Comment 1 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Sherry
Last Name: JANSEN
Email Address: maraschinosherry@aol.com
Affiliation:

Subject: Alternative Energy
Comment:

I am so pleased to see that California has initiated such an innovative plan with their partnership with Better Place. You will truely set the pace for the rest of the nation in this badly needed plan. This type projet was outlined in Jeff Wilson's new book The Manhattan Project of 2009 Energy Independence NOW. It was thrilling to see such projects already underway in America. It would cost the equivalent of 60 cents a gallon to charge and drive an electric car. The electricity to charge the car could also come from solar or wind generated electricity. If all gasoline cars, trucks, and suv’s instead had plug-in electric drive trains, the amount of electricity needed to replace gasoline is about equal to the estimated wind energy potential of the state of North Dakota. Why don't we use some of the billions in bail out money to bail us out of our dependence on foreign oil? This past year the high cost of fuel so seriously damaged our economy and society that the ripple effects will be felt for years to come. Why not invest in setting up some alternative energy projects on a national basis, create clean cheap electricity, create millions of badly needed new green collar jobs, and get out from under our dependence on foreign oil. What a win -win situation this will be. Congratulations!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-12-11 02:18:01

No Duplicates.

Comment 2 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Paul
Last Name: Kydd
Email Address: partnerships1@comcast.net
Affiliation: President, Partnerships 1, Inc.

Subject: PHEV conversion regulations
Comment:

```
I believe these regulations will strangle a promising approach to
emissions reduction and energy independence at birth. I am
attaching comments. I have forwarded 30 copies by mail. I would
appreciate an opportunity to present them at the hearing.

Paul H. Kydd
```

Attachment: www.arb.ca.gov/lists/phev09/3-carb_comments.doc

Original File Name: CARB Comments.doc

Date and Time Comment Was Submitted: 2009-01-10 17:18:06

No Duplicates.

Comment 3 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Steve
Last Name: Woodruff
Email Address: steve@autobeyours.com
Affiliation:

Subject: Pro Plug in hybrid electric Vehicle conversions
Comment:

I have personally observed the gain in fuel economy after upgrading a Prius to a PHEV. Forcing battery warranty periods would force underground all the efforts of bright engineers and vehicle owners. Regarding cold engine restart, software is easily implemented to reduce this problem on the current phev kit I have seen. Additionally cold engine restart should be compared to a vehicle that has been burning fuel constantly for 15, 30, 60 or more miles. In short many people want phev kits or production autos. Brief education should be encouraged of the correct use of a phev.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-14 11:23:55

No Duplicates.

Comment 4 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Daniel
Last Name: Phelan
Email Address: dphelan@forwardprinting.com
Affiliation:

Subject: RULEMAKING TO CONSIDER THE CONSIDER PLUG-IN HYBRID ELECTRIC VEHICLE TEST PROCEDURE AMENDME
Comment:

To the board:

An owner of a hybrid that wishes to covert his or her car to a "plug-in" should not be burdened more or less than an owner who wishes to modify his or her non-hybrid car. Car owners all across our state modify their vehicles in various ways such as upgrading the carburetor, muffler system, fuel systems, and tire sizes often times resulting in a decrease in fuel efficiency and an increase in carbon release.

CARBs purpose is to regulate and monitor air pollution in California, not to over regulate those emerging industries that would help CARB reach its goals.

Shop owners that do "plug-in" conversions should not have to provide warrantees or guarantees that differ from the warrantees or guarantees that traditional car maintenance and repair shops are required to offer. Warrantees or guarantees are market devices that help competitors separate themselves and should be the option of such "plug-in" conversion shops and/or buyers of such conversions.

Another concern I have is that "Fuel Cell" type EV's are being fast-tracked through the regulatory process. Electric cars are the way of the future, but not PEM fuel cell EV's. Hydrogen produced and packaged for use in cars is highly redundant when the car is already operating on electricity. Using PEM fuel cells is an inefficient use of PEM technology when one considers that %50+ of the energy produced is heat and is mostly useless to the system or operator. Also, hydrogen requires much energy to make and then store in liquid form.

It is my opinion that electricity is the future of energy, and because its use in vehicular motorization is conducive to the goals of CARB it would be more productive to resist placing regulatory barriers between citizens and their right to own and drive electric and hybrid/electric vehicles.

Thank you,

Daniel Phelan
Oakland, CA

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-14 15:22:25

No Duplicates.

Comment 5 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Darren
Last Name: Overby
Email Address: darren@pactradewinds.com
Affiliation:

Subject: Don't stifle the PHEV industry in it's infancy
Comment:

For years I have been frustrated by my inability to purchase an electric car. Finally, a year ago I became the proud owner of a PHEV. I have consciously made lifestyle choices such that my stores, schools, work etc are all within a few miles of my home and as such my family can drive entirely in electric mode to these locations so the engine is never used at all for these trips. For my family the PHEV Prius is a REAL neighborhood electric vehicle (NEV) capable of safely keeping up with 35mph traffic (that is normally going 45mph) with the added safety of air bags, crumple zones and reinforced occupant area. It's something the automakers have had the technology to make a long time ago but kept it out of consumers hands.

Like all PHEV drivers I know, my family is extremely concerned about the environment and therefore also very educated on how to drive in a manner that produces the absolute minimum emissions possible no matter what the length of the trip.

The California Air Resources Board should not stifle the PHEV industry while it's still in it's infancy and while it's just beginning to increase public awareness of the tremendous potential these vehicles have to help our environment. PHEV09 will prevent environmentally minded citizens from even performing new "proof of concept" and "public perception changing" conversions. And without access to the source code of Prius's and other hybrid vehicle computers, we will once again be at the mercy of the automakers. PHEV's could easily go the way of the electric car and automakers will once again win a victory in their goal to stall cleaning the environment with electrification of transportation.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-14 23:06:41

No Duplicates.

Comment 6 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Shelia
Last Name: Doney
Email Address: sdoney@uhs.berkeley.edu
Affiliation:

Subject: Plug-in Hybrid Electronic vehicle test procedure amendments
Comment:

Please give the small start- up Companies a pass and work with them on complying with reasonable standards.

The mega-Companies can’t compete although they’ve had 35 years to get it right.

It’s outrageous that the same mega-corps that have helped run our economy into the ground still get all the brakes.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-15 07:41:17

No Duplicates.

Comment 7 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Leo
Last Name: Galcher
Email Address: leo4marg@cox.net
Affiliation: EVAOSC, inc.

Subject: PHEV09
Comment:

Several years ago CARB killed the EV. Now you are ready to put a stake in the heart of the PHEV. WHY? There are millions of vehicles in CA that are not started every 3 days. You can insure clean running PHEV by simply requiring the PHEVs to run the IC until the CAT is operational upon start up. Perfect -NO, but probably a 75% reduction vapor release.
We are beginning to move in the direction production EVs, roadblocks are not needed.

Next week, the California Air Resources Board is expected to adopt strict new regulations based on the theory that the innovative technology sold by 3Prong Power and other companies may be bad for the environment. Sherwood and Guzyk say that if the board adopts the strict new rules at its January 22 and 23 meeting, it likely will force them to shutter their business, which just had its grand opening last month at Green Motors on San Pablo Avenue.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-15 10:48:05

No Duplicates.

Comment 8 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Edward
Last Name: Spivey
Email Address: espivey@cogentenergy.com
Affiliation:

Subject: Regulations:
Comment:

Who Killed the Electric Car? pinned some of the blame for the death of the electric vehicle in the United States on the California Air Resources Board. In 2003, the board relaxed its landmark support for so-called zero-emission vehicles after being sued by the major car companies and the Bush administration. Automakers and the administration convinced air board members that hydrogen fuel-cell vehicles were a more viable technology than battery-operated cars, despite the fact that fuel-cell vehicles currently cost about $1 million each and are believed to be at least fifteen to thirty years away from mass production.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-15 11:25:17

No Duplicates.

Comment 9 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Edward
Last Name: Spivey
Email Address: espivey@cogentenergy.com
Affiliation:

Subject: Proposed Regulations on PHEV 09:
Comment:

```
I have two points to make:
First does CARD really think that the handful of converted Prius
that are providing savings in overall air pollution and reduced
gasoline consumption are having any effect on smog and is thus
truly worthy of this currently proposed regulation (and from what I
have read, the smog issues are based on dubious facts)? I cannot
help but believe, and expect that most will feel the way I do, that
some special interest is involved.
Second, does CARB need the more publicity like the following:
"Who Killed the Electric Car? pinned some of the blame for the
death of the electric vehicle in the United States on the
California Air Resources Board. In 2003, the board relaxed its
landmark support for so-called zero-emission vehicles after being
sued by the major car companies and the Bush administration.
Automakers and the administration convinced air board members that
hydrogen fuel-cell vehicles were a more viable technology than
battery-operated cars, despite the fact that fuel-cell vehicles
currently cost about $1 million each and are believed to be at
least fifteen to thirty years away from mass production."
This is misguided and given the State's financial issues, harmful
in so many ways.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-15 11:35:34

No Duplicates.

Comment 10 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Shelby
Last Name: Solomon
Email Address: ssolomon_p@yahoo.com
Affiliation:

Subject: Please drop warranty requirements for conversions
Comment:

The Executive Summary for this proposed amendments to PHEV testing includes the following: “The most recent changes to the ZEV regulation, considered in March 2008 included provisions that strongly encourage commercialization of plug-in HEVs (PHEV) or off vehicle charge capable (OVCC) HEVs.”

However, parts of the proposed changes will have the opposite effect, to discourage commercialization of PHEVs. In Section 4.5 Aftermarket Parts Program, the requirement for mandatory warranty periods as listed in Table 4-1 sets unrealistically high requirements that will destroy the newly developing plug-in hybrid conversion industry. Current battery technology cannot last for 10 years or 150,000 miles, so requiring the conversion companies to offer such long warranties will require them to charge for triple conversions, essentially putting them out of business.

There is much research going on to improve battery technology, so this is an area where we should encourage innovation and let the market sort out the viable technologies. This means encouraging small businesses to do these conversions and see what works and what people are willing to pay for. Don’t inhibit this innovation by setting unrealistic regulations. You should drop the warranty requirements entirely from the regulations of conversion systems.

I also urge you to work with the small conversion businesses (such as 3Prong Power in Berkeley, Luscious Garage in San Francisco, and Pat’s Garage in San Francisco) to ensure that the emissions testing requirements for conversion systems are affordable for small businesses. These businesses don’t have the resources of the major car companies, that can afford to do extensive testing. However, these small companies do have the ability to be much more innovative, much more quickly, which has the promise of advancing our ZEV technology faster than the major car companies can. Please don’t over regulate this emerging industry and retard its development.

Sincerely,
Shelby Solomon

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 00:31:49

No Duplicates.

Comment 11 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Howard
Last Name: Letovsky
Email Address: howard@instawave.com
Affiliation:

Subject: PHEV Systems R&D Certificates
Comment:

Howard Letovsky 707-481-5252
CARB Proposed PHEV Regulation Comments:

I am of the opinion that CARB and all developers of systems intended to improve gas mileage and reduce emissions and dependence on foreign oil are working toward the same goal. Therefore I suggest the following:

1. A developer should be able to acquire a “Certificate to Perform R&D” from CARB immediately on request for on any technology with the stated purpose of reducing the use of fossil fuels and reducing emissions.
2. This “Certificate to Perform R&D” should include the name, address, and phone number of the technologist, a short description of the intended technology, and the VIN number of the intended test vehicle if one exists. An addendum to the “Certificate to Perform R&D” should be gotten if a test vehicle is chosen at a later date.
3. When the test vehicle that uses the above stated technology is registered for road use, or within 6 months of the receipt of the “Certificate to Perform R&D”, it must get a smog test.
4. If the test vehicle passes the smog test, it is allowed to be used on the road for a year – at which point a second smog test must be successfully passed or the vehicle modifications must be removed. If the second smog test is successful the modifications can stay.
5. CARB should provide free emissions and compliance testing for all holders of said “Certificate to Perform R&D”.
6. All technologies covered under the “Certificate to Perform R&D” should not be subject to any harsher or different regulations than any other replacement part that does not affect a smog test.
7. In the specific case of PHEV modification units, CAB should provide convenient testing services for all developers of said PHEV modification units, and if the units are found to be “vehicle neutral” through the onboard CANBUS or OBD system, CARB should issue an opinion that said PHEV modification unit does not nullify the car maker’s warranty. I realize this opinion is probably impossible to defend in court but it could be helpful to get the auto makers to work together with independent technology developers.
8. Extend the same 500 unit courtesy that Hymotion got to all developers of PHEV modification units. It is not nice to play favorites.
9. In the case of R&D PHEV modification units that are bought by an end user in the retail sector, they must take full responsibility for any loss, failure, or warranty problems that the PHEV modification unit causes with the full understanding that they

are participating in a technology development exercise.
10. Production PHEV modification units – when certified - should not carry any greater warranty requirements or loss indemnifications that any other aftermarket part is subject to.
11. The only way the major car companies will ever fully deploy long range PHEVs or pure electrics is when it is absolutely clear that it is profitable and the market is ready. The efforts of independent technology developers – when successful – will push, or shame, the major auto maker's into taking action to meet market demand. Ultimately, only large well funded auto maker's can make cars for a mass market so there is really no threat to the auto industry from independent technology developers.

I have built over 200 electric vehicles in the past 25 years – including the World's First Electric Police Car, featured on the Discovery Channel, and a fully functional Solar Powered City Electric car that gets 20 miles per day on sunshine alone and goes 35 miles per hour with 4 adults on board. I have participated in creating all electric tractors for agricultural use that are 500% more efficient than liquid fueled tractors.

Thanks for reading the above list.

I can be reached at any time to discuss these and other vehicle improvement issues.

Howard Letovsky
707-481-5252

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 11:27:19

No Duplicates.

Comment 12 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: micah
Last Name: franks
Email Address: micahcf@sfsu.edu
Affiliation: hayward unified school district

Subject: please work with plug in hybrid aftermarket
Comment:

```
Hello,

It seems like the CARB is not seeing the big picture with regards
to plug in hybrids. Aftermarket plug in manufacturers and mechanics
have the same missions as CARB with regards to emissions. Please
work with them to discuss ways to use the catalytic converters
effectively, and to discharge vaporized gasoline. Please allow
waivers for the warranty requirements as well as the testing, until
you can find some more reasonable and mission advancing warranty
and testing requirements.

Thanks,
Micah Franks
Teacher
Hayward, Ca
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 13:56:56

No Duplicates.

Comment 13 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ross
Last Name: Guldenbrein
Email Address: radiocycle@pacbell.net
Affiliation:

Subject: PHEV regulations PHEV09
Comment:

Dear Sirs,

Please consider keeping a low level of restrictive regulations regarding PHEV building, testing and marketing. At this formative time in the PHEV technology, unnecessary regulation will only serve to hamper the advancement of the state of the art. The educated consumer is fully capable of making a prudent decision provided all the facts are known. The proposed rules could drastically slow growth of the conversion industry, and it could prevent further progress with components, software and usability. Thank you for your time and consideration of this very important issue.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 19:20:02

No Duplicates.

