

## NEWS RELEASE

### **Pittsburgh Expands Use of Optimus Technologies' Biofuel Conversion Systems**

*Outfitting 20 more public works trucks  
to minimize fuel costs and to reduce lifecycle emissions over 80%.*

**Pittsburgh, PA** – Optimus Technologies today announced the City of Pittsburgh has agreed to expand its use of Optimus' EPA-approved, biofuel conversion solution to an additional 20 public works trucks. Further, the city will deploy an Optimus-designed, 5000 gallon biofuel storage/refilling station at its main garage that supports over 100 trucks. Through Optimus' solution, which reduces lifecycle emissions over 80% and fuel costs up to 25%, the city will reduce their overall emissions as required in its Pittsburgh Climate Action Plan version 2.0. The plan targets to reduce overall greenhouse gases generated by the city by 20 percent between 2003 and 2023.

#### **Building on a Successful Field Trial**

The city tested Optimus' Vector biofuel conversion system for an extensive 18 month evaluation on five of its International trucks. The trucks were used for road maintenance and snow-removal operations. The vehicles ran more than three-quarters of the time, even on the coldest of days, on pure biodiesel. After a trouble-free field trial, the city decided to take the next step.

"The city has a significant goal of reducing greenhouse gas emissions in the next eight years," said Grant Ervin, sustainability manager for the city. "Since Optimus' solution significantly reduces our emissions footprint -- while also reducing our fuel costs with their new, sustainable biofuel -- it was an easy decision to increase the number of trucks we wanted to convert."

Ervin's team conducted an inventory of the city's truck fleet and prioritized the vehicles, in part, by the amount of emissions they generate. They found garbage and recycling trucks are the biggest emission contributors due to their fuel consumption and their low gas mileage – both impacted by the trucks' many stops, idling, and restarts throughout each work day.

"Our garbage and recycling trucks are driven hard every day and any solution has to be very rugged," said Mike Gable, Director of Public Works for the city. "We are pleased to see a purpose-built solution for medium- and heavy-duty trucks that, relative to other alternative fuel solutions, is easy to add to our trucks, minimizes changes to our maintenance operations, and minimizes any changes our fueling infrastructure."

The city will offset the costs of the new solution with funding provided by the state's Department of Environmental Protection Alternative Fuels Incentive Grant (AFIG) program and by Innovation Works' Technology Commercialization Initiative (TCI) funding.

### **The Total Biofuel Solution**

The city's total solution includes Optimus' bolt-on biofuel conversion system, a biofuel refueling station, and pure biofuel -- either pure biodiesel (B100/B99) or Optimus-grade renewable diesel.

20 of the city's trucks will be configured with Optimus' Vector, an EPA-approved, bi-fuel (diesel/biofuel) conversion system that runs in parallel to a truck's existing diesel system -- without significantly modifying, replacing, or rebuilding the engine. The Vector enables the engine to run exclusively on biofuel most of the time to optimize fuel savings and emission performance. Diesel is used during startup, shutdown, or fallback operation, if necessary. Built to operate in the harshest temperature ranges, Optimus' Vector system is compatible with all modern emission after-treatment systems such as selective catalytic reduction systems (SCRs) and diesel particulate filters (DPF). Vector is now compatible with a variety of diesel engines, including the Navistar DT 466 and HT 570, and the Cummins ISL 8.9L and ISM 10.8L.

To manage fueling operations, the city is adding additional refueling facilities at the 29th street garage to include a dedicated pure biofuel station. The challenge was to implement a solution that could heat the biofuels during cold weather while minimizing operational heating costs. Optimus engineered an energy-efficient solution by creating a multi-stage holding tank that heats only the volume of fuel that will be dispensed in the near-term which serves to reduce the overall heating demands by an expected 70%.

"To support the pure biofuels, customers can either convert existing fueling facilities or implement new ones," stated Colin Huwyler, CEO of Optimus Technologies. "Either way, it's all about creating a total solution which is why we do more than sell fuel conversion systems. In addition to helping with fueling stations, we are now building out our fuel partner network and will soon develop our Vector reseller network."

While the city will use Optimus' Vector system on many of its road maintenance and garbage/recycling trucks, Optimus is planning deployments in the near future across a wide range of home-fueled fleets. Typical vehicles include those from both government and commercial sectors that are used in retail/wholesale delivery and transport, waste services, on-road construction, and road maintenance, to name just a few.

Compared to other alternative fuel solutions, such as compressed natural gas (CNG), Optimus' solution does not require expensive new fuel stations, modifications to maintenance facilities, or cost prohibitive truck conversions. Optimus' systems do not necessitate any change in operator behavior, need any specialized maintenance training, or require any special safety certifications.

### **About Optimus Technologies**

Optimus Technologies is the technology leader in high performance bi-fuel conversion systems (diesel & biofuel) for medium- and heavy-duty fleets, providing the simplest way to reduce fuel costs, reduce emissions and address alternative fuel mandates. Savings can be so significant that fleets can realize a payback of less than one year from Optimus' solution. Driven by the vision and the knowledge that other alternative fuel solutions are prohibitively expensive and do not provide the same results as biofuels, Optimus was formed in 2010 to commercialize the results of five years of research and development of biofuel systems for diesel engines. Optimus Technologies is private company, based in Pittsburgh, PA. For more information, see [www.optimustec.com](http://www.optimustec.com).