



Partners In

Plug-in Hybrid Medium & Heavy Duty Trucks



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About Odyne & DUECO, Inc.

- Odyne designs and manufactures plug-in hybrid propulsion systems for trucks over 14,000 pounds
- Founded in 2001, Odyne developed the industry's first commercial plug-in hybrid utility truck in 2007 with DUECO, Inc.
- Odyne is owned by the parent company of:
 - DUECO, one of the largest final stage manufacturers of trucks in the U.S.; and
 - UELC, one of the largest nationwide rental and leasing companies in the utility industry, two locations in California.
- Odyne operates in partnership with affiliates DUECO & UELC and works with Terex Utilities



Odyne & DUECO Production Facility

Why Interest in Plug-in Hybrid Trucks?

- Energy security (displace petroleum with electricity)
- Reduced emissions (GHG) & other pollutants (NOx, particulates)
- Reduced fuel consumption
- Reduced noise at jobsite



Plug-in Hybrid truck with Digger Derrick

U.S. Truck Market

- Over 8 million trucks (>14,000 pounds), High fuel consumption & idle time
- Approximately 100,000 work trucks with a PTO sold per year in U.S.

Medium and heavy duty truck segment excellent fit for hybrid technology.
Odyne expects strong growth for our systems within the next 3 to 5 years.

Early Adopters

- Produced 20 plug-in hybrid trucks to date, utilities across country receiving units, **expanding production** in 2009
- PG&E, Xcel, AEP, DPL, Progress Energy, FP&L, and others
- UELC – units available for rent



PG&E
Plug-in Hybrid
Medium Duty Truck

Applications

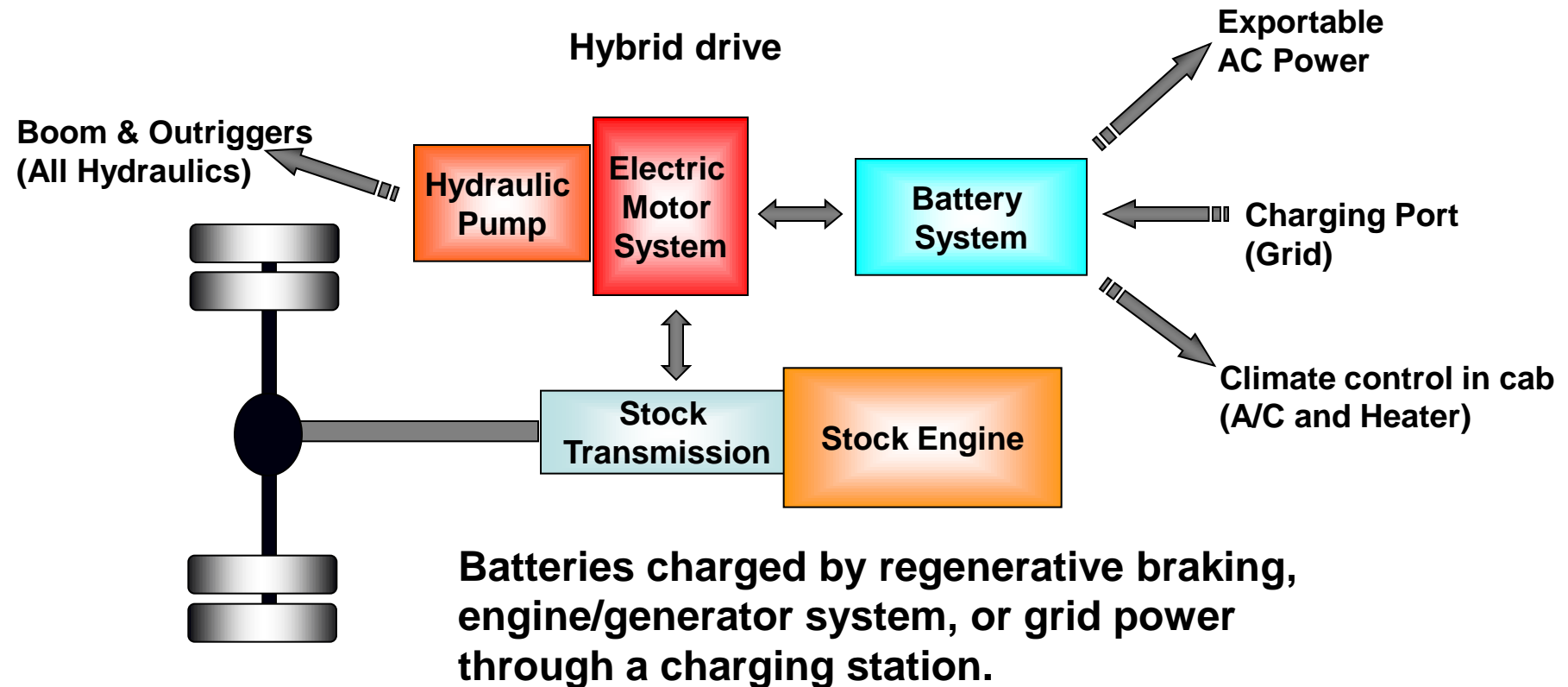
- Trucks over 14,000 pounds (examples):
 - Aerial device bucket trucks
 - Digger derricks
 - Compressor trucks
 - Refuse
- New truck market and retro-fit

Odyne is a leader in plug-in hybrids – First:

- Digger derrick
- Compressor truck
- Class 8 tandem axle truck (56,000 pounds GVWR)
- 4x4 class 8 truck (37,000 pounds GVWR)

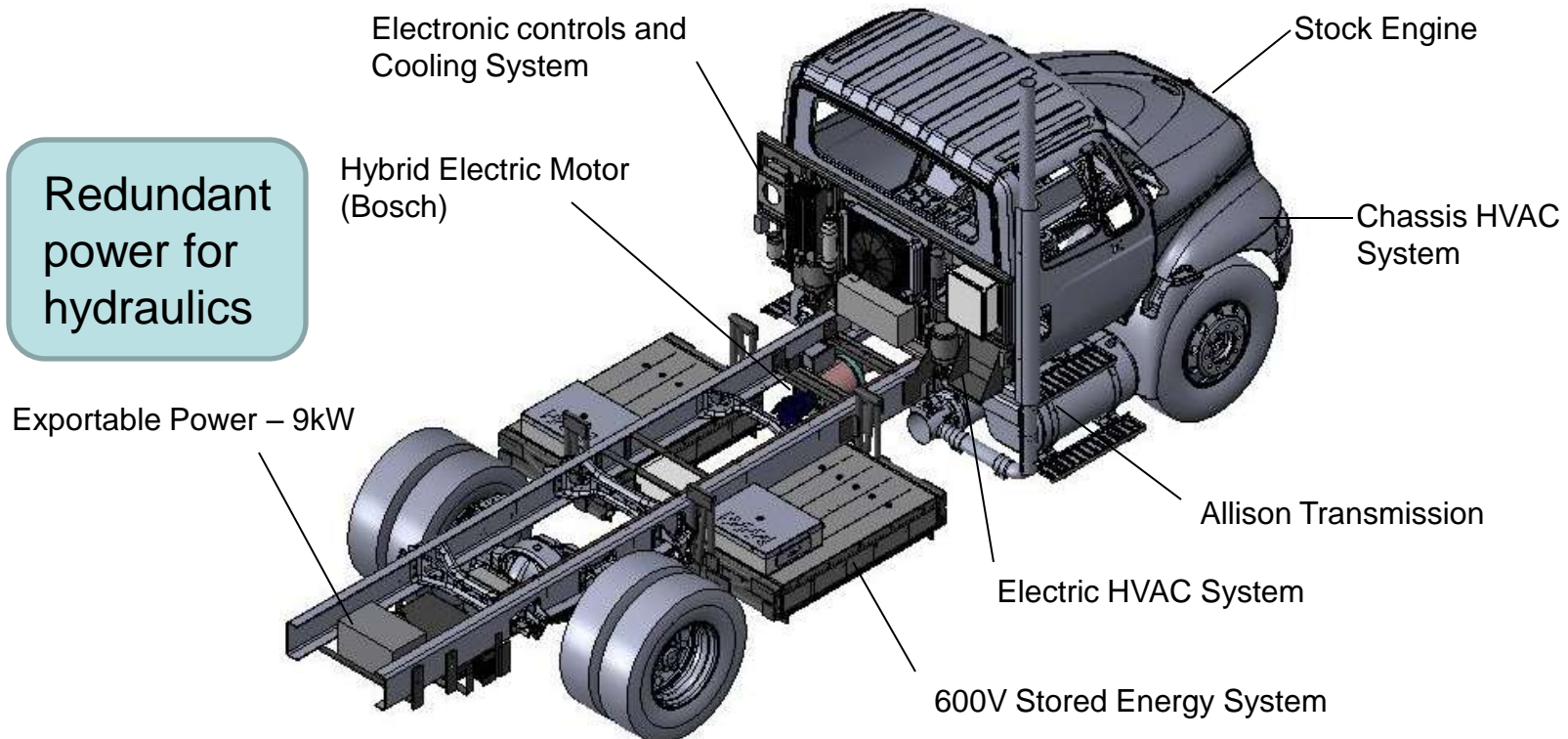


Odyne Parallel Hybrid System



No change to OEM Transmission or Engine parameters: Emissions Compliant

Odyne Parallel Hybrid System



Multiple Chassis Manufacturers, Multiple Weight Classes, Retro-Fit Capable



Benefits of Odyne Plug-in Hybrid

Reduced fuel consumption & emissions:

- Eliminates or reduces fuel consumption and emissions at the jobsite
- Increased efficiency when driving
- Savings of 50% per year are possible, depending upon the duty cycle
- Testing performed at Southwest Research Institute, results expected soon.

Quiet jobsite operation

Larger battery system than conventional hybrid

- 35kWh vs. 2Kwh – recharge using grid (or vehicle)
- Operates longer in all-electric mode at jobsite.
- Electric air conditioning and heat in cab, reduces idle time at jobsite.
- Exportable power, eliminates diesel generator.





Future Plans

Developing next generation plug-in hybrid system

Expanding production

- Developing lower cost, lower weight system (Li-ion).
- Leverage automotive supply chain, Scale to high volume
 - Design for multiple chassis makes and sizes
- Lower fuel consumption
- Lower emissions (2010 compliant)
- Quiet operation



Awarded DOE Congressionally Directed Project

\$1.9 million DOE funding for plug-in hybrid medium duty truck

- Seeking Southern California partners for 40% matching: customers, government and private funds, suppliers - Expand program to Southern California
- Develop and demonstrate next generation plug-in hybrid medium duty trucks



Questions?



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www.odyne.com

www.duecoplugin.com



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