Comment 14 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Stephen
Last Name: Foster
Email Address: stephenhfoster@hotmail.com
Affiliation:

Subject: Limit Regulation of PHEV Aftermarket Industry
Comment:

I ask that the Air Resources Board limit regulation of the PHEV Aftermarket industry to protect the spirit of innovation currently in flower.

I drive much more than average for my work in construction. For one, such as myself, to have access to clean transportation would be of great benefit to the effort to reduce pollution by green-house gasses. I am very interested in the development of PHEV technology for light truck applications.

I am concerned that this nascent industry may be adversely impacted by injudicious regulation. We need as many new ideas to have a chance to face the test of the real world as can be imagined. Ill effects from poor design or process will be limited due to the small number of units made. Time for stricter regulation for test procedures and parts certification would be more appropriate later, when a few designs are beginning to dominate the market.

I urge the Air Resources Board to exercise restraint in its efforts; the benefits to society from these emerging technologies is of great value to society; and the impacts to a young industry may be to our detriment.

Thank you,
Stephen H. Foster
Concord, California

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 20:25:19

No Duplicates.

Comment 15 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Mike
Last Name: Cox
Email Address: mgcox2@yahoo.com
Affiliation:

Subject: PHEV09
Comment:

"WHO KILLED THE PHEV" could be the next movie that results from ANOTHER poorly considered CARB regulation. Let's not be too hasty to regulate after-market conversions that will reduce fossil fuel pollution.

It appears to me that this regulation is obviously contrary to the intended purpose of CARB regulations -- to reduce air pollution.

As a 2005 Prius owner who is considering a PHEV conversion, I also believe that you may be messing with the future production of PHEVs by large auto manufacturers. PHEV conversions are a significant reason that auto manufacturers are now going to produce them. And, the growing number of conversions demonstrates the business case for automakers to move more quickly. Regulating conversions will slow the number of conversions and make the business case less enticing to large automakers. (Are the large automakers behind this regulation? As they were behind the electric vehicle regulation changes?)

Staff should reconsider this regulation in light of the positive effects of conversions done by the nascent PHEV industry versus the possible miniscule negative effects on air pollution produced by a few hundred conversions. Don't you have a lot bigger air pollution problems to spend your time on? How about diverting some of your staff to looking into helping reduce air pollution by stopping poor regulations from being written?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 22:27:08

No Duplicates.

Comment 16 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: John
Last Name: Rosselli
Email Address: rosselli.john@gmail.com
Affiliation: SDSU

Subject: PHEV
Comment:

I must admit that I do not know much about this proposition to regulate PHEV or about the EV industry (what little there is of it). What I do know is that for petroleum energy sources to be able to transition to other sources, in this case electric, should not be stymied without very careful consideration of all its potential effects. Are these new regulations in the best interests of the public? From what I have read I am not so sure. All I ask is that we consider whether these regulations 'promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants while recognizing and considering the effects on the economy of the state'. Again, from what I have read I am not so sure. I will be graduating San Diego State University this year and I would like to be able to contribute to the EV movement, but not as a lawyer or politician just trying to cut through the red-tape.
Nothing against lawyers or politicians; well, not all of them.
Respectfully, John Rosselli

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-16 23:14:53

No Duplicates.

Comment 17 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Frank
Last Name: John
Email Address: johnfamily1@bigfoot.com
Affiliation:

Subject: PHEV Regulation
Comment:

Dear Madam or Sir:

Please accept CalCars recommendations to not over-regulate PHEV's at this time. I believe it is critical to our nation's economic and environmental health that PHEV's be developed as soon as possible. I believe that your proposals will slow down growth in the conversion field, particularly with small, innovative businesses. Please, please - do not regulate PHEV's at this time.

Thank You

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-17 04:00:12

No Duplicates.

Comment 18 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Philip
Last Name: Beard
Email Address: phbeard@mac.com
Affiliation: Sonoma County GoLocal Cooperative

Subject: proposed phev regulations
Comment:

I support 100% Felix Kramer's and Ron Gremban's objections to the proposed phev testing and warranty requirements.

A simple fix resolves the fuel vapor overflow problem. CARB might reasonably insist that it be applied: namely, that phev's fuel-driven engines be programmed to start briefly once every three days regardless of vehicle use. (Incidentally, for consistency's sake this same requirement should be applied to all new vehicles with a gasoline tank.)

And the battery warranty? Why should this even be CARB's concern? After all, once the supplemental batteries fail, the vehicle reverts to normal hybrid functionality, so from an emissions standpoint their length of service is irrelevant: at WORST, they have reduced greenhouse gas emissions for their active period! Vehicle owners will know from the outset that the supplemental batteries will need to be replaced sooner than the car's other components; why should CARB involve itself in this exclusively market-oriented (as opposed to emissions-oriented) discussion?

PLEASE do the right thing for our environment and for the innovative phev entrepreneurs who are contributing so powerfully to climate change reduction.

Thank you.

Philip Beard, Ph.D.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-17 07:39:38

No Duplicates.

Comment 19 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Tom
Last Name: Rust
Email Address: trust@photonenergysys.com
Affiliation: Photon Energy Systems

Subject: Plug in Hybrids and renewable energy
Comment:

Plug in hybrid technology currently represents the best method for the transportation industry to reduce oil consumption, CO2 emissions, and transition to a renewable energy society. Coupled with photovoltaic solar energy, it can drastically reduce energy costs. PV energy will soon be providing power at less than $0.05 kwh, with essentially unlimited lifetime and near zero maintenance.

It is imperative to encourage the plug-in hybrid market to stimulate both US jobs and achieve US energy independence. We appreciate the desire to ensure safety in the implementation of these systems, but unnecessarily restrictive requirements are unwarranted at this time.

I strongly urge the commision to take to heart CalCars Felix kramer and Ron Grembam's recommendations on this matter, and to support the growing US industry in plug-in hybrid technology.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-18 10:59:09

No Duplicates.

Comment 20 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: F.
Last Name: Hamilton
Email Address: favplagget@aol.com
Affiliation:

Subject: Electric Hybrid Vehicles
Comment:

"I believe these proposed CARB regulations will strangle at birth the promising approach to emissions reduction and energy independence that Plug-In Electric Hybrid Vehicles represent.

I agree with Felix Kramer, of CalCars.org, the pioneering Palo Alto-based nonprofit that has led the fight for plug-in vehicles: 'It's simply too early for government regulation of plug-in hybrids. Acting too soon will shut off innovation and will kill companies that are just getting started.' "

CARB killed the electric car in California - do not make the same mistake with plug-in hybrids!

Very sincerely,

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-18 18:23:17

No Duplicates.

Comment 21 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Kay
Last Name: Gore
Email Address: kaygore@cox.net
Affiliation:

Subject: CARB regulations will stiffle our economic future
Comment:

The proposed CARB regulations will have the unfortunate effect of killing a promising technology that could not only help fuel California's economic growth but also that of the nations. Plug-in Electronic Hybrid Vehicles represent a grand hope and the means to end our reliance on foreign oil as well as reduce pollution.

Felix Kramer of Calcars.org has made a persuasive argument for not imposing regulations on plug-in cars at the very moment when innovation is gathering steam.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-18 21:06:38

No Duplicates.

Comment 22 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: David
Last Name: Foster
Email Address: dalan@mac.com
Affiliation:

Subject: Plug-In Hybrid Vehicles Need Openings, Not Closings/Restrictions
Comment:

"I believe these proposed CARB regulations will strangle at birth the promising approach to emissions reduction and energy independence that Plug-In Electric Hybrid Vehicles represent.

I agree with Felix Kramer, of CalCars.org, the pioneering Palo Alto-based nonprofit that has led the fight for plug-in vehicles: 'It's simply too early for government regulation of plug-in hybrids. Acting too soon will shut off innovation and will kill companies that are just getting started.' "

CARB killed the electric car in California - do not make the same mistake with plug-in hybrids!

Very, truly yours,
David Foster

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 02:18:48

No Duplicates.

Comment 23 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: rob
Last Name: ryan
Email Address: robert596@gmail.com
Affiliation:

Subject: TOO EARLY FOR REGULATION OF PLUG INS! - Do NOT KILL the Plug-in Hybrid
Comment:

```
I believe these proposed CARB regulations will strangle at birth
the promising approach to emissions reduction and energy
independence that Plug-In Electric Hybrid Vehicles represent.

I agree with Felix Kramer, of CalCars.org, the pioneering Palo
Alto-based nonprofit that has led the fight for plug-in vehicles:
'It's simply too early for government regulation of plug-in
hybrids. Acting too soon will shut off innovation and will kill
companies that are just getting started.

Do NOT KILL the Plug-in Hybrid like we did the electric car or we
will not support you for re-election.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 09:32:44

No Duplicates.

Comment 24 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Marc
Last Name: Michon
Email Address: marc07@sti.net
Affiliation:

Subject: Regulate PHEV Conversions
Comment:

```
It's too early to impose specific regulations
do not kill plugin electric vehicles like you did the electric
car
it has been developed by very small bussiness People in their
garages and small shops these are the people that have advanced to
where EV's are today an emerging form of transportation
you must take and support the position of Calcars
or is your job to make sure you prevent EV's get on the road
you should be promoting hamemade conversions have a rebate of
$5,000 for each conversion and simple just register at DMV get
rebate none of your burecratic road blocks
and many of the people will become the bussinesses that become
large converter companies and move to manufacturing
Marc Michon driving to work every day since 2004
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 10:35:27

No Duplicates.

Comment 25 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Leslie
Last Name: Spaiser
Email Address: lspaiser@gmail.com
Affiliation:

Subject: Concerns about PHEV certifications
Comment:

```
The conversions being done are quite sound and viable. Your
requiring small companies to undergo rigorous testing sounds like a
bureaucratic measure which does not take into account the reality
of current small business practices. The measure supports only
large businesses.

You SHOULD NOT pass PHEV09.

Mr Spaiser
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 11:40:10

No Duplicates.

Comment 26 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Daniel
Last Name: Sherwood
Email Address: daniel@3prongpower.com
Affiliation: 3 Prong Power Inc.

Subject: Comments Regarding Proposed Regulations of Test Procedures for Hybrid Electric Vehicles
Comment:

Dear California Air Resources Board,

I would like to respectfully submit the following comments on behalf of our startup company, 3Prong Power, our employees, our customers and the customers we plan to serve in the years ahead, with our technology enabling the popular Prius hybrid to reduce its air and climate impact and increase its fuel economy through the installation of an after-market plug-in electric upgrade.
I appreciated the thoughtfulness that CARB has obviously put into drafting the proposed regulations and test procedures to address the newly available class of off board charging hybrid vehicles. I am certain that your agency is aware of the enormous potential for this emerging class of vehicle, commonly known as Plug-In Hybrid Electric Vehicles (PHEVs), to improve our state air quality and fight global warming.

I urge CARB to revise their proposed regulations so they are not at cross purposes. As currently written the proposed regulations will serve to stifle the nascent California based PHEV industry. The aim of CARB is to improve air quality and vehicle electrification is an essential part of the solution. In the upcoming Plug-In Hybrid Electric Vehicle Test Procedure Amendments and Aftermarket Parts Certification Requirements the agency needs to strike a balance between regulating for air quality and allowing room for PHEV innovation to continue to flourish.
After attending CARBâ€™s September workshop on test procedures for hybrid electric vehicles, I was concerned that CARB may not have adequately considered how best to foster the innovation, development, and market adoption of increasingly electrified hybrid vehicles.

It is through innovation by nimble, progressive small businesses and non-profits here in California that many basic system design elements have come into being and evolved. Further design evolution is absolutely necessary to bring these environmentally beneficial vehicle technologies to mass market scale. Small, local companies will play a leading role in proving and developing the consumer market for this emerging technology. This offers an environmental benefit with gigantic leverage: history has repeatedly shown that only when a mass market opportunity is well-established and proven will major international automakers step in to exploit and serve it.

I therefore respectfully urge CARB to set requirements and test

procedures that will achieve the most environmentally beneficial balance between clear guidance on vehicle air quality regulations and the fostering of innovation in this field.

Specifically, we are concerned about the following proposed changes to CARBâ€™s regulations:

Evaporative Test Procedures

The draft evaporative test procedures call for up to five vehicles to be made available to CARB for testing purposes. While it is important that the effects of â€œalways plugging inâ€• be accounted for when testing an ORVR device, a readily available alternative exists: simply running the combustion engine at startup, as all hybrid vehicles currently do, will resolve this issue.

CARBâ€™s proposed requirement that 5 vehicles would be utterly prohibitive for a bootstrapping startup like us. We hold only one operational vehicles in inventory that is used to demonstrate the technology to our customers. A requirement to provide multiple vehicles for testing without providing a funding source for these vehicles would instantly put us out of business, choking off the vital technical and market development we are working hard to offer to Californiaâ€™s environment and consumers.

After Market Part Warranty Requirements

The after market parts requirement for providing a warranty equivalent to the vehicle warranty period is inappropriate for the vehicle battery. While some manufacturers have been able to obtain impressive battery longevity in hybrid electric vehicles, the same battery lifetime will not be matched if the battery is used more intensively, as is typical in an off-board charging duty cycle.

Also, the most widely available, affordable and easily re-cycled battery technology remains lead acid batteries, which have been used for decades in electric vehicle applications. These batteries clearly can not achieve a 7 year lifespan. Instead, as long as consumers are made properly aware of realistic battery lifespan expectations, thereâ€™s no need to bar the use of a proven, commonly available, and affordable technology that has a lifespan shorter than 7 years.

Exhaust Test Procedures

There is no reason to believe that after market vehicles will fail the urban drive cycle test procedure as long as they maintain the initial engine run that is programmed into all hybrid cars as described above. Again for a small after market parts manufacturer providing vehicles for expensive testing is an overly onerous requirement unless further data is provided to suggest that there is a problem.

OBD Minimum Frequency Requirements

The OBD requirements were not created with PHEVs in mind. It may not be possible for plug-in hybrids to meet the minimum frequency for OBD measurements of engine related functions. It is valuable to keep in mind that the minimum frequency requirements are designed to keep engine emissions low, with a PHEV the engine operates a fraction of the time compared with standard vehicle. While this may cause a PHEV to not meet the minimum frequency, the

overall benefits of PHEVs to air quality outweigh this concern.

In addition, all HEVs are currently exempt from smog testing and therefore the OBD log data does not serve a useful function in detecting problems with the emissions systems.
We urge CARB to drop this requirement from the test procedures as it is nearly impossible to work around, difficult to test and will not have a significant impact on air quality.

In General

My company respectfully requests and urges that before adopting these regulations CARB first join us and other stakeholders in a conversation so that we can jointly identify a mutually, socially, and environmentally beneficial pathway that fosters the innovation needed in this area until the industry is mature enough to pay the costs of the kind of extensive testing and certification we would all like to see eventually.

We would also encourage CARB to work with the non-profit organization CalCars.org, by adding to their existing open source design repository any modifications to the run cycle or vehicle components that would allow modified HEVs to satisfy clean air requirements.

Finally, we would like to request an exemption for small manufacturers selling very small quantities of cars or conversions, such as fewer than 500 in a year, from these requirements. We think this is a reasonable request so long as the number of modified cars remains statistically negligible, as is the case today.

Thank you for the opportunity to provide this input on how to create a set of testing and regulations for PHEV and ZEV that will best provide Californians with increasingly clean air standards while promoting clean emission alternatives for personal transportation.

Respectfully submitted,

Daniel Sherwood
President, 3Prong Power
Daniel@3prongpower.com

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 12:03:24

No Duplicates.

Comment 27 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Christopher
Last Name: Haima
Email Address: haima.christopher@gmail.com
Affiliation:

Subject: Testing Requirements
Comment:

```
It appears that the testing procedures will place a heavy burden on
small firms and individuals working with plug-in hybrids. Before
passing such legislation it would be wise to consider whether the
hypothetical environmental gains as a result of this legislation
are greater than the economic consequences it will have on small
businesses.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 12:23:28

No Duplicates.

