

MEMO

DOCKET	
08-ALT-1	
DATE	FEB 23 2009
RECD.	FEB 25 2009

To: California Energy Commission
From: Jeremy Walker & Bob Garzee
The Standard Plug-In Hybrid Electric Pickup Truck
Date: February 23, 2009
Re: Response to AB118 Public Hearing in San Jose

Summary.

eTruck is a new Silicon Valley vehicles systems integration company, producing a **Plug-in Diesel-Electric Standard Pickup Truck** to provide Californian commercial and fleet buyers with a full-size PHEV replacement for their fleets of internal combustion pickups.

This memo is to provide a document for the public record of our intent to propose such demonstration project using AB118 funding.

Objectives are to:

- Reduce dependency on foreign oil;
- Greatly reduce fleet fuel cost;
- Significantly reduce greenhouse gas emissions;
- Accelerate adoption of fuel-efficient vehicles by commercial users;
- Re-invigorate transportation manufacturing in California, and
- Provide new 'green-collar' jobs in California and across the USA.

Target buyers are:

- Small business users, such as construction contractors, plumbers, farmers and others, for whom a standard pickup truck is an essential business tool, and for whom the rising cost of fuel makes undue operating burdens on their companies.
- Fleet owners, such as municipalities, counties and large commercial users, for whom operation of a fleet of standard gasoline or diesel trucks places significant financial and regulatory hindrance on their bottom line.

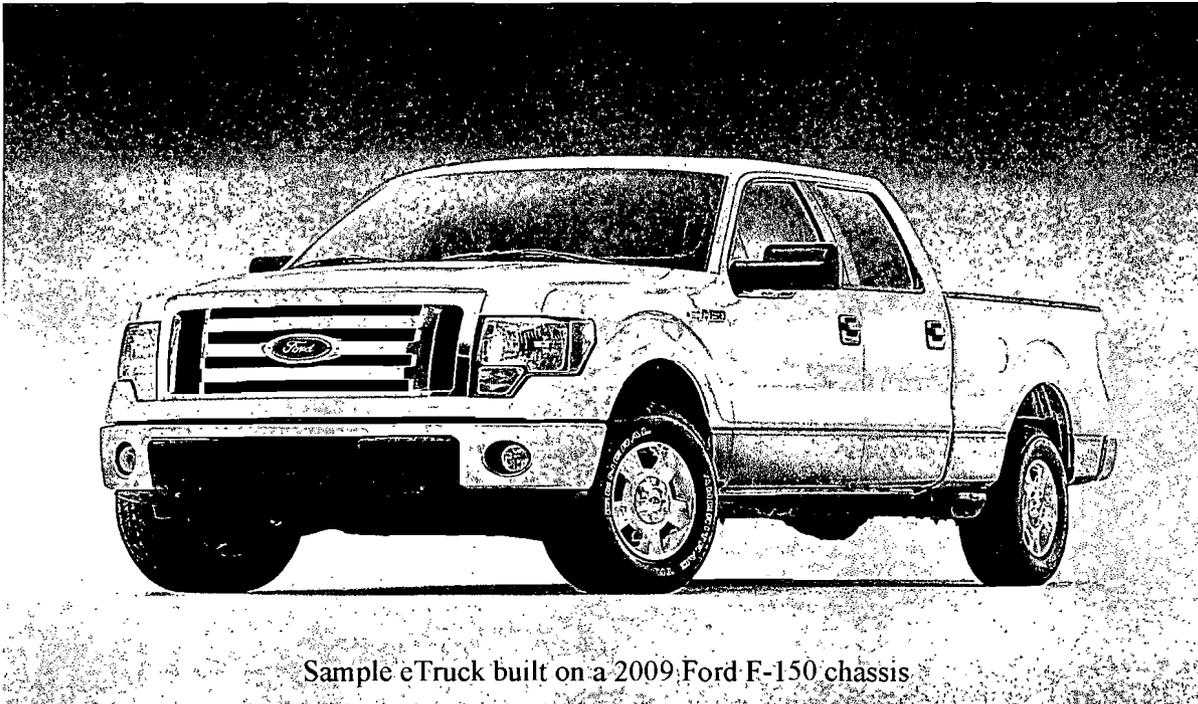
The vehicles.

We will be buying in best-of-breed components from a number of manufacturers, with a focus on USA-made parts. Parts suppliers include Ford (chassis), VW America (diesel engine), Electric Motor Works (wheelmotors), Tesla (controllers), Baldor (ancillary motors) and a whole host of local California suppliers for subsystems, cabling and essential components. The company will specialize in optimizing the electric and hybrid electric drivetrain which will be manufactured here in California, and the key IP will reside in the process used to integrate all the components into a hybrid pickup truck in a cost-effective, weight-sensitive and environmentally-benign way.

