

Grant Deliverables and Reporting Requirements for UTC Grants

UTC Project Information	
Project Title	100% Biodiesel Vector Technology and Fuel Dispensing Solution — A CTECH live lab pilot project for the implementation and evaluation of the 100% biodiesel technology on identified equipment within Cornell’s fleet operations
University	Cornell University
Principal Investigator	H. Oliver Gao
PI Contact Information	hg55@cornell.edu 607-254-8334
Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: \$2,000 Donor: \$22,000
Total Project Cost	\$24,000
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	Start date: 09/01/2017 End date: 09/30/2020
Brief Description of Research Project	<p>“Cornell is a global leader in sustainability and climate change research, teaching and engagement. [Cornell’s] campuses are living laboratories for developing, testing and implementing solutions that address these most challenging issues.” The Center for Transportation, Environment, and Community Health (CTECH) pursues research and innovation to support sustainable mobility of people and goods while preserving the environment and improving community health. CTECH has partnered with a student project team to create a project that will provide hands-on experience to student engineers in sustainable transportation. Optimus, Inc., CTECH, and the biofuels group from Engineers for a Sustainable World (ESW) have met with Cornell Farm Services to identify three potential pieces of equipment within Cornell’s fleet operations which are ideal candidates for the implementation and evaluation of the 100% biodiesel technology, one of which will serve as the pilot vehicle.</p> <p>Project Goals</p> <ul style="list-style-type: none"> • Validate the Optimus biodiesel fuel system technology and the use of 100% biodiesel within Cornell’s operations assisting the University in achieving its “plan

	<p>to reach carbon neutrality by 2035 through innovation, leadership, and campus excellence.”</p> <ul style="list-style-type: none"> • Quantify the reduction in fleet greenhouse gas emissions for project vehicles (75%+ reduction projected) and perform an analysis of overall applicability of the technology to various other use cases on campus. • Facilitate reduced fleet fuel costs through utilization of domestically produced, renewable, low-carbon biodiesel. • Provide the students’ direct engagement and real-world experience by participating as project engineers on the biodiesel fuel system technology project development and deployment.
<p>Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>http://ctech.cee.cornell.edu/final-project-reports/</p>