

Transcript of Felix Kramer's 9-minute remarks at breakout session, "The Consumer: Who, When and Why?" at The Business of Plugging In 2009 Conference [http://www.pev2009.com/program/index.asp - w\\_bs1\\_3](http://www.pev2009.com/program/index.asp - w_bs1_3) . This page and the audio are at <http://www.calcars.org/audio-video.html>

**Introduction** by session moderator **Brett Smith**, director of the Automotive Analysis Group, at the Center for Automotive Research (CAR) in Ann Arbor Michigan (CAR organized The Business of Plugging In 2009 Conference.) <http://www.pev2009.com>

Our next speaker is Felix Kramer. I had the chance to meet Felix actually several years ago very briefly and then last November out in California at a meeting of the Volt people and several folks from the community in California who are very passionate about this subject. At the end of the day, Felix gave up and gave what I and [GM's] Rob Peterson -- I don't think Rob is in the room -- and I agreed, was the most amazing speech we had ever heard. This was right at the stage, I think it was the day that the Big Three chief executives were on Capitol Hill, and the mood was so bad, you remember. Felix got up, a real California guy, being someone who's been passionate about the environment for a long time, got up and gave a speech that was just stunningly thoughtful on why we need our automotive industry to succeed to get to this point. And Rob and I looked at each other and said, "Yeah, he gets the PEV part but he also gets the importance of the industry as a whole." Our next speaker is Felix Kramer from CalCars Initiative.

**Felix Kramer** : So I want to talk about what we've learned from conversions, and what they tell us about future consumer demand.

Seven years ago, I started CalCars.org to put plug-in hybrids on the map. From 2002 to 2005, all we heard was "Nobody's interested, nobody wants to plug in -- there's no business case, there's no benefit, and the carmakers will never go for it."

Andy Frank, meanwhile, did the first retrofits, mostly on big GM vehicles, and almost five years ago we brought the first Prius conversion to Detroit to show to an automotive reporter. On the way back we stopped at the Center for Automotive Research to show them a plug-in hybrid.

After us, *hundreds* of Prius conversions and Ford Escape conversions gave a glimpse of the future to a lot of important, critical people -- some journalists, think-tank people, C-level executives, elected officials.

And those vehicles enabled us to communicate three powerful slogans that became kind of memes: "100+ miles per gallon" (with a footnote "plus a penny or two a mile of electricity"); "Good enough to get started" with the technologies we have now -- good enough to get started; and "Cleaner, Cheaper, Domestic" as a way of describing the benefits of electricity compared to gasoline.

And then they also enabled us to show this [a short "dongle" cord, with a regular 110 electrical plug on one end and a plug for the vehicle on the other] and get a laugh from people, saying "every alternative fuel source needs a new infrastructure and new technology; this connects us to *today's* infrastructure." And that was a really very powerful message.

So, with the help of a broad coalition that began to form, most of those objections fell away in 2006 to 2008.

We still face a lot of steps between here and successful commercialization. But today, for the first time, I'm taking this occasion to *DECLARE VICTORY* -- plug-in hybrids are coming! And we actually haven't had a chance -- you know, we've been working so hard all the time -- to actually say, "Look what we've done! We've made this happen. We've made this amazing change."

Now before I go on to talk about the market, I want to talk about a **major new development**, which I think will become part of the "What comes next?" story.

Having achieved our primary goals, we started to look at how long it takes new vehicles to penetrate into the market. It took hybrids *10 years* to become 1% of the fleet and 2% of new cars. If you take that and you multiply [it] by a highly optimistic 10x factor, 15 years from now, we will still have a dribble of new plug-in vehicles in the market compared to 250 million vehicles in the United States and 900 million in the world.

That means that during those 10 to

15 years, we won't get the petroleum-reduction benefits we need. So, that leads us to a new goal: we're pointing to a global business opportunity to fix the vehicles that are on the road today.

Intel's former CEO Andy Grove likes to talk about big gas-guzzlers, PSVs - - Pickups, SUVs and Vans -- as the market (and I'd add municipal and school buses and some other vehicles to that), and he's a big fan of this strategy, although there's a lot of skepticism about it. We think it's possible to retrofit to safe, drivable, validated EVs or PHEVs, depending on the drive cycle and the technology and construction of the vehicle, *millions* of vehicles.

So, we're launching a new campaign that's spotlighting a few prototypes from small startups. We're collecting endorsements and getting a lot of partners on board about this. We want this effort to happen in two years instead of seven years. I'm happy to talk about it, give you a flyer, and all the info about it is at CalCars.org.

So back to the questions that we want to talk about here. 2010 is our real major unexplored frontier and our most critical year. The vehicles are coming this time -- not prototypes, not conversions, but real production cars. And they're going to come into a kind of twilight zone, at an unusual intersection.

On the one hand, you've got the public -- with its understanding, its conceptions and its misconceptions, its expectations and its hopes that somehow there's going to some sort

of solution that's going to get us out of this problem, this situation. And they'll bring all of those expectations to their encounters with multiple flavors of vehicles -- from small manufacturers and from large companies.

So, they're going to start to see what plug-ins can deliver and there's going to be some mismatch in their thinking. And we hope that they'll recalibrate their expectations in healthy and enthusiastic ways. But that's not guaranteed.

Automakers and the broad community can take a lot of steps to influence this unpredictable journey. The actions and communication strategies that we choose can significantly improve the chances of successful commercialization.

**So my predictions:** I think the first vehicles will be gobbled up by early adopters. I think for a long time, carmakers will sell as many as they can build. I think the early buyers are going to self-select, based on the drive cycles and access to home or business charging.

If 50% of the population has access to a plug right now, that's *not a niche* -- that's a huge market and we don't have to worry for a long time about where people are going to plug in. Plenty of people can start by plugging in.

And millions of people are going to pay for features, just like they do for every kind of car. They'll pay for the green feature, the smart feature, the cool feature, the advanced-technology feature, the prestige

feature. And all of those features get communicated by positioning, by design and by advertizing.

So how many people are we talking about? Let's take one example: there's an acronym *LOHAS*, the LOHAS community -- Lifestyles of Health and Sustainability. It's a marketing category and people estimate that over 50 million people in America, 25% of adults, are willing to pay more for products where they will get the features that appeal to the LOHAS mentality. That again is *not a niche*.

Now one caveat to all the predictions that we've been reading about: they are all based on "BAU" -- Business As Usual. Business As Usual -- I don't think is likely in the next couple of years. It could come from bad news: higher oil prices, international crises, supply disruptions. We could move at any point to a post-Pearl Harbor situation where we say we've got to retool the whole country because we don't have guaranteed access to oil any more.

It could also come from positive steps, like carbon credits and additional incentives on local levels.

So now, **I'm really encouraged** that the carmakers see as their allies and -- this is in contrast, in some cases, in the past -- not only the utilities, but plug-in advocates, communities, and regional efforts like project *Get Ready* -- and I highly recommend that you look at <http://www.projectgetready.org> .

So it's now possible for carmakers, the media and advocates to use new

communications tools to give voices to the future drivers who are going to be the first owners of plug-in cars. These customers and future customers can describe now what they hope for, and when they start getting them, they can say what they like and what they'd like in version 2, because we're talking about automotive *software* now, to a great extent, and hardware, but a lot of it is -- version 2 can go right into their car, some day in the future.

So, let's think of all of those customers as a giant fan club and as a focus group.

For the roll-out in the next year, I think the guiding principle for all of us should be the ones that GM embraced when it announced the Volt:

transparency and two-way communications at every stage.

This year, just like those demonstrators' cars, those conversions for all of those years, the cars are going to do us a big favor and give us the biggest boost yet. They give us the chance to personalize the experience and for people to communicate their own *personal* experiences. We can enlist every new driver as an advocate -- at *least* for their families, their friends and their neighbors and coworkers.

But I expect, actually, many of them will jump in and become amateur evangelists to audiences who want to hear all about this. And I can't wait! Thank you.