Target Specifications:

The first vehicles will be based on the ubiquitous Ford F-150 chassis, with an electric motor integrated into each wheel, battery packs under the load bed, a plug-in charging port next to the diesel filler, and a small 80kW diesel generator mounted up front, which will charge the batteries as they are drawn down.

This is a logical and proven series-hybrid approach, which gives the first 40 to 55 miles on pure electric power before the generator starts itself to charge the batteries. All the remaining amenities of the vehicle remain exactly the same, reducing any unfamiliarity which may be felt by these commercial drivers.



Sample eTruck built on a 2009 Ford F-150 chassis

Depending on daily mileage driven, we estimate that fuel consumption will leap from the 10mpg averaged by existing standard pickup trucks to 40mpg, or as much as 60mpg if the daily miles driven are less than 100.

Total range for longer trips is only dependent on fuel tank size – we estimate that with a standard 30 gallon tank, a fuel range of over 1,000 miles on a single tank will be normal.

Load carrying capacity will be identical to, if not superior to all the equivalent gasoline or diesel powered vehicles currently on the market. These will be permanent four-wheel-drive vehicles, with over 400hp, immense torque due to the electric motors, and full regenerative braking to capture energy otherwise lost while braking.

A popular option for contractors will be provision of a 5kW inverter built right into the truck. This means that they can run electric power tools on a remote jobsite, powered directly from the vehicle battery. This removes the need for temporary utility power on-site, and eliminates the use of polluting two-stroke gasoline tools, and the carriage of gasoline to feed them.

Complete package.

It is important to note that we will be providing commercial buyers with a complete package - not just an eTruck, but all of the 'extras' are part of the offering: sales, driver training, wireless remote diagnostics, service contract, on-site maintenance, financing, rebates, warranties etc...

Final pricing of the vehicle is anticipated to be \$52k to \$58k. Fleet vehicle finance is the key - this will be managed by members of our partnership team. We have also identified a number of clean transportation incentives for small business and fleet buyers, which we will apply for and manage on their behalf.

Distribution

Initially we will manufacture the complete vehicle in Silicon Valley, but as demand and geographical reach widens, we will launch a state-wide franchise operation after the first year, which will eventually become national.

We will continue to manufacture all the subsystems at a central location here in Northern California, and are developing a rigorous Dell-like manufacturing process system. This will allow us to franchise vehicle assembly to large regional pickup repair shops, once they've done the full training course at our California HQ and are then fully certified as eTruck assemblers and service technicians.

Our intention is to establish at least twelve large assembly franchises across California covering the major centers for commercial users. These will include Eureka, Redding, Healdsburg, Sacramento, Oakland, Modesto, Salinas, Fresno, San Luis Obispo, Bakersfield, several in greater Los Angeles, San Bernadino, and San Diego. We will concentrate on providing new green-collar jobs in areas suffering job-losses in the present financial climate.

The vehicle assembly checklist will be web-based – developed by technology partners in Silicon Valley, so we can maintain complete control of franchisee assembly quality, and can thereby continuously improve our process. An added bonus for fleet owners is online access to fleet maintenance records and schedules.

Team

eTruck will partner with many key California groups, including Silicon Valley City Fleet; multiple technology partners, Auto Tech Diagnostics; Silicon Valley Clean Cities Coalition, CalCars, Synergy EV Financial, and franchising partners to develop a Electric Truck product and support network in conjunction with the Silicon Valley Edition-Transportation Center of Excellence.

Deliverables:

- A plug-in diesel-electric series-hybrid fleet pickup;
- A headquarters plant in Silicon Valley (preferably San Jose) for development, design & manufacturing of all subsystems;
- A training center for vehicle assembly franchisees;
- A full financing package for fleet purchases of multiple vehicles;
- Provision of on-site and drive-in service for fleet eTruck pickups.

Estimated Grant Range of Dollars:

We estimate that with a grant of \$600,000 to \$1million, we will be able to demonstrate a functionally complete and operable plug-in electric hybrid truck to fleet buyers in California by mid-summer of this year, 2009.

Additional funding, a combination of private and venture investment, and further government grants and loans will enable us to be in series production and revenue by the end of the year, and by end 2010 we will be capable of producing 200 vehicles per month.

Our Teaming Approach:

