

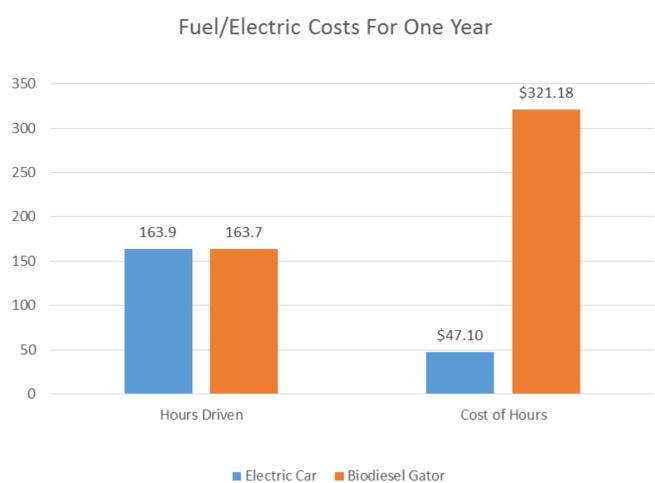
# Grounds Utility Vehicle Carbon Footprint Comparison



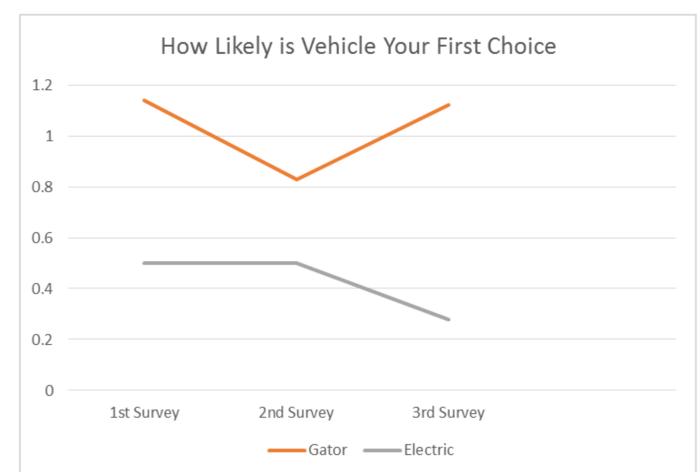
## ABSTRACT

This project will compare the cost, carbon footprint, utility performance and user satisfaction of two different fuel-sourced vehicles (electric and biodiesel) at the University of Washington Botanic Gardens' (UWBG) Washington Park Arboretum (WPA). The carbon footprint of the University of Washington associated with the operation of maintenance utility vehicles will also be assessed.

## Cost (\$0.28/hr for electric \$0.51/hr for biodiesel)

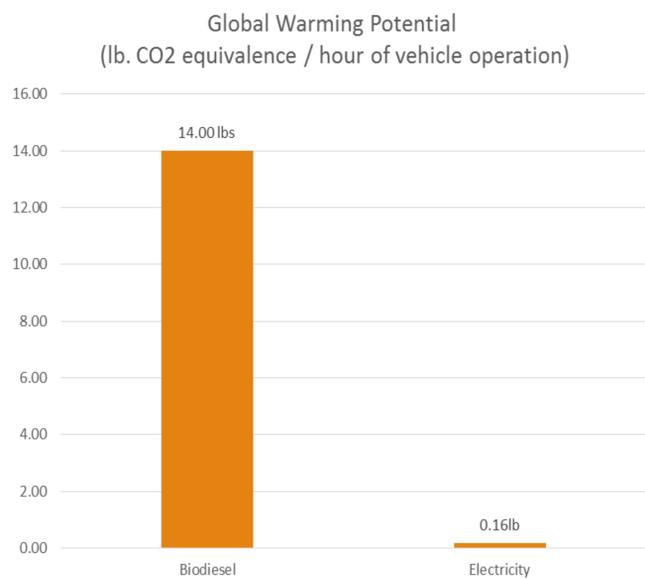


## User Satisfaction

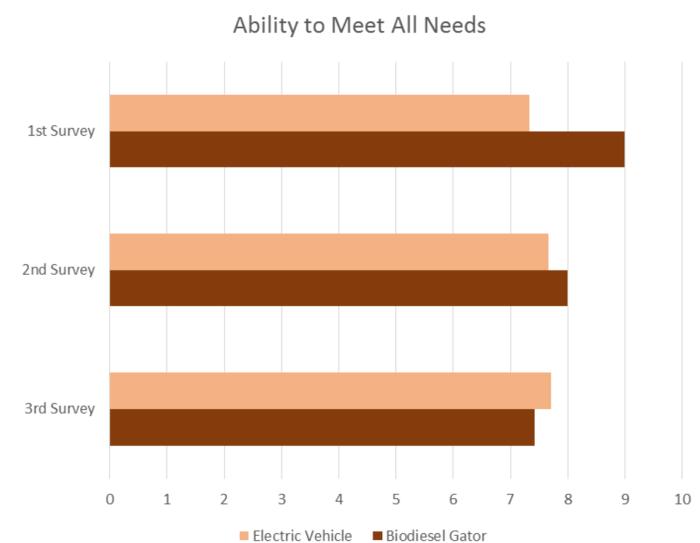


Coded: 0=Very Likely 1=Somewhat Likely 2=Not Very likely

## Carbon Footprint



## Utility Performance



0= Unable to meet needs, 10= Able to meet all needs

## DESCRIPTION

The goal of this research is to lower the carbon footprint of WPA ground utility vehicle fleet without compromising the associated strength, durability and user satisfaction of the vehicles. As per the University of Washington Climate Action Plan, reduction of Scope 1, or direct emissions from university property, is necessary to keep the university in compliance with the gradual reductions of greenhouse gasses required under Washington State law. Reduction or elimination of Scope 1 emissions by the WPA grounds crew (and other UW grounds crews informed by our research) will also help the university achieve its goal of producing zero greenhouse gas emissions by 2050.

## CREDITS

### Research Team:

UWBG Horticulture Staff

Rick Gustafson, PhD.: Lead Investigator

Kathleen DeMaria, MEH: Collaborating Investigator, UWBG horticulturist

Alex Green: Graduate Student, UW SEFS

