

RASER INTRODUCES

140 MPG ELECTRIC FLEET TRUCK

CUTS FLEET OPERATION COSTS BY 75%

140 MPG CITY—33 MPG HIGHWAY—400 MILES RANGE

Recent advancements in high power electric motor and battery technology enable full size trucks to benefit from full electric drive. Electric fleet truck technology from Raser delivers extraordinary fuel economy, without compromising power or performance. The key to this breakthrough vehicle is its powerful, yet economical 200 kilowatt advanced AC induction motor and high power lithium ion batteries, demonstrating the first true high power, 700 volt drive system architecture.

THE PAYLOAD OF A PICKUP, GREENER THAN PRIUS

The extended range electric vehicle (E-REV), can drive 40 miles daily in all electric mode, then up to 400 miles in hybrid mode with the range extender. It has twice the gas fuel economy as a Toyota Prius in city driving. Most drivers can fill the tank just 5 times a year in typical local driving, rather than once a week on a variety of renewable fuels including E-85 and electricity. And the best part electric fuel is just 60 cents per equivalent gallon recharged conveniently at home.

ELECTRICITY COSTS ABOUT 1/4 THE PRICE OF PETROLEUM

The E-REV truck offers no-compromise power and performance in an environmentally friendly package with the highest fuel economy and lowest emissions of any hybrid available on the market. This provides fleets a way to demonstrate the benefits of plug in electric drive and meet alternative fuel and CAFE mandates while reducing fuel costs by up to 75%.



Raser's Electric Fleet Truck technology provides over 140 mpg in typical local daily driving with near zero emissions under full with electric power.



Delivers the payload of a pickup truck with better fuel economy than a Toyota Prius in local daily driving.



Electricity costs about 1/4 the price of petroleum. Raser's E-REV fleet truck can help cut fleet fuel costs by up to 75% by using electricity as the primary fuel.

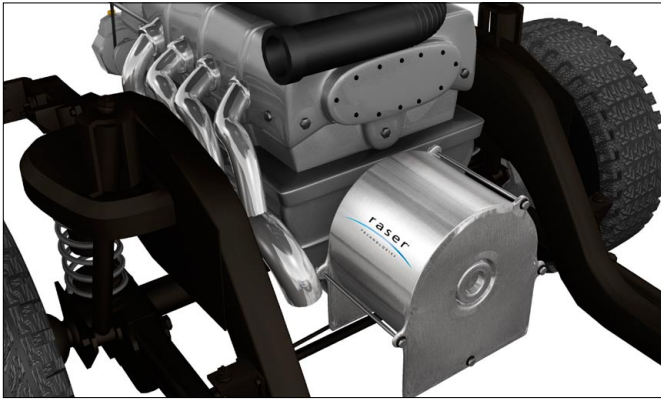
Raser's E-REV powertrain includes a 4-WD transmission; a 200 kW Symetron Enhanced AC induction motor and drive system; a 100 kW Symetron Enhanced Generator; Li-Ion Batteries; a controller; and a 2 liter engine used only to generate electricity.



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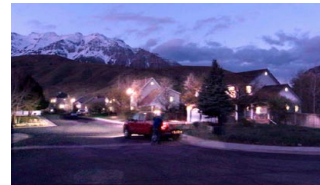


PROVIDES MOBILE EMERGENCY POWER FROM A BUILT IN 100 KW GENERATOR

The batteries are recharged rapidly and efficiently by the onboard Symetron Enhanced, PM Synchronous generator. The 100 kW generator can be used to deliver onboard mobile electricity to power jobsite tools, or the entire construction site. It provides enough mobile wattage to power your home and six of your neighbors. The extended range electric truck offers no-compromise power and performance in an environmentally friendly package with the highest fuel economy and lowest emissions of any hybrid available on the market.



The 100 kW, Symetron Enhanced generator can be used to deliver on-board mobile power to power jobsite tools, or the entire construction site.



The onboard generator can provide enough energy to power your home and six of your neighbors.

And when driving beyond battery range, a vehicle using Raser's electric drive system should get twice the highway gas fuel economy over the base vehicle. This is primarily achieved by operating the engine only at its peak efficiency of about 30% to recharge batteries, rather than at the average of 15% efficiency when accelerating the vehicle.



Full Electric Propulsion, Recharged by smaller combustion engine.

The truck is propelled entirely by an electric motor and a Li-ion battery, recharged daily by plugging in. The stock V-8 engine is replaced with a smaller 2 liter engine used only to generate electricity when driving beyond battery range.

4WD Fleet Truck Performance Criteria

Simulation Results

Acceleration: 0 – 60 mph (seconds)	8.8
Electric Range:	40 miles
Combined Range: (miles)	360 (12 gal. tank)
60 Mile Fuel Economy: (mpg)	280
Overall Fuel Economy: (mpg)	26 city / 38 hwy
Max Vehicle Speed: (mph)	>100



The E-REV Fleet Truck does 0-60 in just 8.5 seconds, faster than a gasoline powered Ford F-150. It's quiet and clean with near zero direct emissions. It can climb a 6.5% grade at 65 mph with enough power in reserve to pass, and charge its batteries.

Assumptions

ICE: (Engine)	2 Liter (Replaces V-8)
Curb Weight: (lbs)	5720
Battery Capacity: (kWh)	30
Rear Axle Ratio:	3.73:1
Transmission Gear Ratios:	3.08:1, 1.63:1, 1:1
Air Density: (kg/m ³)	1.293
Frontal Area: (m ²)	3
Coefficient of Drag:	.43
Rolling Resistance at 55 mph: (kWh)	11.5

To find out if your fleet can qualify for the early beta test program or to reserve a position for early delivery and deployment contact David West at Raser Technologies. david.west@rasertech.com 801-836-6350 or 1-888-81-POWER

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