Eaton Hybrid Power Systems
Fact Sheet

Eaton is a power management company providing energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 102,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.com

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Saving fuel and the environment

Proven reliable and efficient
Eaton hybrid power systems are sold all around the world and have accumulated more than 700 million miles of road-tested service, contributed to saving more than 19 million gallons of fuel and have reduced more than 195,000 metric tons of CO₂ emissions.

Eaton is a global leader in the development and manufacturing of complete hybrid power systems for commercial vehicles. Our hybrid systems help cities and businesses to run cleaner, greener, more responsible commercial fleets.

With nearly one third of all fuel being consumed by commercial vehicles, making the transition to Eaton’s hybrid power system means cities and businesses can significantly reduce the amount of fuel they consume and emission they produce while also reducing their overall fleet operating costs. It’s a decision that’s as economical as it is ecological.

A hybrid is defined as a vehicle that uses two or more distinct power sources to move. To create a hybrid commercial vehicle, Eaton combines a vehicle’s traditional internal combustion engine with an electric motor or a hydraulic pump to move the vehicle forward and then through regenerative braking the system recharges itself.

Eaton’s hybrid power systems provide their greatest value in commercial vehicles that burn tremendous amounts of fuel by stopping and starting and trucks and buses that idle at work sites to run accessories or tools.

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Solutions for multiple applications

We offer the world’s most complete line-up of hybrid power systems for commercial vehicle applications, and have extensive knowledge of electric hybrid, plug-in electric hybrid and hydraulic hybrid power systems.

### City Transit, Shuttle and School Buses

Buses are the world’s people movers. They operate round-the-clock in nearly every city and every country in the world. Their frequent start-and-stop cycles and need to keep passengers safe and comfortable even when not moving, make them a good choice for hybrid.

<table>
<thead>
<tr>
<th>Application &amp; Value</th>
<th>Improved Fuel Economy (estimated annual fuel savings per vehicle)</th>
<th>ePTO (Electronic Power Takeoff)</th>
<th>Engine Off at Stop</th>
<th>Hill Start Assist</th>
<th>Shiftable Park</th>
<th>DC to DC</th>
<th>Low Profile Shifter</th>
<th>Brake savings</th>
<th>Annual Emissions Reduction (Carbon and CO2)</th>
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</thead>
<tbody>
<tr>
<td>City Delivery – Low Profile</td>
<td>Up to 43%</td>
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<td>Up to 20,861 lbs; 9,462 kg</td>
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<td>City Delivery</td>
<td>14%-37%</td>
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<td>Up to 37,473 lbs; 16,997 kg</td>
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<td>Utility</td>
<td>Up to 1360 gal; 5148 ltr</td>
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<tr>
<td>Utility with ePTO**</td>
<td>Up to 1360 gal; 5148 ltr</td>
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<tr>
<td>Tractor</td>
<td>14%-37%</td>
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<td>Passenger Transport</td>
<td>Up to 30%</td>
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<tr>
<td>Passenger School Bus</td>
<td>Up to 30%</td>
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*Dependent on duty cycle, driver behavior, weight and operating conditions.

**Combines both drive and worksite fuel savings. Also dependent on duty cycle, driver behavior, weight and operating conditions. Shading indicates availability.

### City Delivery/Pick-Up & Delivery

Delivery trucks come in many shapes and sizes based on their intended use but they all have frequent start-and-stop duty cycles which make them an ideal hybrid application. Add in our engine-off at idle feature and three-phase auxiliary power generator to a refrigerated delivery vehicles and fuel consumption and emissions improve greatly.

### Utility, Telecommunications & Municipality

Our electric hybrid system with our patented engine-off power-take-off (ePTO) and optional Auxiliary Power Generator and AC Power Panel is ideally suited for the utility, telecom and municipal markets that utilize medium duty bucket trucks to keep operations running. In addition to reducing fuel consumption and emissions, this system can fully operate the existing hydraulic system which also greatly reduces noise while performing service in residential areas.