

From: Cherry, Brian K
Sent: 8/6/2012 9:41:16 AM
To: Sandoval, Catherine J.K. (catherine.sandoval@cpuc.ca.gov)
(catherine.sandoval@cpuc.ca.gov)
Cc:
Bcc:
Subject: FW: ChinaEV - Fleets are Where It's At: China Utilities Should Study PGE's
Electric Vehicle Purchase Program

Thought you might enjoy this article.

From: owner-Newsflash-Real-Time@pge.com [mailto:owner-Newsflash-Real-Time@pge.com] **On
Behalf Of** News Flash
Sent: Monday, August 06, 2012 9:36 AM
To: Newsflash-Real-Time
Subject: ChinaEV - Fleets are Where It's At: China Utilities Should Study PGE's Electric Vehicle
Purchase Program

ChinaEV published coverage on PG&E's use of electric vehicles in its fleet and testing of alternative fuel technology. PG&E Director of Transportation Services Dave Meisel was quoted.

Fleets are Where It's At: China Utilities Should Study PGE's Electric Vehicle Purchase Program

By Alysha Webb

ChinaEV Blog, July 23, 2012

China's recently-released plan to promote fuel efficient and (mainly) battery electric and plug-in hybrid electric vehicles touches on fleets, but sadly doesn't do much to address this most important segment for widespread electrification. http://www.gov.cn/zwggk/2012-07/09/content_2179032.htm

Perhaps some of the two dozen cities Beijing designated as experimental sites for public fleet electrification are making huge efforts in that direction, but I doubt it. They certainly weren't

not long ago. http://www.chinadaily.com.cn/business/2012autoshow/2012-04/23/content_15114562.htm

Beijing (by this I mean China's central government) would do well to pay more attention to fleets, and to promote more cross-industry cooperation of the kind I found here in the U.S. when I talked to **Dave Meisel, director of transportation for Pacific Gas & Electric** www.pge.com, or **PG&E**. As one of the largest public utilities in the U.S., PG&E has a huge fleet—some 14,000 vehicles. That's a pretty big Petri dish for testing out alternative fuel technologies, and PG&E has been doing that for years, says **Meisel**, who says he has been in the business for 35 years. The utility has gotten much more active in testing alternative fuel technology vehicles in the last four or five years, he says, which makes sense because finding replacements for gasoline as a vehicle fuel has become a much hotter topic in the last four or five years.

PG&E isn't doing this out of the goodness of its heart. Partly, it is compelled by California law to have a certain percentage of low-emission vehicles in its fleet. www.arb.ca.gov

But PG&E is also looking to save money. Isn't PG&E a bit special because it has a huge fleet so small savings can equal a large amount? I asked **Meisel**. (Sort of like a small percentage of the Chinese population can still equal a big market.) He said: "(Alt-fuel vehicles) makes sense everywhere but the dollars are much bigger for PG&E because of our fleet size. We actually do (the alt-fuel vehicles) because they make business sense. Sometimes they make sense because you are improving your carbon footprint, sometimes they save money." Some examples of money-saving later in this blog.

As you might expect, PG&E is trying out various kinds of electrified vehicles. It has a varying numbers of vehicles in its fleet from a wide range of companies including VIA Motors (extended range electric vehicles) www.viamotors.com, Efficient Drivetrains Inc. (PHEVs) www.efficientdrivetrains.com, and Quantum Technologies (multiple kinds of electric drivetrains and fuels) www.qtw.com. PG&E also works with battery makers such as A123 www.a123systems.com and Dow Kokam <http://dowkokam.com/technology.htm> and with OEs such as General Motors www.gm.com on development. What I found unique and useful for not just PG&E and the companies it works with, but also eventually for consumers of alt fuel vehicles, is that PG&E influences the design of the vehicles so that they better meet its needs. That is why VIA Motors extended-range Chevy Silverado pickups come with an optional on-board inverter that can be used in place of an external generator. PG&E suggested VIA add that feature, says **Meisel**. At around \$79,000 per truck ("Anticipated selling price is \$79,000 at volume" says the VIA website), the EREVs are pricey. But the ability to one day use a fleet of

them to light up a neighborhood that has lost power makes that price acceptable, says **Meisel**. Utilities are judged by their ability to provide continuous service, he says, and this could contribute to that ability. Having input from a potential future customer helps both parties out, adds **Meisel**.

“Sometimes when you are a pickup truck manufacturer you look at it purely from your perspective. I have a different perspective,” he says. “I ask them if it can do things that would help us out, have conversations about how to make it a good deal for everybody.” Since other utilities have the same needs as PG&E, this also helps create a market for the vehicles, says **Meisel**.

The money for these projects comes from different sources. Sometimes the technology company pays for the modification, says **Meisel**. Sometimes PG&E chips in. Sometimes there is government money involved. For example, PG&E is working with Peterbilt Motors Co. www.peterbiltmotors.com (think really really big trucks) on a Class 7 extended range electric truck. PG&E contributed grant money from the California Energy Commission www.energy.ca.gov to the project.

When I spoke with him **Meisel** has just returned from Toronto, where he met with General Motors (**Meisel** is on an advisory board) about GM’s b-fuel compressed natural gas Chevy Silverado and GMC extended cab pickups.
<http://www.worktruckonline.com/News/Story/2012/03/Video-GM-s-Ed-Peper-Discusses-New-Bi-Fuel-CNG-Pickup-Trucks.aspx>

Meisel is excited about this technology. Though CNG is cheaper to use than gasoline, the refueling infrastructure is not as extensive. “Straight CNG is pretty hard for us,” he says. But the 17 gallons of CNG is enough for PG&E’s trucks to get pretty much anywhere they need to, he says. After that, they can run on widely-available gasoline. The bi-fuel option adds \$11,000 to the price, says **Meisel**, but he figures the payback period won’t be that long with the cost of gas these days. GM is taking orders now for 2014 delivery.

PG&E is electrifying its entire fleet of bucket trucks (as the name suggests, those are the trucks with those bucket-like lifts that a person stands in to repair electric lines and the like), says **Meisel**. He didn’t go into detail about what kind of electrification (or rather I didn’t ask) though he did say PG&E is working with several companies. The payback period for the \$24,000 conversion cost is only 3.5 years, says **Meisel**. “In the old version we would idle a

vehicle 7-8 hours a day. In the new version it is zero,” he says. There’s also a substantial environmental benefit, I couldn’t help thinking....

How big is his budget for alt-fuel vehicles? I asked **Meisel**. PG&E doesn’t have a budget just for alt-fuel vehicles, he says. “What we do is we have a vehicle acquisition budget,” he says. “We know we are going to add, delete, buy sell vehicles.” Right now, he seems pretty high on VIA, or companies with similar technology.

“We really like the idea of an extended range electric a lot, we like the idea of exportable power, we are spending a lot of time on that,” says **Meisel**.

If you don’t have a bi-fuel pickup or an extended –range EV with exportable power, however, don’t despair. Just keep track of where **Meisel** is spending his time. He speaks at about 100 events a year, says **Meisel**. People approach him about new technologies at these events all the time, or the technology is on display and PG&E likes it.

Now, I must return to China’s situation. Are China Southern Grid <http://eng.csg.cn/> and State Grid www.sgcc.com.cn guys hanging out at various alt-fuel vehicle events to find promising new technologies for their fleets? I can only hope so.

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