive, use less fuel, and make our activities more visible to students on campus. We also plan to install solar powered charging stations in the future. "Workman MDE W/ stake-bed: Recycling use.

Technical Advisors and Collaborators

“Bear” Darrin Edson, dmedson@alaska.edu, Facilities, Michele Hebert, mahebert@alaska,edu, Office of Sustainability"

Budget Detail

Equipment: One Toro Workman MDE with lights, open cab, windshield, and stake-bed: -est-$10,500; One Toro Workman MDE with lights, open cab, and windshield: -est-$10,350
Services: Shipping: -est-$1,000
Total: -est- $21,850"

Budget Justification

See project value. High shipping cost: No dealer in Fairbanks"

Project Value

These carts will allow the Office of Sustainability to perform its activities more efficiently. A solid recycling program is vital to our sustainability efforts on campus. Having our own cart will reduce the need to rent full size trucks from facilities, saving us the cost of rental and allowing us to use a more environmentally friendly vehicle that better fits our needs. The Office of Sustainability efforts at the greenhouse and with the invasive species management plan would be far more effective if we had a utility vehicle to transport supplies, move and dispose of the invasive plants that we collect, and transport produce that we grow to the Lola Tilly Commons. The 48 volt motors in these carts, combined with regenerative breaking and other efficiency improving features will lower our emissions and our fuel consumption. These carts would also be highly visible on campus and clearly labeled as part of the office of sustainability. Seeing an active sustainability effort on campus would help to promote an attitude of sustainability among students. We would also like to install solar powered charging stations after a short period of use with these vehicles. A solar charging station would allow us to use these carts without directly producing any carbon emissions or burning any coal in the production of electricity.
With these two carts the Office of Sustainability would be better able to perform their duties and promote sustainability on campus.

**Implementation Plan**

"Brandon Hoover would be responsible for ordering these carts, installing a strobe on top of them, and setting up charging stations for both carts.  
June 15: receive funding from RISE Board, and order carts.  
July 30: estimated arrival of carts, installation of strobe, and set up charging station.  
July 31 forward: use of carts by Office of Sustainability

**Qualifications & Experience**

My work at the Office of Sustainability gives me the experience to understand what vehicles would be most effective for the tasks we perform. My experience with automotive electrical systems would allow me to install the strobes on top of the carts.

**Group/Department**

Office of Sustainability  
Sustainability Area  
Transportation, Waste Management, Food Systems

**Supporting Documentation (if provided) follows:**