

A publication for members of the Hybrid Electric Truck Users Forum (HTUF) - a project of the US Army and WestStart.



Hybrid DiaLog

Information Update

September 25, 2002

Issues of Interest for Hybrid-Electric Trucks

Sets "Framework" for Trucks

CARB Releases Draft Hybrid Bus Certification Rules - Flexible to Start; Questions Remain

The California Air Resources Board (CARB) has released proposed interim rules for certifying emissions from hybrid electric transit buses. While starting with buses, the rules become the framework for all heavy-duty hybrid vehicles.

The proposed "interim certification" process has several provisions - some suggested by industry - to help cost-effectively measure and give credit for the real emissions reductions offered by hybrids.

Interim Certification features:

- **Timeframe** - Three-year, interim certification period (MY 2004-2006); relaxed durability, useful life requirements.
- **Test Procedure** - Modified "chassis" dynamometer testing process to measure output of the entire hybrid system, not just the engine.
- **Emission Factor Ratio** - Testing establishes an emission factor ratio (EFR) showing the difference between a hybrid system bus and a comparable conventional bus - ratios of 0.5 - 0.6 expected (perhaps 40-50% reductions in emissions credited).
- **Alternative Credit** - Hybrid makers may choose an alternate approach that grants hybrids a 25% reduction off the NOx emissions generated by its engine - with no chassis testing needed.
- **Allowable Engines** - Ability to use CARB certified medium- and heavy- heavy-duty engines (not all engines).

Not all hybrid developers are pleased with the CARB draft. In particular, there are concerns about the limited range of engines that

continued: page 2

Truck Maker's Views

Commercializing Hybrids: What's Needed?

- Government demonstration funding;
- User/buyer commitments;
- Finding first applications.

These were some of the top comments from truck and system makers when asked what it would

continued: page 2

Have You Registered Yet?

H-TUF Forum Oct. 15-16 in Chattanooga: "Next Steps" High on Agenda

Next steps in taking heavy-duty hybrid technology and placing it into commercial uses is one of the key discussion topics on the agenda at the October 15-16 meeting of the Hybrid Truck Users Forum (H-TUF).

Fleet operators and users nationwide, including top military experts, together with leading truck and system makers will be involved in the two-day session that takes

continued: page 2

Also on Page 2: Trend Watch

- Tougher Emission Rules Coming for Heavy-Duty Refuse Trucks

CARB HEB Certification Questions Remain

- from page 1

can be used in the hybrid system. For some hybrids much smaller engines are possible and even desirable.

CARB is seeking comments on its draft document. The proposed rule goes before the full Board at the regular October 24 meeting.

To see the full document, visit the CARB Website at: www.arb.ca.gov/regact/bus02/bus02.htm

TrendWatch:

New Emission Rules Coming for H-D Vehicles: Refuse Trucks Next

CARB staff is currently working on proposed new rules that would reduce PM (particulate matter) emissions from heavy-duty, diesel-fueled residential and commercial solid waste collection (refuse) trucks. The draft of the regulations could come by early 2003. The regulations are part of California's overall Diesel Risk Reduction Program-- which targets both on- and off-road heavy-duty diesel vehicles in California. Public heavy-duty fleets would face regulations next. The goal is to cut diesel PM emissions 75% by 2010 from these engines.

- **Solid waste collection truck issues:** <http://www.arb.ca.gov/msprog/SWCV/SWCV.htm>
- **Diesel Risk Reduction Program:** <http://www.arb.ca.gov/diesel/dieselrrp.htm>

What's Needed to Launch Hybrids?

- from page 1

require for heavy-duty hybrid technologies to move into the truck "main-stream."

These and other observations on pathways forward will be shared during the Oct. 15-16 H-TUF meeting in Chattanooga. WestStart has gathered extensive comments and data from truck and system makers as part of its efforts to help commercialize heavy-duty hybrids. Coupled with truck user comments, what came out of the investigation were:

- The "sweet spot" first applications for heavy-duty hybrids;
- Best next steps to move the technology forward; and
- Overlaps with military hybrid platforms already under development.

These possible paths forward -- to be presented at the Chattanooga meeting -- will form the framework for much of the discussion at the forum. H-TUF participants, look for more at Chattanooga and in coming issues of the **Hybrid Dia-Log**.

2nd H-TUF Features

"Next Steps" - from page 1

place in Chattanooga, Tenn.

H-TUF is an on-going learning and dialogue process between truck users, the military and truck makers, exploring the new technologies that make hybrid heavy-duty vehicles possible, what benefits those technologies bring and the economic case for their use.

At this next session, truck and system maker comments on commercialization highlight the first morning. The forum also features briefings on the latest vehicles, hybrid demonstration programs, military support and a sneak peak at a new Class 8 hybrid truck.

Have you signed up?

[Click here](#) for the latest agenda and registration materials.

The Hybrid Truck Users Forum (H-TUF) is a joint project of the U.S. Army National Automotive Center (NAC) and WestStart to assist with the commercialization of heavy-duty hybrid technologies. The Army has already selected hybrids for its future combat vehicles to significantly reduce its fuel use and increase performance.

For additional information on the HTUF program, please call Fred Silver, program manager, at 626 744-5600, or e-mail him at fsilver@weststart.org.

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