



REDUCE FUEL COSTS. REDUCE EMISSIONS. EASILY.

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## Chicago Park District Lowers Carbon Footprint with Optimus Technologies' 100% Biodiesel Fuel System

### Chicago Park Visitors Breathing Easier with Less Emissions in the Air

Chicago's city parks reopened in time for Independence Day, and visitors can expect to breathe easier thanks to a continued initiative by the Chicago Park District to reduce carbon emissions and improve air quality.

The Chicago Park District has decreased their carbon footprint by enabling two heavy-duty refuse trucks to run on 100 percent biodiesel (B100), a cleaner burning alternative to petroleum diesel. The switch was made possible thanks to Optimus Technologies' Vector System, an advanced fuel system that enables these trucks to operate on biodiesel, reducing their overall carbon emissions by over 80%.

Like many municipal departments, the Chicago Park District recognized that their diesel trucks presented the biggest challenge to their sustainability goals. Refuse trucks in particular produce the highest amounts of emissions per vehicle in most fleets.

The trucks travel at low speeds and require frequent stops, actions that create potential for pollutants to be emitted into the atmosphere. With the use of biodiesel and the Vector System, many of these emissions are entirely eliminated, leading to improved air quality and public health.

#### **Biodiesel: Better. Cleaner. Now!**

Many public entities, like Chicago Park District, are finding a sustainable solution with biodiesel. Derived from waste oils, greases, and fats, the renewable fuel burns drastically cleaner than petroleum while having no detrimental impact on vehicle performance. Many trucks are

already running on low level blends of biodiesel, such as 5 or 20 percent, but to maximize the carbon reductions and environmental benefits, more fleet managers are turning to pure B100.

Chicago Park District fleet managers won't have to go far to source their B100 fuel, as their haulers will utilize biodiesel derived from left-over cooking oil recycled by Chicago's own restaurants. This cooking oil is processed at Renewable Energy Group's (REG) biorefinery in Seneca, Illinois, where it is transformed into biodiesel fuel for the trucks. This B100 project will support a number of domestic industries and the local

**"You would be hard pressed to find a more sustainable option for our refuse trucks than B100 biodiesel"**

- Mike Dimitroff  
Chicago Park District

economy, as it utilizes products all made in the USA.

### Optimus' Advanced Fuel System

B100 biodiesel, however, cannot be utilized as fuel without minor engine upgrades, which is where Optimus Technologies steps in. The innovative Vector System offers a seamless transition to B100 that avoids any disruption to a fleet's day-to-day operations and vehicle maintenance. The system easily bolts onto trucks as a retrofit on existing equipment, or can be integrated as a configuration option with new truck purchases.

"Chicago Parks District has always been recognized as a leader with their sustainability initiatives; Optimus is excited to be partnering with their team to continue that progress," says Colin Huwyler, CEO of Optimus Technologies. "Chicago Park District is demonstrating that even in a cold climate like Chicago, using 100% biodiesel to eliminate fossil fuels is not only feasible, but practical, cost effective, and available now."

In early 2019, the Chicago Park District requested two trucks to be upgraded with the Optimus system. In the project's first year, these two trucks drove over 12,000 miles and ran for over 2,690 hours. During this time, the Optimus' Vector System tracked and analyzed vehicle performance, cost savings, emissions reductions, and petroleum offsets. Chicago Park District has been thrilled with the results.

"Through this B100 project, we are seeing unprecedented reductions in carbon emissions, supporting a healthier and more sustainable environment for the people of Chicago," says Mike Dimitroff with Chicago Park District. "This pilot program demonstrates how biodiesel can be

a pathway to meeting carbon reduction targets and sets the stage for other park equipment to run on either higher biodiesel blends or B100."

The Optimus system solves one of the biggest obstacles to using high percentages of biodiesel – cold weather. Cold temperatures can cause pure biodiesel to gel and solidify, which presents a number of problems for vehicles. The Vector System prevents these issues with a groundbreaking, yet simple bi-fuel solution. The vehicle first starts on traditional diesel, and waste heat from the engine is recirculated to warm the biodiesel to a usable temperature. When conditions are right, the system automatically switches to biodiesel. The vehicle continues on biodiesel until the key is removed from the ignition, at which point the system purges itself using traditional diesel and automatically shuts down.

### Expanding the B100 Program

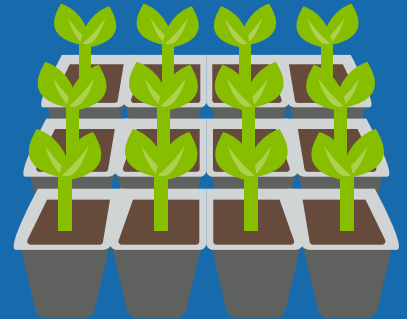
By using B100 in their refuse trucks, Chicago Park District, REG, and Optimus Technologies are promoting a circular economic system aimed at eliminating waste by using recyclable resources. After evaluating the performance of the Vector System, the Chicago Park District plans to double the number of trucks on Optimus' Vector System this year and hopes to introduce the City of Chicago into an Optimus Pilot Program with close to a dozen trucks running on B100, which will have Chicago residents breathing easier as the city makes its transition to sustainability.

### A Wide-Ranging Partnership

This B100 program is a partnership with Optimus Technologies, Chicago Park District, Renewable Energy Group, the Illinois Soybean Asso-

**In one year, two CDP Trucks with the Optimus Vector System drove over 12,000 miles.**

**The emission reduction was equivalent to planting 419 trees.**



ciation (ISA), and the American Lung Association (ALA). Chicago Park District is a member of the B20 Club, a collaboration between the ISA and the ALA that recognizes Illinois-based fleets committed to operating on biodiesel blends of 20 percent or higher.

### Partner Links

[Chicago Park District](#)

[American Lung Association \(ALA\)](#)

[Illinois Soybean Association \(ISA\)](#)

[B20 Club](#)

[Renewable Energy Group \(REG\)](#)