Comment 28 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jack
Last Name: Tuttle
Email Address: Jackstextbooks@hotmail.com
Affiliation:

Subject: Plug in Conversions
Comment:

```
Please stay out of Regululating the Plug in conversion kits. You
already screwed up with pulling the plug to the Ev's in the Late
90's.  For a organization who's motto is to help product the air
Quality, you have done more harm than good.

Best wishes

Jack
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 14:28:12

No Duplicates.

Comment 29 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Tommy
Last Name: Chang
Email Address: tommy_chang@ahm.honda.com
Affiliation: American Honda Motor Company

Subject: Comments on Plug-In Hybrid Electric Vehicle Test Procedure Amendments
Comment:

```
American Honda Motor Company, Inc. (AHM) appreciates the
opportunity to provide comments on CARB's amendments to motor
vehicle test procedures for exhaust emissions, evaporative
emissions, and refueling emissions, and new requirements for
certification of aftermarket conversion systems for plug-in hybrid
electric vehicles.

Please see attached file for details.  Thank you.
```

Attachment: www.arb.ca.gov/lists/phev09/30-honda_comments_on_carb_phev_45d_notice_jan_19_2009.pdf

Original File Name: Honda comments on CARB PHEV 45D notice Jan 19 2009.pdf

Date and Time Comment Was Submitted: 2009-01-19 14:56:16

No Duplicates.

Comment 30 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gillis
Last Name: Lang
Email Address: gillisclang@msn.com
Affiliation: tired of subsidizing air pollution

Subject: Plug In Hybrid Conversions
Comment:

Please do not regulate hybrid car aftermarket conversions. Recharging times are none of your business and certainly not your expertise, and warranties are decided between consumers and installers. Your proposals smack of uninformed barriers and pointless restrictions to a public benefit, the reduction of overall emissions compared to pure gasoline vehicles.

I can only assume from your recent proposals that you are trying to restrict the use of electric drive, use of which reduces overall emissions compared to vehicles with no electric drive. The inevitable conclusion here is that CARB is trying to increase vehicle emissions. If your mission is to increase overall vehicle emissions, congratulations. You are doing a good job. That is your mission, right? If not, please support electric drive or at least get out of the way of its increased use.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 15:05:56

No Duplicates.

Comment 31 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Kevin
Last Name: FIngerman
Email Address: kevin.fingerman@gmail.com
Affiliation: UC Berkeley - Energy & Resources

Subject: PHEV regulations
Comment:

```
The evaporative test procedures, warranty requirements, and exhaust
test procedures proposed for PHEV conversion companies would prove
unreasonably onerous to the start-up operations at work in this
field and would not make an important contribution to CA air
quality.

While I recognize the necessity for CARB to ensure regulatory
harmonization across vehicle types and operation sizes, it is
irresponsible at this point to apply such regulations to PHEV
companies. It is not worth throwing this particular baby out with
the bathwater.

Sincerely,
Kevin Fingerman
Ph.D. student
Energy & Resources Group
UC Berkeley
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 15:28:34

No Duplicates.

Comment 32 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Edouard
Last Name: Gendreau
Email Address: EdGendreau@gmail.com
Affiliation:

Subject: Save Plug in Hybrids
Comment:

```
Please save any and all (semi)electric vehicles.

Thanks,
Ed
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 16:19:07

No Duplicates.

Comment 33 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Andrew
Last Name: Dailey
Email Address: andrew.dailey@gmail.com
Affiliation: none

Subject: Support for Market Forces
Comment:

To The Board:

Forcing the nascent PHEV industry to submit to increased regulation and punitive bureaucratic procedures that have little, if any, proven benefit seems to be antithetical to the grander cause of lower greenhouse emissions and improving California's air quality.

Imagine if a state board had force Steve Jobs and Steve Wozniak, the founders of Apple, Inc., to submit to such regulations! Would you be proud to be a member of the board that forced Fairchild Semiconductor (the company that spawned Intel and the semiconductor industry as we know it today) to onerous regulatory actions -- at a time when the semiconductor industry was in its (global) infancy in California?

The state is at a critical junction - our economy is in shambles, our environment is in need of repair, and the citizens of the state are eager for freedom to innovate in a clean way. State Boards should tread lightly at a time when citizens are actively questioning the value received from Sacramento. The state needs more innovation, less regulation, more jobs, and a cleaner environment.

Please consider the time and place of your decisions - and their long-term implications. For CARB to intervene in such matters, it should be mindful of the small, entreprenurial companies it could harm -- these same companies are the Apples and Intels of tomorrow.

Sincerely yours,
Andrew Dailey
Mill Valley, CA
415 381 1042

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 16:35:58

No Duplicates.

Comment 34 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michael
Last Name: Hamson
Email Address: mhamson@gmail.com
Affiliation: Voter

Subject: Response to Aftermarket certification
Comment:

First, the idea of requiring a clean air certification to the aftermarket sector which is attempting to further distribute (an already certified) vehicles resources to clean technology is simply ridiculous.

However... if this is your decision... then I say that ALL aftermarket parts for vehicles should then require the same certification process and expense. This means that ALL car parts will be on equal footing and no one isolated group of companies of the same sector should then be segregated.

Of course in these economically trying times, such a move would prove to be whole-heartily disastrous.

I strongly encourage you to move away from any sense of unreasonable, illogical, and otherwise ecologically un-responsible decision making.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 16:41:55

No Duplicates.

Comment 35 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: irene
Last Name: haralabatos
Email Address: jake3941@comcast.net
Affiliation:

Subject: Plug in hybrid vehicles
Comment:

```
I am a physician specializing in asthma and respiratory disease. I
am also a mother.

Please take a moment to consider air quality, climate change and
our dependence in oil.

I little profit in the short term is not worth it.

Please allow progress and manufacture of plug in hybrid cars in
California. Do not make the certification process impossibly
cumbersome.

thank you.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 16:48:45

No Duplicates.

Comment 36 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: David
Last Name: Williams
Email Address: codejock@gmail.com
Affiliation:

Subject: Protect innovators
Comment:

I am writing to express support for CalCars.org and the after market Plug In Hybrid industry in their efforts continue the sort of innovation necessary in order to bring about the Green Economy we need to carry us into the 21st Century.

Please take into account the small size of these companies and make sure that any regulations passed does not snuff out this industry. These companies came forward when the major car makers were unwilling, and demonstrated the viability of this concept. Do not punish vision, reward it.

Thank you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 16:57:08

No Duplicates.

Comment 37 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Paul
Last Name: Malone
Email Address: paulmmalone@yahoo.com
Affiliation:

Subject: Comments of PHEV regulations
Comment:

```
From what I have read it seems the fix for the cold start emissions
for a PHEV can be easily fixed by requiring the gas engine to start
when every you start the car.  This will warm the catalytic
converter, and take car of the gasoline vapors.

A123 has done this with thier conversion.

Please do all of the research before you make a decision on this
matter which could potentially put an end to an industry that is
trying to make a difference.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 17:12:05

No Duplicates.

Comment 38 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Alan
Last Name: Goggins
Email Address: goggins@cal.berkeley.edu
Affiliation:

Subject: Plug In Hybrid Regulations
Comment:

I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive.

The number of plug-in hybrids is very small, a fraction of a percentage of passenger vehicles on the road. There is no reason to rush into passing contentious regulations for such a small number of vehicles. In addition solutions for some perceived problems have already been developed.

These regulations are missing the forest for the trees, the benefits to encouraging the continued development of Plug-In Hybrids far outweigh the negligible cost to air quality that may arise from under-regulation at this point in time. The advantages include drastic reductions in green house
gases and developing a plausible alternative to imported oil as well as strong potential to actually improve air quality through zero emission driving

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 17:28:47

No Duplicates.

Comment 39 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Haley
Last Name: Mack
Email Address: myhaze@yahoo.com
Affiliation:

Subject: My first new car was a Prius
Comment:

I don't have a lot of money, and in general, I don't think buying new cars tends to be cost-effective in the long run, but I bought a Prius in 2004 because I wanted to put my money where my values are so that the technology to move us away from fossil fuels would begin in earnest.

I am concerned that CARB may vote to quash technology which could really move us toward a new generation of auto fuel - it seems short-sighted and preposterous. I hope you will vote for innovation since this technology looks like a bridge to a more perfect future.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 17:32:23

No Duplicates.

Comment 40 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Andrew
Last Name: May
Email Address: mandrew01@hotmail.com
Affiliation:

Subject: Pending Ruling on Plug-In Hybrids
Comment:

It is my understanding that your members are considering a ruling on Plug-In Hybrid Electric Vehicle Test Procedure Amendments that will have the effect of all but barring the development and sale of this vital component of the car-borne air pollution solution.

The apparent justification the ARB is using is that Plug-In Hybrids do not properly burn off excess gasoline discharged in the initial period of a hybrid's operation. I further understand that this issue has been properly identified by the manufacturers of this class of vehicle, and that they have engineered a practical and low-cost solution for this problem.

Given the two facts above, one can only conclude that the real reason for the ARB's nominal position in this matter is that the ARB want to curb/quash the development of Plug-In Electric Hybrids, in order to accommodate the interests of the US Oil, Gas and Auto industries.

It is beyond me how persons entrusted to fulfill their public duties responsibly and who are expected to do so in ways that are transparent and above reproach could allow themselves to be so completely co-opted by moneyed and corporate interests that they would swerve away from doing what is right to doing what is politically expedient. Do the right thing and smooth the way for this remarkable automotive technology.

Simple choice: stand tall or stay small.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 17:33:25

No Duplicates.

Comment 41 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Cathy
Last Name: Meyer
Email Address: mulkeymeyer@att.net
Affiliation:

Subject: Plug in Hybrids - we need them NOW!
Comment:

The price of gas falling this low was a crazy anomaly. We need plug-in hybrids to be sold without the aftermarket parts you are requesting. It is still much more energy efficient and less polluting to use a hybrid, since most trips are under 40 miles in a day, than using gasoline all the time. Please do not cave into a loophole being exploited by Chevron or any other gasoline company.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 17:39:32

No Duplicates.

Comment 42 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michele
Last Name: DeSando
Email Address: micheledesando@yahoo.com
Affiliation:

Subject: plug-in hybrid requirements
Comment:

```
I urge you to carefully consider taking any steps that would halt
the adoption of the plug-in technology.  There are so few cars that
would be immediately affected that we have no reason to act
brashly. We have time to get this right and getting it right means
doing all that can be done to promote the adoption of alternatives
to gas technology.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 18:01:45

No Duplicates.

Comment 43 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gary
Last Name: Wayne
Email Address: gwayne@sunpowercorp.com
Affiliation:

Subject: Plug-In Hybrid Emission Exceptions
Comment:

I strongly believe that CARB not pass the proposed regulations without meeting with representatives of the Plug-In industry includinmg CalCars.

Subjecting this small number of customized cars to this type of one-size fits all regulation will destroy the nascent PHEV innovators and do NOTHING to protect the air.

Like the Hypocratic oath, CARB should do not harm when issuing regulations and this will cause great hard without providing any real protection for consumers at a time when electric vehicle research should be incentived and not punished.

Gary Wayne

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 18:05:40

No Duplicates.

Comment 44 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jacob
Last Name: Lee
Email Address: jacob_i_lee@hotmail.com
Affiliation:

Subject: No on Test Procedure Amendment
Comment:

```
Please do not make the proposed changes. The independent mod market
is small, so it makes little difference on our air quality. But the
benefit of helping create a market is large.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 18:32:46

No Duplicates.

Comment 45 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Chris
Last Name: Pietras
Email Address: cpietras@hotmail.com
Affiliation:

Subject: Please don't kill the electric car,
Comment:

```
Again.  Our planet is at the cliff's edge.  We need bold vision at
this stage of the human experiment, not reactionary caution that
will hamstring our hopes and our future, and the future of all our
children.

Thank you.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 18:53:28

No Duplicates.

Comment 46 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ruth
Last Name: Bassett
Email Address: ruth37@gmail.com
Affiliation:

Subject: Support for plug-in electric vehicles
Comment:

```
Please support the innovators who are developing ways to convert
our vehicles to plug-ins.  I live in Fresno and know that we can
have plenty of solar energy to produce the needed electricity.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 19:03:50

No Duplicates.

Comment 47 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Curtis
Last Name: Darr
Email Address: curtisdarr@gmail.com
Affiliation:

Subject: Show your math...
Comment:

I find it absurd that CARB would attempt to apply strict regulatory and financial penalties on these companies. The focused goal of these companies and the work they do is directly in line with CARB; reduction of emissions.

CARB has seemed to only see the aftermarket status of these companies; and lumped them in with the makers of superchargers and racing exhausts.

My suggestion to the companies affected by this... Come down to Florida... I am sure we will welcome you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 19:06:09

No Duplicates.

Comment 48 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Matthew
Last Name: Rings
Email Address: matthewrings@yahoo.com
Affiliation:

Subject: Please do not impose crushing emissions regulations on startups.
Comment:

```
CARB,

  Please use common sense when considering which vehicles require
a full round of initial emissions testing.  Perhaps a waiver based
upon projected sales and inclusion of emission testing results from
the base vehicle (e.g. Toyota Prius platform).

  This will encourage small start-up businesses for innovation,
and be the "stepping stones" for developing the technology that
will eventually help our entire state and nation in the war on
carbon emissions and pollutants.

  All we citizens ask for is COMMON SENSE, not bureaucracy.  Just
ask your family if what you are proposing makes sense... if not, it
just failed the "common man" test, and you should not pass it.

Sincerely,
Dr. Matthew Rings, MD
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 19:38:47

No Duplicates.

Comment 49 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: eric
Last Name: swenson
Email Address: eric@ericvfx.com
Affiliation:

Subject: Do not pass this!
Comment:

```
With the tiny amount of plug in cars this will cut off an important
new industry before it can get started.

Acting so soon on people who are making cars that more than
satisfy CARB's mandates is a poor move.

We need this technology now. Do not choke a good source of cars we
need to keep our skies clean.

eric swenson
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 19:56:51

No Duplicates.

Comment 50 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Bill
Last Name: Washburn
Email Address: dygituljunky@gmail.com
Affiliation:

Subject: No to unnecessary additional testing on upfitted hybrids.
Comment:

http://www.ecogeek.org/content/view/2489/

Do not enact additional emissions on aftermarket-improved hybrids.

What in the world are y'all thinking? This testing can't possibly necessary since the only effect that the battery packs have on air quality is CLEANER AIR.

I don't yet live in a state that generally follows CARB guidelines but I plan to move to the left coast. Even more importantly, CARB generally shows the rest of the country that good things (like emissions improvements) are possible.

Why would y'all kill the 1/2 electric car just like y'all killed the electric car?!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 20:20:24

No Duplicates.

Comment 51 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Christopher
Last Name: Hamilton
Email Address: dediemar@sbcglobal.net
Affiliation:

Subject: Plug-in Hybrids
Comment:

Please slow down regulation of this new industry. I know a number of people who want to convert their hybrid vehicles to get even better gas mileage.

The proposed regulations threaten nascent industries performing that service. Almost all of them are probably too small to survive the CARB proposed regulations. Some provision should be included that will exclude industry members below a certain threshhold. That way they can continue to pursue innovative technologies that may be throttled by onerous regulations that larger industry members can easily meet.

Too often governments lose sight of the effects of proposed actions on the smaller members of an industry, those whose impacts on the deleterious emissions would be small when considering the overall picture. Please modify the proposed regulations to allow continued operation of the most innovative and creative sector of our auto conversion industry, those who can show the way to larger, less nimble industry members.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 20:40:14

No Duplicates.

Comment 52 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Nicholas
Last Name: Cederlind
Email Address: Nick.cederlind@yahoo.com
Affiliation:

Subject: STOP THIS HEARING
Comment:

This hearing for these standards, amendments, and tests undermine the READILY VERIFIABLE standards that are already IN PLACE thanks to the professionals at places like 3-Prong Power. Make no mistake, these proposed tests and standards DIRECTLY impact the state's ability to promote and produce green jobs. Additionally, these tests not only hurt the electric hybrid business, they NEGATIVELY affect the overall public opinion of both the hybrid and electric car businesses. These tests and certifications provide enough hurdles to burden the state budget with more problems and simply do HARM to the green car business and the stat, overall.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 21:23:01

No Duplicates.

Comment 53 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Mark
Last Name: Bartosik
Email Address: mbartosik@yahoo.com
Affiliation:

Subject: testing for plug-in hybrid vehicles
Comment:

Requiring low volume plug-in hybrid conversions to under go expensive certifications is obscene and against the public interest.

The companies performing these conversions are leading the way forward. The benefit of them is that they are helping to change public opinion about plug-in electric vehicles, and are spurring major manufacturers to follow their example.

Low volume conversions is already very expensive, much of the aim is to get major manufacturers to follow suit with high volume OEM plug-in hybrid electric vehicles. Only then does the economics really make sense. Requiring volume OEM testing is normal, and sensible.

If required to make major capital expenses for testing this will inhibit development. Each new conversion would require new testing, thus limiting innovation. Companies would either have to pass on the cost to customers, thus further deterring potential customers, or smaller companies may have to cease doing business.

The aim of these companies is to act as a spear head, not to produce high volumes. Additional costly testing will only blunt the spear head.

Would CEPA require me to have my vehicle (re)tested if I simply installed a bigger battery in it? What about if installed a bigger electric motor?

A compromise might be after 10,000 units sold per manufacturer testing might be required. Another compromise if CEPA thinks testing is so necessary is for CEPA to pay for testing, and then charge $20 per unit sold, or to limit the cost of testing to no more than the cost of one conversion (about $10K). If not enough units are sold, then CEPA takes the loss.

Would CEPA take into account the lower and even emissions when driving electric only? Does CEPA have evidence that harm is being done, and that a remedy is required? If not how about CEPA pays for evidence to be gathered before writing new rules?

Also intuitively, a plug-in conversion is going to reduce emissions.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 21:24:45

No Duplicates.

Comment 54 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Angela
Last Name: Allegra
Email Address: AngelaAllegra@gmail.com
Affiliation:

Subject: Give PHEV companies a chance to thrive!
Comment:

```
This regulation would be devastating to the small businesses
already invested in this industry. Promote - don't impede -
economic growth that lowers emissions!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-19 23:31:53

No Duplicates.

Comment 55 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Krista
Last Name: Adams
Email Address: kaykayaa@yahoo.com
Affiliation:

Subject: Please leave plug-in hybrids alone!
Comment:

```
Don't just test because they're there!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 05:33:45

No Duplicates.

Comment 56 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gary
Last Name: Warfel
Email Address: garywarfel@gmail.com
Affiliation:

Subject: Proposed Plug-In Electric Vehicle Testing Requirements
Comment:

Do not create unnecessary programs and bureaucratic process to over-regulate this emerging industry. We are at a critical time in the development, implementation, and wide-spread accepance of all electric vehicles to reduce our dependence on foreign oil. The proposed introduction of emissions testing requirements adds cost and time to the process, and will discourage expedient delivery of products from this critical industry. This is pure California over-regulation and bureaucracy at its finest. STOP and THINK!! Do NOT do this. Take responsibility to make the rapid development of all-electric vehicles a reality; not to stifle development with over-regulation. Those who support overregulation that will deter deployment of all-electric vehicles will be exposed. As far as extended warranties are concerned, let the consumers make this decision; not the California government!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 07:17:35

No Duplicates.

Comment 57 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Stefano
Last Name: Rota
Email Address: stefano.rota1@tin.it
Affiliation:

Subject: New CARB rules for plug-in vehicles
Comment:

```
I believe plug-in technology to be a must for human being.
We should do everything possible to help this new technology to
become popular on our roads so to drammatically reduce the use of
oil for transportation purposes.

American people seems to be on the right path, specially in
California, to reach this important target. Everybody caring for
our future should be part of this effort.

regards
Stefano
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 07:43:10

No Duplicates.

Comment 58 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Erich
Last Name: Nahser-Ringer
Email Address: realitycheque@hotmail.com
Affiliation:

Subject: Pending Legislation on electric cars
Comment:

```
Please ensure that you sit down and consult all stakeholder groups
before you make a decision that impacts their future
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 10:23:38

No Duplicates.

Comment 59 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Kevin
Last Name: Stoll
Email Address: kevinharrisstoll@comcast.net
Affiliation:

Subject: Regulation of plug-in hybrid conversions
Comment:

I support CalCars.org and the after market plug-in hybrid industry in their opposition to CARB's proposed regulations on plug-in hybrid conversions.

I urge CARB not to pass these regulations as currently written, but to draft a compromise solution that will allow the fledgling plug-in hybrid industry to thrive.

Please do not strangle the small companies that move us closer to zero emissions transportation.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 10:37:07

No Duplicates.

Comment 60 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Brad
Last Name: Jester
Email Address: bradjester8@hotmail.com
Affiliation:

Subject: Plug in Hybrids
Comment:

```
I support innovation in plug-in hybrids as well as the
organizations and small companies working to improve these cars.  I
urge CARB to not act as rashly like it did when it buckled from the
pressure of the auto/oil industry and killed the electric car.

I support Calcars.org and the plug-in hybrid innovation from small
companies in California.

Brad Jester
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 10:44:51

No Duplicates.

Comment 61 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Carl
Last Name: Lenox
Email Address: carl.lenox@gmail.com
Affiliation:

Subject: Proposed PHEV regulations
Comment:

Board:

I write to ask that you reconsider the proposed regulations of aftermarket plug-in hybrid conversions.

The emissions issues you cite are important, but readily fixed by converters. These companies exist primarily to move the state of the art in clean transportation forward. Their goal is to reduce emissions.

These converters are not well capitalized so the test requirements and warranty requirements impose a significant burden.

Nonetheless, these small, innovative companies are significantly accelerating the development of plug-in hybrid technology by creating consumer awareness and generating real-world data, to say nothing of providing individuals the early opportunity to drive high-mileage vehicles.

Do not throw out the baby with the bathwater and stifle small-business innovation in a difficult economic climate. There entrepreneurs are achieving what the big automakers can't, or won't.

I urge you to reconsider the proposed regulations and support innovation in the State of California.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 11:27:51

No Duplicates.

Comment 62 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jordan
Last Name: Shechter
Email Address: JordanRock@gmail.com
Affiliation: Sunpower

Subject: Stop the unfair regulation of plug-in hybrids!
Comment:

```
Hello,
I am an advocate of clean energy and transportation solutions in
the 21st century.  CARB is preparing to pass initiatives this week
that will hurt or crush small businesses that have invested
valuable time and money to convert factory hybrid cars into plug-in
hybrids.  These cars get significantly more MPG than their
unaltered counterparts and they do not produce any more pollutants
because their engines undergo the same warm-up initiation as normal
hybrids once the engine is switched on.  Please DO NOT PASS
PHEV09!!!  Thank you.
-Jordan Shechter
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 11:38:18

No Duplicates.

Comment 63 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Greg
Last Name: Robbeloth
Email Address: mackrobb@yahoo.com
Affiliation:

Subject: Dont kill this innovation
Comment:

Please do not make the perfect the enemy of the good. The plug in hybrid is the only technology currently practical to reduce CO2 emissions from cars. As President Obama is inaugurated, he calls for commitment to changing our reliance on fossil fuel for national & global security & the environment. California has led the way in reducing all kinds of pollution such that between now & when I was a child in the 1960's our air has become much cleaner overall. If our state were to trade back some of those gains in local pullution in order to advance the cause of combatting global warming, I dont think history would judge us harshly for the sacrifice. I realize the importance of regulation but this is an area that clearly deserves forbearance while the agency works to streamline and assist this transition to a reduced carbon economy.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 12:08:20

No Duplicates.

Comment 64 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jorge
Last Name: Matos
Email Address: jamatos@astound.net
Affiliation:

Subject: new rugulations on plug-in hybrid conversions
Comment:

Dear Board,

I'm concerned that the new regulations on plug-in hybrid conversions will negatively affect businesses now involved in developing and marketing new technology that will take us closer to energy independance and cleaner, more efficient vehicles. I ask you to please carefullyy review and revise any regulations to protect consumers and the public but not to hinder the creativity and progress these businesses can bring. Just a few hours ago Barack Obama was sworn into office and gave a speech asking all of us to do our part to bring about the US. It is opportunities like this one in your hands now to make the best choice to allow progress to move forward.

Thanks.

Jorge Matos

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 12:16:20

No Duplicates.

Comment 65 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Bill
Last Name: Woodson
Email Address: bill@woodsonlaw.bc.ca
Affiliation:

Subject: Proposed CARB Regulation of plug-in hybrids
Comment:

```
The only initial regulation should be maintaining the initial
engine run sequence on startup that is currently programmed into
all Hybrid Vehicles.  Other regulation can await further study and
yet ensure these beneficial modifications continue

Since part of CARB's mandate is to promote low carbon
transportation options the proposed regulations will be contrary to
this mandate.  CARB should be doing everyting in it's power to
encourace Plug-In Electric vehicles, not spending it's resources in
premature restrictive regulation.
Bill Woodson
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 12:36:45

No Duplicates.

Comment 66 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Utaw
Last Name: Cusoe-White
Email Address: utawwhite@yahoo.com
Affiliation: Mechanical Engineer

Subject: RULEMAKING TO CONSIDER THE CONSIDER PLUG-IN HYBRID ELECTRIC VEHICLE TEST PROCEDURE AMENDME
Comment:

To the board:

I'm a person who plans on buying a hybrid and wishes to covert to a “plug-in”. I should not be burdened more or less than an owner who wishes to modify his or her non-hybrid car. Car owners all across our state modify their vehicles in various ways such as upgrading the carburetor, muffler system, fuel systems, and tire sizes often times resulting in a decrease in fuel efficiency and an increase in carbon release.

CARBs purpose is to regulate and monitor air pollution in California, not to over regulate those emerging industries that would help CARB reach its goals.

Shop owners that do “plug-in” conversions should not have to provide warrantees or guarantees that differ from the warrantees or guarantees that traditional car maintenance and repair shops are required to offer. Warrantees or guarantees are market devices that help competitors separate themselves and should be the option of such “plug-in” conversion shops nd/or buyers of such conversions.

Another concern I have is that “Fuel Cell” type EV’s are being fast-tracked through the regulatory process. Electric cars are the way of the future, but not PEM fuel cell EV’s. Hydrogen produced and packaged for use in cars is highly redundant when the car is already operating on electricity. Using PEM fuel cells is an inefficient use of PEM technology when one considers that %50+ of the energy produced is heat and is mostly useless to the system or operator. Also, hydrogen requires much energy to make and then store in liquid form.

It is my opinion that electricity is the future of energy, and because its use in vehicular motorization is conducive to the oals of CARB it would be more productive to resist placing regulatory barriers between citizens and their right to own and drive electric and hybrid/electric vehicles.

Thank you,

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 12:56:48

No Duplicates.

Comment 67 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Neil
Last Name: DeWitte
Email Address: neil_dewitte@hotmail.com
Affiliation:

Subject: Please do not regulate PHEVs
Comment:

Hello,

I would like CARB to consider that even if PHEVs do emit slightly more smog-forming emissions that other cars, they should not be regulated.

I say this is for two reasons:

1. Small company and private individual PHEV conversions are going to be short-lived.

2. The number of cars converted by small companies and private individuals is small.

In a few years we will see large numbers of PHEVs available commercially from major auto manufacturers. These will have to meet existing emissions standards and these manufacturers all offer reasonable warranties.

In the meantime all of America needs these private PHEV conversions to continue. They help put pressure on major auto makers to step up to the plate and offer competing commercial products.

Thank you for all the leadership over the years provided to our nation where cars and clean air are concerned. Leadership on these issues certainly do not come from anywhere else. I know this because I live in one of the worst polluted metropolitan areas in the US and no one will do anything about it.

Thank you,
Neil DeWitte
1336 Shades Crest Road
Birmingham, AL 35226

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 13:07:25

No Duplicates.

Comment 68 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Troy
Last Name: Meyer
Email Address: troymeyer@hotmail.com
Affiliation:

Subject: The spirit of the PHEV09 laws
Comment:

```
The three goals of the ARB (as stated on your site)

1 Attain and maintain healthy air quality.
2 Conduct research into the causes of and solutions to air
pollution.
3 Systematically attack the serious problem caused by motor
vehicles, which are the major causes of air pollution in the
State.

In what ways does restricting the expansion of electric use in
vehicles serve any part of the organizations agenda?  It appears as
if the ARB is fighting only to stop changes in motor vehicles, not
considering if the changes are good or bad.  Or even worse, the
organization is working against their actual goal set.  In a time
of poor air quality, global warming, and disgusting smog; why is
the ARB not looking for solutions and helping this type of progress
make it into the mainstream.  Perhaps those pushing for the passage
of PHEV09 need to reconsider their participation in the ARB.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 13:25:05

No Duplicates.

Comment 69 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Joel
Last Name: McKinnon
Email Address: montarans@gmail.com
Affiliation:

Subject: Plug-in hybrids regulation
Comment:

```
To whom it may concern,

Regarding the plan to regulate plug-in hybrids:

Many of the concerns expressed by the CARB engineering staff can
be easily addressed by maintaining the initial engine run sequence
on startup that is currently programmed into all Hybrid Vehicles.
Simply having this as the one and only requirment would alleviate
nearly all the concerns raised by the CARB engineering staff
without requiring any expensive testing and regulation.

Joel McKinnon
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 13:29:13

No Duplicates.

Comment 70 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Seth
Last Name: Masia
Email Address: smasia@solartoday.org
Affiliation: American Solar Energy Society

Subject: PHEV testing rules
Comment:

Hello, CARB:

I'm managing editor of Solar Today Magazine in Boulder, Colo. I'm also an electric vehicle hobbyist. I'm one of thousands of shade-tree mechanics around the country who like to swap electric motors into old vehicles, discarding the inefficient polluting gasoline engines. I commute to work with one of the machines I built, using components purchased in part from California vendors.

But I'm also a fan of plug-in hybrid electric vehicles. The vehicle I want -- a light all-wheel-drive station wagon -- is not now commercially available. So I'm keenly interested in doing a PHEV conversion of an old Subaru.

To do so, I'll have to buy batteries, controllers, adapter plates, and possible motor and exhaust parts from a vendor, just as I do now for EV parts. Most of these vendors are start-up companies in California. If your new rules put them out of business, it will stop the progress of PHEV and EV conversions across the country. That can only retard progress toward cleaner air everywhere.

I implore you to phase in your new rules to promote the growth of small manufacturers and conversion shops. It's the best thing you could do to promote the long-term goal of cleaner air, reduced carbon, and an emerging category of secure green-collar jobs.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 13:59:14

No Duplicates.

Comment 71 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: John
Last Name: White
Email Address: babado@comcast.net
Affiliation:

Subject: reconsider your proposed amendments and requirements
Comment:

```
I understand that CARB is considering adoption of rules and
requirements regarding PHEVs that will in effect shut down
grassroots initiatives that are creating product, industry, and
market all at once.  I usually agree with caution and regulation
for new industries, but not when this new industry is grassroots,
environmental conscious and an unmitigated good.  Please rethink
your procedures and work with this budding, GOOD industry to
support and grow it appropriately.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 14:48:35

No Duplicates.

Comment 72 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Rita
Last Name: Stoll
Email Address: rrstoll@verizon.net
Affiliation:

Subject: Opposing proposing regulations
Comment:

"I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive."

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 15:12:28

No Duplicates.

Comment 73 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michelle
Last Name: Tellez
Email Address: michelletellez@yahoo.com
Affiliation:

Subject: HYBRID
Comment:

```
Please make plug in cars legal in California. We need it. Let's
lead the way!!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 16:12:48

No Duplicates.

Comment 74 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Leslie
Last Name: Dorosin
Email Address: leslie@bodegapartners.com
Affiliation:

Subject: PHEV test procedures
Comment:

I am writing to ask the California Air Resources Board to amend the regulations requiring expensive testing for PHEVs. Energy independence and climate change are huge challenges and for California to continue to be a leader in clean technology, CARB needs to foster and enable nacent technology not drive small start ups out of business. I realize there are concerns about the catalytic converters and gasoline vapors but I believe that much of the debate is academic and know that A123 easily passed the smog test last year (though they likely couldn't afford the expense of your testing requirements). Instead of regulating with a heavy hand, CARB should work with these small companies and help them navigate a path to success and ensures California remains a technology leader.

As to the extended warranty requirements for the additional batteries, to require small garage to warranty a battery for 10 years when it's failure means that the car will revert to being a regular hybrid seems onerous. Better to leave the warranty decision to the market place. Consumers can decide how long a warranty they need and as companies offer different options the market will sort it out.

Sincerely,

Leslie Dorosin

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 16:40:31

No Duplicates.

Comment 75 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Glenn
Last Name: Fay
Email Address: glenn@oakleighvermont.com
Affiliation:

Subject: plug-in hybrid conversion regs
Comment:

```
Please stop the nonsense about strict, expensive regulations and
log warranties for hybrid conversion start-ups. You are
discriminating against small companies and g=favoring big
automakers and will undoubtedly see civil action as a result.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 17:25:45

No Duplicates.

Comment 76 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: C
Last Name: Miron
Email Address: missthesnow@mail2girl.com
Affiliation:

Subject: Carb should support hybrid conversions, not block them.
Comment:

How is it in the interest of California or "clean air" to hinder small producers of Hybrid conversions with steep financial hurdles?

It should be made clear to consumers that over a 10 year period they will experience diminished battery capability, but requiring a 10 year full warranty will force these companies to increase prices and put the technology even farther out of the reach of the average citizen.

CARB should be working with these enterprising companies to increase hybrid conversion. It is a smart way to reduce emissions from cars that are already out there, something CARB should wholeheartedly support if their real agenda is "clean air".

CARB should be focusing it's efforts on the real enemies of clean air... like Big Oil and Coal.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 18:52:40

No Duplicates.

Comment 77 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Melissa
Last Name: Hardy
Email Address: alapachamama@hotmail.com
Affiliation:

Subject: Reconsider regulations around Plug-in Hybrids
Comment:

```
These proposed regulations will stifle a fledgling Clean Air
industry.  Real people making these coversions creat real jobs AND
cleaner air.  Asking them to warranty it is out of the CARB scope.


My neighbor has a plug-in hybrid and i am happy to have cleaner
emmissions on my block and a quiet electric car--Today!!

Warranty requirements should not be a concern of CARB so long as
the vehicle emissions to not get worse once the parts not under
warranty fail.  This is likely the case with most after market
plug-in hybrid conversions.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 19:32:28

No Duplicates.

Comment 78 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Warren
Last Name: Atherton
Email Address: headroom@flowerdog.com
Affiliation:

Subject: Plug-In Hybrid Regulation
Comment:

I request that the Board not stifle the plug-in conversion industry with burdensome regulation at this time. While the major auto manufacturers have yet to begin selling PHEVs to the public, during this interim period, plug-in conversions are the best way for consumers to access and promote this new technology.

When I purchased the Hymotion product for my Prius, my primary motivation was to reduce CO2 and criteria emissions. Along with the Board, I am also concerned about increased criteria and evaporative emissions when plug-in hybrids are used in particular situations. There has been a suggestion to electrically heat the catalytic converter and I look forward to seeing that idea and other solutions explored. Until these problems are solved, however, I use my knowledge as an early adopter to operate my plug-in hybrid in such a manner as to minimize these effects.

While the conversion industry becomes more refined and we wait for the major manufacturers, we can afford to temporarily tolerate a few issues. Battery longevity and warranty are matters for the consumer to consider rather than be causes for the government to limit the freedom of early adopters. Possible increased emissions are almost trivial given the small number of PHEVs compared to the multitude of legacy (i.e., without emission controls) vehicles in regular use in this state.

Sincerely,
Warren "Dave" Atherton

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 20:51:17

No Duplicates.

Comment 79 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jeff
Last Name: Krupnick
Email Address: jeffkrupnick@comcast.net
Affiliation:

Subject: Do not change the rules for electric hybrid's now.
Comment:

Members of the Air Resources Board,
It has recently come to my attention that you are considering imposing new testing on electric car conversions that would place devestating costs on fledging independent electric vehicle producers. Stipulations and testing that would stifle and stop the advancement, competition and production of viable electric vehicles created by small independent companies.
We know, of course, that the near-sighted big three auto makers are once again attempting to thwart needed change and advancement in the electric car field.
The fact that you are attempting to require onerous testing at this crucial time is unacceptable. Also unacceptable is the fact that you are basing this "need" for testing on the "secret" testing done by the established auto-manufactures in Detroit. Testing that is hidden by "trade secrets" of the big three who have already shown their contempt for and opposition to viable electric cars by falsifying and manipulating their previous "attempts" to establish a market for electric vehicles.
You have already caved into them by lowering the mileage standards that were to have gone into effect years ago.
Your former action should be investigated as possible collusion with the big three who so forcefully attacked the need for increased mileage requirements. See "Who killed the Electric Car" for evidence as to the intent of "the Big Three."
To side with the "Big Three" auto makers based on their secret test results should indeed be the basis for investigation into criminal fraudulent collusion.
I ask that this sudden proposal for additional testing of cars such as the converted Prius's which produce mileage in excess of 100 miles to the gallon be shelved at this time.
To pass this measure would indeed suggest collusion on the part of all board members who attempt to pass this measure.
I implore you to drop this measure now.

Respectfully yours,

Jeff Krupnick

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 20:58:44

No Duplicates.

Comment 80 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Daniel
Last Name: Bell
Email Address: danielpbell@gmail.com
Affiliation: Energy Efficiency Retrofitting

Subject: Onerous standards
Comment:

THE CALIFORNIA Air Resources Board dashed the first true progress that was made on electric cars in this country, as chronicled in the documentary "Who Killed the Electric Car." They are poised to do it again, this time to the plug-in hybrid vehicle.

They are poised to make a ruling that will cripple the nascent plug-in hybrid conversion industry by imposing onerous testing and warranty standards that capital poor entrepreneurs cannot provide. In the process, they will violate their own mandate to reduce global warming pollution.

They are validly concerned about air pollution that can increase when a hybrid's gas engine is started less frequently. However, conversion companies have since found that simply having their software turn on the gas engine for a period whenever the car starts renders these air quality issues nil.

Given that the air quality issues are now gone, and with CARB's mandate to reduce global warming pollution, CARB has no rational choice but to work these conversion companies to find an equitable solution to keep plug-in hybrids on the road.

I'd rather not have to watch another documentary in five years about how CARB could have done the right thing but didn't.

Daniel Bell

Note: This letter was also published in the January 20th issue of the Oakland Tribune.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:36:01

No Duplicates.

Comment 81 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Erin
Last Name: Daniel
Email Address: Erin_Daniel@baylor.edu
Affiliation:

Subject: Missing the Forest For The Trees,
Comment:

```
These regulations are missing the forest for the trees, the
benefits to encouraging the continued development of Plug-In
Hybrids far outweight the negligable cost to air quality that may
arise from under-regulation at this point in time.  The advantages
include drastic reductions in green house
gases and developing a plausible alternative to imported oil as
well as strong potential to actually improve air quality through
zero emission driving.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:36:11

No Duplicates.

Comment 82 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Chris
Last Name: Ewert
Email Address: chris@ewertenergy.com
Affiliation: Ewert Energy Systems

Subject: Our concerns over proposed regulations
Comment:

```
Please see the attached PDF for our comments regarding the proposed
regulations.

Thanks,
Chris
```

Attachment: www.arb.ca.gov/lists/phev09/86-ewert_energy_systems_response.pdf

Original File Name: Ewert Energy Systems Response.pdf

Date and Time Comment Was Submitted: 2009-01-20 21:38:15

No Duplicates.

Comment 83 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Russell
Last Name: Katz
Email Address: katzhome@pacbell.net
Affiliation:

Subject: In Support of Aftermarket Plug-In Hybrid Companies
Comment:

I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive.

The number of plug-in hybrids is very small, a fraction of a percentage of passenger vehicles on the road. There is no reason to rush into passing contentious regulations for such a small number of vehicles.

These regulations are missing the forest for the trees, the benefits to encouraging the continued development of Plug-In Hybrids far outweigh the negligible cost to air quality that may arise from under-regulation at this point in time. The advantages include drastic reductions in green house
gases and developing a plausible alternative to imported oil as well as strong potential to actually improve air quality through zero emission driving.

Many of the concerns expressed by the CARB engineering staff can be easily addressed by maintaining the initial engine run sequence on startup that is currently programmed into all Hybrid Vehicles. Simply having this as the one and only requirment would alleviate nearly all the concerns raised by the CARB engineering staff without requiring any expensive testing and regulation.

There is no hurry to pass these regulations, there are currently no major producers selling large quantities of Plug-In Hybrid cars in California. Please consider delaying these regulations until the industry is more mature and better able to achieve compliance.

Part of CARB's mandate is to promote low carbon transportation options. CARB should be doing everything in it's power to encourage Plug-In Electric vehicles, not spending it's resources trying to regulate them to death."

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:39:15

No Duplicates.

Comment 84 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jeanette
Last Name: Mas
Email Address: msjanemas@aol.com
Affiliation:

Subject: Don't not block Plug In Hybrids
Comment:

The public will no longer stand for boards, private corporations and their affiliates to interfere with progress. Greed is what brought down our economy and greed will continue to bring it down if they are not publicly reveal. Any actions you take to prevent the people from acquiring eco cars or any afforable type of transporation will only show your lack of interest in the American people. It is a shame that past governments and political interest has allowed you to prevent progress but that is no more. Any negative actions take on false "maybes" will be seen by this new administration and will affect your own future. It is time to stop working for the filthy rich and begin work for America. Enough is enough!

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:39:35

No Duplicates.

Comment 85 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Christian
Last Name: Pelletier
Email Address: christianpelletier@yahoo.com
Affiliation:

Subject: Please reconsider regulations
Comment:

Hi!

While I endorse and believe that the intentions behind this new set of regulations are good, I think it is a bit premature to move forward with them.

Please keep in mind that this is a very small niche market that is just beginning to develop. This market could translate into a lot of opportunity for the state of California. A set of rules too rigid would put a huge brake on this new business. At the end everyone will benefit.

Thanks

Christian

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:46:55

No Duplicates.

Comment 86 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Judith
Last Name: Brown
Email Address: judybrowni@usa.net
Affiliation:

Subject: PLEASE DON'T KILL THE ELECTRIC CAR -- AGAIN
Comment:

I live on a busy street -- Pico Blvd in Los Angeles -- the black soot from gasoline coats my furniture, gets in my rugs, and gets in my lungs.

I welcomed the last version of the electric car as the possibility of saving my lungs -- until the Air Resources Board killed it the last time.

The more electric cars on the road, from whichever source, the better for the environment, and all our lungs.

I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:50:07

No Duplicates.

Comment 87 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Christopher
Last Name: Eshelman
Email Address: christophereshelman@mac.com
Affiliation: UMC

Subject: I'm researching options...
Comment:

and desperately want access to electric hybrid. California is the only place in the US where these seem to have a chance and I'm alarmed that well intentioned but flawed rulings you are set to make may derail the research and development our nation desperately needs to break our dependence on oil.

I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive.

It won't happen in Kansas (my home) if it doesn't develop in California. These companies create jobs and opportunities. There are better solutions than your proposed regulation. Please reconsider.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:51:18

No Duplicates.

Comment 88 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: A
Last Name: Siegel
Email Address: siegead@gmail.com
Affiliation: Energize America

Subject: Seeking to maximize opportunity space
Comment:

```
We face quite serious challenges in figuring out a path forward.
And, to be able to find a path through the Perfect Storm of Peak
Oil and Climate Change (and financial crises and ...) requires that
we start thinking and acting in systems-of-systems fashions. It
seems that the proposed restrictions on auto conversions might
"solve" a narrow problem while likely killing developments on a
path that could lead to real reductions in American gasoline use
and, therefore, pollution.  Does shutting down the after-market
PHEV conversions serve our real requirements?
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 21:58:34

No Duplicates.

Comment 89 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Neely
Last Name: Stewart
Email Address: ravyn9@hotmail.com
Affiliation:

Subject: Plug in and save the planet
Comment:

```
I support CalCars.org and the after market Plug In Hybrid industry
in their opposition to these proposed regulations. I urge CARB not
to pass these regulations as currently written and to sit down at
the table with all stake holders in the industry to arrive at a
compromise solution that will allow for the Plug-In Hybrid industry
to thrive.  We need this so that we and future generations may
thrive too.  Please sit down at the table with the people who are
trying to build this technology and work out solutions.  Thank you.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 22:07:01

No Duplicates.

Comment 90 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Susan
Last Name: Kraemer
Email Address: susan.kraemer@runbox.com
Affiliation:

Subject: PLease don't squash the aftermarket EV conversions
Comment:

```
The EV aftermarket conversions have been the pressure that is
forcing big companies like Toyota to consider more climate friendly
vehicle design.

Without the EV conversions, I doubt Toyota would be considering
the PHEV Prius.

You will not just be killing small startups; you will also cause
the big companies that are pressured by EV conversions to breathe a
sigh of relief and put their heads back in the sand.

And that's where we will get stuck again.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 22:17:15

No Duplicates.

Comment 91 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Don
Last Name: Gillis
Email Address: dongillis@yahoo.com
Affiliation:

Subject: Proposed PHEV Regulation Comments
Comment:

The intent of CARB and the independent developers of PHEV systems are the same, to improve gas mileage and reduce emissions. With each conversion to PHEV there is an improvement toward the stated goal. Your actions are very important and can move the vehicle fleet toward that goal OR you can kill the PHEV Conversion alternative. We don't want a repeat of the California Air Resources Board killing the ZEV for the hydrogen fuel-cell. That fact is your legacy, you need to do much better this time.

I suggest:

1. Register a PHEV developer as a "PHEV Conversion Program" until volumes become significant, the first 1,000 conversions. Safety and original emissions control function should be the only requirements.

2. When the volumes get to 10,000 units you can start to implement your proposed plans for function.

3. CARB should require original vehicle manufacturers to maintain responsible for warranty issues that are not caused by the conversion to PHEV.

The major automakers have been too slow to respond to our need to clean the air (and to get off oil). They have shown we need innovation and options from an independent source. It is clear that there are only EVs and PHEVs in development at the auto companies today because of independent developers like Tesla showing it can be done. A successful PHEV conversion business would show it can be done.

Your decision is more important than you might think. If in 2003 the ZEV decision had been to maintain an annual 500 EV demonstration fleet, there is a good chance a transportation alternative would have prevented oil from going above $60/bl.

Due to bureaucratic reasons tying up votes in the House and Senate, Congress has failed to move us forward. CARB should not wait for them to act, it is your responsibility to act as independent agents and move us in the correct direction.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 22:32:42

No Duplicates.

Comment 92 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Benjamin
Last Name: Gold, Ph.D.
Email Address: nawpublishing@hotmail.com
Affiliation:

Subject: Hybrid test amendments & requirements
Comment:

Concerns expressed by the CARB engineering staff can be readily addressed by maintaining the initial engine run sequence on start up that is currently programmed into all Hybrid vehicles.

Simply having this as the one and only requirement would alleviate nearly all the concerns raised by the CARB engineering staff without requiring any expensive testing and regulation.

This new technology needs more understanding, not stifling regulations; California can again be a leader in this field.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 22:46:14

No Duplicates.

Comment 93 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: victor
Last Name: bradford
Email Address: stpdk2000@yahoo.com
Affiliation:

Subject: Plug-In Hybrid Amendments PHEV09
Comment:

```
Thanks for the opportunity.
I appreciate the magnitude of the job you are trying to do, but I
cannot understand your position on the plug-in hybrid rules (of
course, I could be wrong too).

1. Plenty of aftermarket auto suppliers sell everything from
louder motorcyle/ATV mufflers to performance chips to biodiesel
conversions, and they apparently don't have to worry much about
these kinds of regulations.
2. If you had a good reason to suspect the plug-in kits would
violate any safety or emissions standards, AND if you suspected
that testing one or two vehicles would be a good statistical
sample, AND there is no other way to test them, then examine them,
but if this is just an attempt to show you have the power to make
the rules, this is not a good example to set.
3. Apparently the consumer is making the choice about durability,
and they should be allowed some say in this matter, especially
since the numbers are unlikely to be very high, and especially
since this appears to be an emissions decision only.
4. How are you going to explain this to your kids?

Again, thanks and best wishes.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 22:46:23

No Duplicates.

Comment 94 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Liane
Last Name: Allen
Email Address: mataliandy@charter.net
Affiliation:

Subject: Please Hold Off on PHEV09
Comment:

Dear Air Resources Board,

With PHEV09, your intentions are commendable, but I worry that it may be a case of throwing the baby out with the bathwater.

The issues you are trying to address can be solved, and there are ways to do so other than those prescribed in this proposed rule - ones that are less expensive and just as effective.

As written, the rule will kill a promising new plug-in hybrid industry - one which shares the board's air quality goal. If you could extend the rule-making deadline, and discuss with experts in the field ways to alleviate the board's concerns, you will save (and possibly help create) jobs in this new industry, while simultaneously achieving the shared goal of reduced emissions.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 23:17:09

No Duplicates.

Comment 95 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Holly
Last Name: Jackson
Email Address: hdjackson@wichita.edu
Affiliation:

Subject: Please reject the amendment.
Comment:

```
This amendment is a big step backwards in technology and
innovation. Please reject the amendment.

Holly Jackson
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 23:17:58

No Duplicates.

Comment 96 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ryan
Last Name: Realivasquez
Email Address: reali100@gmail.com
Affiliation:

Subject: Please Do NOT Pass These Requirements
Comment:

What we need now is more innovation not regulation. The CARB is tasked with promoting clean air and yet here it is regulating a cottage industry that does just that. These regulations will triple the cost of making a hybrid car have more battery capacity, making it cost prohibitive for most consumers. That battery capacity we are adding does nothing but helps the CARB meet its mission. Why are you choosing to eliminate that which furthers your goals?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-20 23:45:00

No Duplicates.

Comment 97 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Peggy
Last Name: Kenny
Email Address: peggywrites@yahoo.com
Affiliation:

Subject: Keep Plug-in hybrid conversion innovations coming
Comment:

I urge you to abandon the onerous rules you are contemplating and meet with all stakeholders (not just the big car makers). Listen to all participants. We need all the innovation we can muster to solve our GHG problems.

Some of the issues that concern you have been addressed, and others may well be outweighed by the benefits of trying out innovative forms of plug-in hybrids.

My story is that I will continue to drive my 20-year old car until there is an affordable and electric technology that inspires me to buy a new car. If I could convert my existing vehicle to an electric one, I would.

Please don't repeat the shameful performance of the ARB with regard to the original electric cars. Ponder how much cleaner California's air might be today if the ARB back then had not capitulated to the fossil fuel interests. Please remember you are tasked to serve the public, not the corporations.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 00:21:13

No Duplicates.

Comment 98 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gregory
Last Name: Stevens
Email Address: gstevens@berkeley.edu
Affiliation: Student

Subject: Please Do Not pass expensive regulations
Comment:

Plug-in Hybrid Electric Vehicles offer the best opportunity for people to dramatically clean up the environment, reduce greenhouse gas emissions, support their local communities by staying local, and take a real step towards ending our dependence on fossil fuels which are the root of almost all of California's Air Quality Problems.

I firmly urge you - seek low-cost solutions to your concerns. Expensive testing requirements would destroy this nascent industry. I appeal to your consciences. Allowing more and more of these conversions to happen will only improve the air quality in this state, if coupled with low-cost responses to your concerns. Stopping these conversions could be a roadblock insurmountable to making cars in this state greener, cleaner, and better for the air quality of this state and the environment. Again, I urge you - for the sake of our air, our health, and our climatic stability do not destroy this industry of making Plug-in Hybrids.

Thank you.

Gregory Stevens

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 00:27:06

No Duplicates.

Comment 99 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michelle
Last Name: Patterson
Email Address: michellep@dslextreme.com
Affiliation:

Subject: Costs of Emission Tests.
Comment:

Dear Air Resources Board,

It my understanding that your new regulations will require small start-up companies offering plug-in conversion services to shoulder the costs of these expensive emissions tests. I ask you to either reduce the fees or eliminate them so that new start-up companies that are creating plug-in hybrids can be allowed to blossom. We need to move beyond 45-50 mpg that current hybrids offer and allow new companies to create technologies that make 100 mpg plug-in cars a reality and mass produced. Please don't squelch a budding technology which will not only reduce green house gases but will create many new California jobs. Thank you.

Sincerely,

Michelle Patterson

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 01:50:00

No Duplicates.

Comment 100 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: James
Last Name: Rieley
Email Address: jbrieley@rieley.com
Affiliation:

Subject: Plug-In Hybrid Vehicles
Comment:

In a time where all organisations, whether government or private, need to be open to finding new ways to help reduce the dependence on petroleum (a finite resource), it seems that an opportunity to support innovative solutions is logical and well worth supporting. Please consider this as a plea to encourage the discovery and application of the work of organisations such I have been reading about (3 Prong Power).

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 01:52:04

No Duplicates.

Comment 101 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: James
Last Name: Koumanis
Email Address: jamkoumanis@hotmail.com
Affiliation:

Subject: PHEV Regulations
Comment:

```
I find your going after these small conversion companies with these
laws are dispicable. When is CARB going to stop doing things out of
special interest and do what science says. These conversions are
harmless and people have been doing car conversions since I can
remember. STOP putting roadblocks up for the electric car industry.
You guys are a joke.

>JK
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 02:32:18

No Duplicates.

Comment 102 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: ALBERT
Last Name: NUNEZ
Email Address: albert.nunez@capitalsungroup.com
Affiliation: DC-EVA

Subject: Over regulation of the PHEV09 vendors
Comment:

I agree 100% with the following CalCars assessment as presented to the board. Please take these comments to heart when making your final determination this Friday.

It's too early to impose specific regulations

The embryonic aftermarket conversion industry is mainly comprised of promising small startups. So far we see only one hardly-mature mid-sized company with deep enough pockets to have good prospects of complying with CARB's proposed regulations. These proposed rules would require potential conversion suppliers to complete all design, long-term emissions testing and verification, and CARB certifications up-front, as well as provide very extended warranties. These new regulations would require existing and yet-to-be-formed small companies to act as if they were large auto companies with substantial technical and financial resources and dramatically slower development cycles.

But today's conversions are the product of continuous design refinement and street testing. Many have been financed from a handful of sales by small companies with a few tens of thousands of dollars to work with at any time. The proposed rules will significantly raise the cost of entry, potentially excluding the very entrepreneurial engineers whose innovations established the market in the first place. Tellingly, today's highest-volume converter, Hymotion, was such a small business until it was acquired by battery maker A123 Systems.

Unfortunately, these companies have been too busy developing their technology and products and responding to public demand even to fully recognize, let alone adequately respond to, the developing governmental processes that could so significantly affect their work. Now we expect that too-early regulation will force some or all of these companies to close, halting their continued development work, losing jobs, promoting stagnation rather than innovation in the industry.

The contraction of these companies will affect their suppliers. Many have promising innovative products but lack the track record and resources to bid for, let alone get, auto manufacturer contracts. Small battery manufacturers, for whom testing and validating their products in real-world vehicles is the sine qua non of engineering and marketing success, will be most affected.

The consequences will not be restricted to California, since some of these companies have been establishing installers or franchisers

in other locations in the US and globally. This is a broad industry -- but California is its nerve center, and whatever is decided here will have an impact everywhere. And finally: the result will be less opportunity to reduce CO2 by displacing gasoline with electricity.

Let's recognize how important conversions have been

A look back shows the unprecedented impact of the conversions from late 2004-2006: they demonstrated how close we were to real products from carmakers; they gave utilities and national labs, the California Energy Commission, CARB and the state's air quality districts testbeds upon which to evaluate the benefits and logistics of PHEVs. They prompted the President, the US Department of Energy, Senators, Representatives, Governors, Mayors, and others to endorse this solution as a way to solve key intersecting problems: energy security, CO2 emissions, the future product mix of the auto industry, and costs per mile. They gave elected officials, corporate executives, industry analysts, NGOs and ordinary drivers a preview of a plug-in future. They helped motivate battery developers to focus on the opportunities within the auto industry.

As the technology and solutions evolve, many of these constituencies will still be eager to see and derive PHEVs during the next two to five years until OEM-produced PHEVs are widely available from dealers. They will want PHEVs, as will thousands of citizen-drivers. Hundreds of citizen-drivers have visited our listings at "How To Get a PHEV" at http://www.calcars.org/Â-howtoget.html and from there they (and hopefully in the future, thousands more) will find a company to convert their vehicles.

An unrecognized broader implication of the regulations

Regulation now could provide potentially dangerous precedent for regulation of conversions of non-hybrids to plug-in vehicles, both PHEVs and EVs. (See our descriptive page and links about this enormous market at http://www.calcars.org/Â-ice-conversions/Â-.) The very aftermarket conversion companies and their suppliers whose existences are threatened or prevented are precisely among the firms we expect to take the lead in ICE conversions, which we believe offer the opportunity to make significant near-term reductions in CO2 and petroleum dependency during the five to ten years before new plug-in vehicles achieve significant overwhelming market penetration. And CARB, more than almost anyone, knows we have no time to delay in replacing fossil fuels with low-carbon electricity.

We believe this opportunity has been under-appreciated, with some exceptions, such as former Intel CEO Andy Grove, singer Neil Young, and PHEV inventor Andy Frank, and that they affect the prospects of such far-flung companies as:

* Efficient Drivetrains Inc in California
* Electradrive in California
* EV Power Systems in North Carolina
* H-Line Conversions in Kansas
* Hybrid Electric Vehicle Technologies in Illinois
* Linc Volt in California
* Poulsen Hybrid in Connecticut
* Rapid Electric Vehicles in Vancouver

None of these companies are directly involved in or affected by the current regulatory process. But, importantly, they are interested parties, because the regulations the ARB adopts for aftermarket conversions of hybrids could become precedents for their (or other state/federal government agencies) imposing unrealistic or unduly burdensome limitations on conversions of ICE vehicles in the future.

Learning the lessons of unintended consequences

Though this issue begins on a far smaller scale, it reminds us of what happened when we moved to insufficiently considered massive support for biofuels, invoking cellulosic ethanol but giving us corn ethanol. What happened should at least cause us to move from a greenlight "go" to a yellow "caution--advance slowly."

Remember when the Energy Policy Act of 2005? It increased the amount of biofuel (usually ethanol) that must be mixed with gasoline sold in the United States to 4 billion gallons by 2006, 6.1 billion by 2009, 7.5 billion by 2012 -- and 30 billion gallons by 2020. The European Union followed with similar targets. We can only list the consequences that have been directly and indirectly linked with this decision, which include the belated recognition of the negative energy balance of corn ethanol and the overestimated near-term prospects for cellulosic ethanol; the lack of greenhouse gas benefits; the impact on corn, feed and human food prices; global deforestation and water impacts; the boom and bust in Midwestern farm states and the subsequent bankruptcy of ethanol companies; and periodic food riots in locations around the world. To its credit, Europe recognized the error and stepped back; we still struggle with bad legislation and inappropriate incentives.

The Staff and Executive Officer have prematurely concluded there are no negative impacts

The Staff Report: Initial Statement of Reasons for Proposed Rulemaking for Plug-In Hybrid-Electric Vehicles on page 28 says, "The proposed amendments to the Exhaust and Evaporative Test Procedures are not expected to have a noticeable impact on the status of California business creation, elimination, or expansion."

In the Notice of Public Hearing, we read, "The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action would not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California."

CalCars believes that although the companies involved have not yet made their case effectively, the difficulties these regulations cause will in fact have very significant impacts in these areas and in the development path for plug-in vehicles. We believe the Board needs to allow more time to explore these issues.

As a non-profit organization, CalCars has encouraged the

aftermarket companies and their suppliers (especially battery manufacturers) to form a trade association. That way an organized constituency can quantify the value and jobs it provides, demonstrate that it is part of a supply chain that needs to be encouraged, and characterize the significant social and environmental benefits it delivers, and cooperatively to come up with workable solutions . We hope this will happen in the coming months.

We accept the magnanimous offer in the Notice of Public Hearing

There we find, "Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the board or that has otherwise been identified and brought to the attention of the board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action." We appreciate the Board's recognition that there may be alternative solutions; we propose the Board consider those we present.

THEREFORE WE PROPOSE THAT BOARD MEMBERS AT THIS MEETING REQUIRE: that all the companies involved in conversions simply register with CARB, inventory their completed conversions, project their 2009 volume, and make themselves available for a more deliberative process. . CARB can then engage in a dialogue with all the stakeholders, just as it has for many years with automakers, to ensure a process that makes sense to all and takes into consideration the very different state and form of the conversion industry and its players.

We appreciate your growing support for plug-in vehicle solutions, and hope that you can come up with a solution where all the players win. Now, one more pointâ€¦

CalCars' fallback position: if CARB must regulate nowâ€¦

We understand that CARB is concerned about the durability of warranties following conversions, either from vehicles requiring repairs that are not made, or conversions that are not engineered with sufficient rigor and testing. These are legitimate concerns, but so far we are talking about only several hundred conversions in the entire world. We support an approach that enables companies to improve their products and their support services. The benefits of encouraging this so-far-almost-exclusively-entrepreneurial conversion industry far exceed the risk.

However, if CARB does go ahead, we present an example of a graduated regulation scheme could continue to allow grass roots innovation by holding compliance costs to around $500 per already-sold conversion -- a high but not insurmountable hurdle:

* A company enters the conversion business by presenting CARB with an engineering proposal showing how it will avoid increased criteria pollutants; it then shows a running prototype. Each completed conversion is subject to an ordinary end-user smog test for that model of unconverted vehicle. Buyers sign a contract acknowledging the level of warranty accompanying the product, accepting a level of risk for an 'experimental' conversion, and perhaps committing to periodic smog tests that are not otherwise immediately required of SULEV vehicles for several years.
* After selling 10 conversions, the manufacturer explains how

the now-current version(s) avoid mechanical, reliability, and emissions problems, and shows on paper how the system preserves known OEM OBD functionality.

* After selling 100 systems, one vehicle undergoes the most basic manufacturer emissions testing, and the conversion manufacturer shows how known OEM On-Board Diagnostic System (OBD) functionality is both preserved and enhanced with similar capabilities warning of conversion components needing service.

* After selling 1,000 systems, the company complies with CARB's whole set of production conversion rules

Note: such a proposal would require some cooperation with auto manufacturers, who would need to provide aftermarket conversion companies with some proprietary information, or the conversion companies would need to collaborate on building a database of discovered OBD functionality for multiple vehicle models, similar to the reverse -engineered Prius and Escape CAN bus information currently available at www.eaa-phev.org.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 03:28:11

No Duplicates.

Comment 103 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ann
Last Name: Malone
Email Address: kissingrock@va.net
Affiliation:

Subject: Hybrid Conversion
Comment:

```
Please do not kill the Electric Car again.
Fighting air pollution is great, but we are in a transitional
period, and to make conversion prohibitively expensive kills small
businesses engaged in helping the people convert hybrids to truly
electric cars is wrong.
Please recognize that we need to take steps, and right now some of
these must be baby steps. This is a baby step. Don't force us to
crawl again, when we are just learning to walk.
Thank you.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 04:37:11

No Duplicates.

Comment 104 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Susan
Last Name: Zander
Email Address: susanzander@gcpower.net
Affiliation:

Subject: Plug in Hybrid Proposed Regulations
Comment:

"I support CalCars.org and the after market Plug In Hybrid industry in their opposition to these proposed regulations. I urge CARB not to pass these regulations as currently written and to sit down at the table with all stake holders in the industry to arrive at a compromise solution that will allow for the Plug-In Hybrid industry to thrive."

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 05:28:58

No Duplicates.

Comment 105 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Perla
Last Name: Zerboni
Email Address: perlita101@yahoo.com
Affiliation:

Subject: PLUG IN HYBRIDS
Comment:

I drive a hybrid car, and I am impatiently waiting for the plug in hybrid.

We already killed the electric car, which could us saved us money, our environment, and countless illness due to smog and other pollution.

Let's not kill this innovation for the sake of the oil companies. We need the new technology, and I want to be able to plug in my car to my home generator which I charged from the sun.!

PLEASE LET INNOVATION THRIVE, LET'S SAVE THIS WORLD FOR OUR CHILDREN AND GRANDCHILDREN.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 05:35:45

No Duplicates.

Comment 106 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Tommy
Last Name: Chang
Email Address: tommy_chang@ahm.honda.com
Affiliation: American Honda Motor Company

Subject: Comment on Plug-In Hybrid Electric Vehicle Test Procedure Amendments
Comment:

```
Just one more comment on the Exhaust test procedures.  Thank you.

Appendix D, Page F-17, Section 8, 50'F and 20'F Test Provision.

<Error, perhaps just a typo?>
urban charge "sustaining" range test or urban charge sustaining
test as defined in section F.5.

<correct>
urban charge "depleting" range test or urban charge sustaining
test as defined in section F.5.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 06:21:49

No Duplicates.

Comment 107 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Eugene
Last Name: Moss
Email Address: harold@flickerlab.com
Affiliation:

Subject: Protect the Plug-in Hybrid Conversion Market
Comment:

We as a nation are struggling to find ways to decrease our reliance on oil and reduce our CO2 emissions. Our future health and prosperity depend on it. One of the key transitional moves towards this will be the development of a strong plug-in hybrid fleet. This new ruling will effectively kill the burgeoning plug-in hybrid after market that has grown up in California at a time when all efforts should be made to encourage it. Companies have already developed a solution to the catalytic converter issue at question which is telling the gasoline engine to start up at the beginning of the ride to warm up the catalytic converter. This is a simple solution which can be required of the companies until a better solution is developed, rather than crippling a critical industry in its infancy.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 06:47:02

No Duplicates.

Comment 108 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Debra
Last Name: Gooch
Email Address: bugsnchita@gmail.com
Affiliation:

Subject: plug-in hybrid vehicle
Comment:

```
Please do not kill this energy-saving technology!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 07:05:38

No Duplicates.

Comment 109 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jason
Last Name: Titus
Email Address: jazzmantitus@yahoo.com
Affiliation:

Subject: Don't cut off our plugin converters!
Comment:

```
Please seriously consider the impact on our innovative startups
when you create new regulations. The auto industry has moved so
slowly and these small companies have been the only places that
have been experimenting and giving us the cars we need. If we crush
them with regulations they won't be able to create the next wave of
improvements and grow into a new generation of car companies.

Thanks,
Jason Titus
Palo Alto, CA
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 07:09:16

No Duplicates.

Comment 110 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Karen
Last Name: Grove
Email Address: karenfgrove@gmail.com
Affiliation:

Subject: please don't "kill the PHEV"
Comment:

I am writing to ask the California Air Resources Board to amend the regulations requiring expensive testing for PHEVs. Energy independence and climate change are huge challenges and for California to continue to be a leader in clean technology, CARB needs to foster and enable nascent technology, not drive small start ups out of business. I realize there are concerns about the catalytic converters and gasoline vapors but I believe that much of the debate is academic and know that A123 easily passed the smog test last year (though they likely couldn't afford the expense of your testing requirements). Instead of regulating with a heavy hand, CARB should work with these small companies and help them navigate a path to success and ensure that California remains a technology leader.

As to the extended warranty requirements for the additional batteries, to require small garage to warranty a battery for 10 years when its failure means that the car will revert to being a regular hybrid seems onerous. Better to leave the warranty decision to the market place. Consumers can decide how long a warranty they need and as companies offer different options the market will sort it out.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 08:03:36

No Duplicates.

Comment 111 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Charles
Last Name: Protheroe
Email Address: cprotheroe@gmail.com
Affiliation:

Subject: Aftermarket PHEV Conversion System regulation
Comment:

I would like to point out a concern that doesn't seem to have been voiced yet. Right now there are many small aftermarket PHEV conversion system manufacturers working on different products. However, I believe there is only one manufacturer that would be able to afford to conform to ARB's regulation and thus there would be only one manufacturer selling this sort of product in California. So ARB would be effectively creating a monopoly on one of the air quality's most critical industries. I urge ARB to further look into possible unintended consequences of these regulations that could, in the end, hurt air quality.

Thank you for your consideration.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 08:29:21

No Duplicates.

Comment 112 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Robb
Last Name: Protheroe
Email Address: robb@pluginsupply.com
Affiliation: Plug-In Supply Inc.

Subject: Comments from Plug-In Supply Inc on proposed PHEV 09 regulations
Comment:

```
Dear Sir,

Attached are comments from Plug-In Supply Inc on the proposed
PHEV09 regulations.
Please consider them.
Regards
Robb Protheroe
President
Plug-In Supply Inc.
```

Attachment: www.arb.ca.gov/lists/phev09/119-plug-in_supply_submission_to_carb.doc

Original File Name: Plug-In Supply Submission to CARB.doc

Date and Time Comment Was Submitted: 2009-01-21 08:53:33

No Duplicates.

Comment 113 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Robb
Last Name: Protheroe
Email Address: robb@pluginsupply.com
Affiliation: Plug-In Supply Inc.

Subject: Comments from Plug-In Supply Inc on proposed PHEV 09 regulations
Comment:

January 20, 2009

Submission from Plug-In Supply Inc. on the Proposed Rulemaking for Aftermarket PHEV (OVCC HEV) Conversions

Dear Sir,
Plug-In Supply Inc. has reviewed the California Air Resource Board's proposed rules for aftermarket PHEV conversions and we are concerned these rules will impose an unnecessary financial burden that will put us out of business and rob California of much needed jobs and tax revenue.
We are a small start-up manufacturer. Our first product is for converting the Toyota Prius into a PHEV. Our product is designed to work with different batteries from different manufactures. It is independent of battery chemistry. Our customers can up-grade their cars to higher performance batteries as they become available. In this way we help spur development of advanced batteries that will reduce our reliance on imported oil and reduce greenhouse gas emissions. Our products create demand for high performance batteries now and will continue to do so in the future.
Mandate: No Negative Impacts.
We want to draw the board's attention to a quote from the CalCars submission: "The Staff and Executive Officer have prematurely concluded there are no negative impacts." "The Staff Report: Initial Statement of Reasons for Proposed Rulemaking for Plug-In Hybrid-Electric Vehicles on page 28 says, "The proposed amendments to the Exhaust and Evaporative Test Procedures are not expected to have a noticeable impact on the status of California business creation, elimination, or expansion."
In the Notice of Public Hearing, we read, "The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action would not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California."
Below, we clearly show the proposed regulations have the opposite effect to that stated above. Jobs will be lost. Revenue and taxes lost. Growth eliminated and a promising new technology suppressed.

Cost of Compliance.

Our staff has over 40 years of high-tech product development experience. We estimate our cost of complying with the proposed regulations will be $1,552,260 the first year followed by $275,000 per year for nine years. Totaling $4 million over 10 years.

This large number is probably conservative. Keep in mind it is just for approval of one product for the Prius. We have three Prius products. Each will incur a similar cost.

We arrived at this number by adding up the individual costs of complying. Below is a summary break down. Our detailed cost estimate is attached. Further data regarding our calculations is available upon request.

Emission Testing: $38,660
OBD Compliance: $16,500
Application Process: $12,100
Test Vehicles: $210,000
Warranty: $275,000 per year for 10 years.
Potential lost revenue in CA during certification: $1,000,000
Total cost of compliance: $4,027,260 over 10 years.
$1,552,260 during the first year.

Clearly, we can't afford to comply. Few companies could. There must be ways to reduce the cost of compliance and make this clean technology widely available for the betterment of all.

Lost Jobs.

We currently have a dozen dealers across the country. Each on average has a staff of two. Along with our staff of three that is 27 jobs lost. Our suppliers have additional hourly paid staff working on our products. Assuming the above have family the number affected could reach 100.

Lost Revenue for California

Our projected sales are 500 units for 2009. Half will be sold in California. At an average price of $8,000 that is $4,000,000 that could be injected into California's economy, generating taxes of $310,000. Not much, but in a recession every thing helps. Eighty five percent of our product comes from companies in California.

Alternatives to Proposed Regulations

Others have made submissions suggesting alternatives to the proposed regulations and we agree with their intent. The exact details should be determined in consultation with all.

CARB has already granted a 500 unit exemption to one supplier. We, a California based corporation, would expect the same consideration.

Exemptions are probably the easiest way to handle this issue; combined with further study.

Respectfully submitted for your consideration by:
Robb Protheroe, Ben Jones and Chuck Protheroe
on behalf of:
Plug-In Supply Inc. A California corporation.

Attachment:
Cost Estimates for Plug-In Supply Compliance with
Proposed CARB PHEV Conversion Certification Requirements

Assumptions:

- $300/8 man-hours (1 day = 8 man-hours)
- 6 month certification process
- 500 systems/year in the first year

Emission Testing/Compliance $38,660
Exhaust Emissions Test: $10,400 Appendix K
Evaporative Emissions Test: $17,760 Appendix K
Emission and Durability Analyses: 20 days $6,000
System Adjustments for Evaporative Emissions: 15 days $4,500 To maintain EV mode

OBD Compliance $16,500
Investigate OEM Vehicle Monitors: 20 days $6,000
Alter Conversion System (e.g. address monitoring frequency): 20 days $6,000
Add OBD Reporting to Conversion System Components: 15 days $4,500

Application Process $12,100
Description of System: 5 days $1,500
Wiring Diagrams: 2 days $600
Parts List and Supplier Information: 2 days $600
Integration Explanation: 1 day $300
Warranty Statement and Parts List: 1 day $1,000 Warranty written by legal professional
Emission and Durability Tests/Analyses Justifications: 3 days $900
Testing Data: 5 days $1,500 Time to test and process data
Proof of OBD Compliance: 2 days $600
Installation and Maintenance Procedures: 10 days $3,000
Owner's Manual: 5 days $1,500
Record Keeping: 2 days $600

Test Vehicles $210,000
1 Emission Car, 1 Durability Car: $60,000
5 In-Use Testing Cars: $150,000 Assumes cars pass, CARB pays for testing

Warranty $275,000 Per year
OEM Vehicle: $75,000 3% failure rate, $5,000 per vehicle repair
Conversion System: $200,000 5% failure rate, $8,000 per system

Total Compliance Cost in First Year $552,260

Potential Lost Revenue During Certification Process: $1,000,000 CA sales 50% of total, $8,000 per system, 6 month certification period

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 08:57:23

No Duplicates.

Comment 114 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Chuck
Last Name: White
Email Address: chuckwhiteinfocus@sbcglobal.net
Affiliation: None (just a concerned citizen)

Subject: Plug-In Hybrids
Comment:

```
We need your SUPPORT of Plug-In Hybrids.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:02:10

No Duplicates.

Comment 115 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michael
Last Name: Nagler
Email Address: mnagler@igc.org
Affiliation:

Subject: PHEV regulations
Comment:

```
Dear Board,

I am the proud owner of a plug-in Prius.  Until newer technologies
reach the market, this is a fine way to spare the environment and
support innovative small business methods, both of which we badly
need.  Please do not overregulate this enterprise!  Let them
thrive, for all our sakes.

Thank you for your attention, and all your good work protecting
our precious air quality.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:02:27

No Duplicates.

Comment 116 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Carol
Last Name: Lipof
Email Address: carol@3prongpower.com
Affiliation: 3Prong Power

Subject: Plugin hybrid electric vehicles hearing
Comment:

```
Please consider delaying these contentious regulations for PHEVs.
The very small number of PHEV vehicles on the road should not be
wasting
CARBs valuable resources.  These after market conversions a low
carbon
vehicles.  CARB should be doing everything in it's power to
encourage
PHEV's not spending it's resources trying to regulate them to
death.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:03:55

No Duplicates.

Comment 117 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: alan
Last Name: gulick
Email Address: alangulick48@yahoo.com
Affiliation:

Subject: new regulations relating to Plug-in Hybrids
Comment:

I had my Prius hybrid adapted with the electric plug in battery by the Three Prong folks out of Berkeley. It is a nice addition to the hybrid model, adding to the car's low carbon imprint. I urge you to consider how new regulations might perhaps adversely affect these small innovative start-up companies...the very companies we need to eventually wean ourselves off the polluters now on the road. Sincerely yours, Alan Gulick,MD

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:12:06

No Duplicates.

Comment 118 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Dottie
Last Name: Adams
Email Address: dot@fresca.net
Affiliation: Green Motors, Berkeley, CA

Subject: Please foster Innovation, don't Squelch it!
Comment:

Please keep Plug In innovation alive. I understand you feel your regulations are in the best interest for protecting the environment but they could have the opposite effect.

Many people upgrade their Prius so they can drive mainly electric because they drive 10 miles or less/day. A purely electric car, although a wonderful option, does not accommodate those who need to drive over 25mph for long distances, but a plug-in prius does.

Please allow Californians to drive cleaner and more efficiently.

Your regulations do not foster innovation, they will squelch it. Economic hard times promote passionate business entrepreneurs to go for it. Complying with your new regulations will force young Start-Ups to bury their talents.

Asking a Start-Up to require battery warranties for longer than the batteries' life is proposterous! Asking a Start-Up to pay for tests for up to 5 cars is outrageous and will force many of them to fold.

Please relax regulations for smaller companies until there are a few thousand after-market PHEVs on the road.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:19:46

No Duplicates.

Comment 119 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ross
Last Name: Levin
Email Address: RossMLevin@gmail.com
Affiliation:

Subject: I am in agreement with 3Prong Power
Comment:

I am in agreement with the company 3Prong Power when they say:

"I urge CARB to revise their proposed regulations so they are not at cross purposes. As currently written the proposed regulations will serve to stifle the nascent California based PHEV industry. The aim of CARB is to improve air quality and vehicle electrification is an essential part of the solution. In the upcoming Plug-In Hybrid Electric Vehicle Test Procedure Amendments and Aftermarket Parts Certification Requirements the agency needs to strike a balance between regulating for air quality and allowing room for PHEV innovation to continue to flourish.

After attending CARB's September workshop on test procedures for hybrid electric vehicles, I was concerned that CARB may not have adequately considered how best to foster the innovation, development, and market adoption of increasingly electrified hybrid vehicles.

It is through innovation by nimble, progressive small businesses and non-profits here in California that many basic system design elements have come into being and evolved. Further design evolution is absolutely necessary to bring these environmentally beneficial vehicle technologies to mass market scale. Small, local companies will play a leading role in proving and developing the consumer market for this emerging technology. This offers an environmental benefit with gigantic leverage: history has repeatedly shown that only when a mass market opportunity is well-established and proven will major international automakers step in to exploit and serve it.

I therefore respectfully urge CARB to set requirements and test procedures that will achieve the most environmentally beneficial balance between clear guidance on vehicle air quality regulations and the fostering of innovation in this field."

I also agree with the rest of their comment to CARB.

Thank you,
Ross Levin

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:21:46

No Duplicates.

Comment 120 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jules
Last Name: Kravitz
Email Address: juleskravitz@yahoo.com
Affiliation:

Subject: Plugin Hybrid Electric Vehicle Test
Comment:

```
CARB needs to do more studies to determine whether these concerns
are really a problem in typical driving conditions, not under some
unlikely laboratory worst case scenario.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 09:52:27

No Duplicates.

Comment 121 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Andrew
Last Name: Burnette
Email Address: andrew.burnette@infowedge.com
Affiliation: infoWedge

Subject: Changes to the Proposed Regulation
Comment:

```
Dear Boardmembers,

Please consider my comments against immediate adoption of the
proposed rules affecting manufacturers of plug-in hybrid electric
vehicle retrofit technologies (in the attached PDF file).
```

Attachment: www.arb.ca.gov/lists/phev09/128-commentsoncarb-phev-retrofitregs-infowedge.pdf

Original File Name: CommentsOnCARB-PHEV-RetrofitRegs-infoWedge.pdf

Date and Time Comment Was Submitted: 2009-01-21 09:59:55

No Duplicates.

Comment 122 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Cindy
Last Name: Trueblood
Email Address: pctr@pacbell.net
Affiliation:

Subject: please don't squelch PHEV development
Comment:

I urge you to reconsider the regulations that you have proposed for Plug-in Hybrid Electric Vehicles.

I own a 2005 Prius that I recently had converted to a Plug-in by 3ProngPower in Berkeley. My husband and I are thrilled to have this vehicle, which we charge from electricity generated by solar panels on the roof of our home. Our Plug-in Prius allows us to reduce our CO2 production and use less gasoline. If the regulations that CARB has proposed are put in place, the nascent Plug-in conversion industry would be effectively squelched and others would not be able to make the choice to reduce their carbon footprint in this way.

It is also important to me to reduce emissions that contribute to smog. Therefore, I appreciate the concerns expressed by the CARB engineering staff about the issues of multiple cold starts and the evaporation of gasoline in cars that are not started within a three day period. These are issues that I was not aware of. However, these issues can be easily addressed by maintaining the initial engine run sequence
on startup that is currently programmed into all Hybrid Vehicles. Simply having this as the one and only requirement would alleviate nearly all the concerns raised by the CARB engineering staff without requiring any expensive testing and regulation. I can attest to the fact that my Plug-in Prius doesn’t go three days without the engine starting, except when I am away on vacation. Please keep this issue in perspective! The emissions coming from evaporating gasoline from all the CA vehicles that are not started every three days is MUCH more significant than the emissions coming from a very small number of Plug-in Hybrids, whose owners are very motivated to reduce the emissions.

As I understand it, part of CARB's mandate is to promote low carbon transportation. The proposed regulations seem to be contrary to this mandate. CARB should be doing everything in it's power to encourage Plug-In Electric vehicles, not spending it's resources in premature restrictive regulation.

Please consider keeping a low level of restrictive regulations regarding PHEV building, testing and marketing. At this formative time in the PHEV technology, unnecessary regulation will only serve to hamper the advancement of the state of the art. The educated consumer is fully capable of making a prudent decision provided all the facts are known. The proposed rules could drastically slow growth of the conversion industry, and it could prevent further progress with components, software and usability.

I urge the Air Resources Board to exercise restraint in its efforts and remember that the benefits from these emerging PHEV technology is of great value to society and the planet.

Thank you for your time and consideration of this very important issue.

Cindy Evans Trueblood

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 10:39:00

No Duplicates.

Comment 123 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Linda
Last Name: Black
Email Address: lindajblack@gmail.com
Affiliation: individual

Subject: NO to strict new regulations on PHEV vehicles
Comment:

As the owner of a Toyota Prius, I would LOVE to be able to convert it to a plug-in hybrid. However, it seems like the CARB is missing the larger picture regarding plug in hybrids. Aftermarket plug in manufacturers and mechanics have the same missions as CARB with regards to emissions. Several years ago CARB killed the EV, and now seems ready to put a stake in the heart of the PHEV. There are millions of vehicles in CA that are not started every 3 days. You can ensure clean running PHEV by simply requiring the PHEVs to run the IC until the CAT is operational upon start up. While this is not a perfect solution, it would eliminate most of the problem and allow research to continue for a better solution. This is a critical time in the movement toward the production EVs, and roadblocks are not needed or beneficial.

The California Air Resources Board is expected to adopt strict new regulations based on the theory that the innovative technology sold by 3Prong Power and other companies may be bad for the environment. This is misguided and, given the State's financial issues, harmful in so many ways. I believe these regulations will strangle a promising approach to emissions reduction and energy independence at birth. Sherwood and Guzyk say that if the board adopts the strict new rules at its January 22 and 23 meeting, it likely will force them to shutter their business, which just had its grand opening last month at Green Motors on San Pablo Avenue. We need to ENCOURAGE such business ventures, not force them to close. I urge you to work with the budding PHEV industry to discuss ways to use the catalytic converters effectively, and to discharge vaporized gasoline. Please allow waivers for the warranty requirements as well as the testing, until you can find some more reasonable and mission advancing warranty and testing requirements.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 10:42:51

No Duplicates.

Comment 124 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: tom
Last Name: buoye
Email Address: tombuoye@gmail.com
Affiliation:

Subject: Aftermarket Plug-in Hybrid Certifications
Comment:

Dear CARB,

Is it really in the interest of California and the world to stifle such innovation and subject tiny cutting edge garage based companies to the same standards that HUGE companies?

These same companies that fought ALL of the initial smog reduction standards, tooth and nail, and instead of assigning the best engineers to fix their cars they gave it to the lawyers and lobbyists, as opposed to Honda that created the CCVC engine.

In terms of real smog control, wouldn't banning the sale of all high performance after market equipment reduce the tonnage of CO, unburned HC's and NOx? by orders of magnitude?

I studied w/ both of the first technical chairs of CARB, both E. Starkman and R. Sawyer and both of them pointed out that you could only get the Auto giants to add emission control equipment or adding even seat belts by holding their feet to the fire.

Only by showing the country and the world the possibility and demand for plug in vehicles will those auto companies pay attention. Don't kill these resourceful, innovative, creative companies right as they are getting traction.

thank you
tom buoye

PS. Professor Starkman pointed out during one of his lectures, maybe my most memorable moment at Berkeley, how CARB was going to implement the second stage of emission control on NOx, and naturally Big Auto claimed it was NOT possible. Prof. Starkman simply pointed out, by retarding the timing, NOx would be meet the standard. It sent the lawyers packing and let the engineers fix the problem.

Let the engineers fix the problem.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 11:12:06

No Duplicates.

Comment 125 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Paul
Last Name: Guzyk
Email Address: paul@3prongpower.com
Affiliation: 3Prong Power Inc, Berkeley

Subject: PHEVs are still insignificant in the large picture
Comment:

```
It is too early to heavily regulate the aftermarket PHEV industry.
Imagine if government had regulated the Internet in the 1990's.
The Internet (as we know it) may never have happened.   Internet
related busineses now provide jobs for tens of thousands of
Californians.

We have an opportunity for California to be a world leader in the
electrification of the automobile.  Most of the PHEV development
and innovation is happening here in California.  Let's keep
California a leader in green tech and foster entrepreneurs.

There are 32 million cars in California
320,000* Prius Hybrids
500* Plug In Hybrids

As of Jan 2009, Less than 1/5th of 1% of California Hybrids are
Plug In Hybrids.

Until the number reaches 3-5% of hybrids, let the PHEV industry
evolve with looser regulations.

Heavy regulation at this time will force the innovative startups
out of business.

Paul Guzyk
co-founder
3Prong Power Inc.

(*conservative estimates)
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 11:18:08

No Duplicates.

Comment 126 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Tom
Last Name: Stacey
Email Address: tjstacey@gmail.com
Affiliation:

Subject: Please do not kill plug-in hybrid technologies before they have a chance to get started
Comment:

```
Please look at the big picture and consider the negative
consequences that will ensue should you require expensive emissions
testing of every plug-in hybrid model. Now is the time to spur
innovation, and encourage the adoption of cleaner technologies. I
urge you to work with small firms who are bringing more
fuel-efficient automotive technologies to the market, rather than
making it much more difficult for them.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 11:27:16

No Duplicates.

Comment 127 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Kim
Last Name: Adelman
Email Address: kadelman@pluginconversions.com
Affiliation: Plug-In Conversions Corporation

Subject: Comments by Plug-In Conversions Corporation, Poway, CA, regarding PHEV amendments
Comment:

```
Plug-In Conversions Corporation thanks the Board for the
opportunity to comment on the proposed PHEV amendments.  Please see
the attached PDF for our comments.
```

Attachment: www.arb.ca.gov/lists/phev09/134-2008-01-21_comments_on_carb_phev_proposed_amendments.pdf

Original File Name: 2008-01-21 Comments on CARB PHEV proposed amendments.pdf

Date and Time Comment Was Submitted: 2009-01-21 11:30:15

No Duplicates.

Comment 128 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: David
Last Name: Serotkin
Email Address: leonthebum@hotmail.com
Affiliation:

Subject: Plug-In Hybrids
Comment:

```
These regulations should be passed with a built in waiver for new
small but growing companies that are building a very small number
of vehicles.  A waiver on the first 1000 vehicles sold for example
would allow small business to continue to innovate while still
providing the needed air quality protections once the industry is
mature.

Many of the concerns expressed by the CARB engineering staff can
be easily addressed by maintaining the initial engine run sequence
on startup that is currently programmed into all Hybrid Vehicles.
Simply having this as the one and only requirment would alleviate
nearly all the concerns raised by the CARB engineering staff
without requiring any expensive testing and regulation."

Thanks,
David
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 11:31:37

No Duplicates.

Comment 129 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Spencer
Last Name: Quong
Email Address: squong@ucsusa.or
Affiliation: Union of Concerned Scientists, et al

Subject: Comments on Hybrid Exhaust Test Procedures
Comment:

```
Attached is a document with comments on the Hybrid Exhaust Test
Procedure portion of the regulation from Union of Concerned
Scientists, Coalition for Clean Air, Friends of the Earth, Friends
of the Earth, Energy Independence Now, Center for Energy Efficiency
and Renewable Technologies, and Environment California.
```

Attachment: www.arb.ca.gov/lists/phev09/136-arb_isor_hybrid_exhaust_test_procedure_comments.pdf

Original File Name: ARB ISOR Hybrid Exhaust Test Procedure Comments.pdf

Date and Time Comment Was Submitted: 2009-01-21 11:58:07

No Duplicates.

Comment 130 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ben
Last Name: Jones
Email Address: benjones1@comcast.net
Affiliation:

Subject: Aftermarket PHEV Conversion Regulations
Comment:

The proposed rulemaking for plug-in hybrid electric vehicle conversions imposes such stringent and costly requirements that the small, local conversion system manufacturers developing and producing this energy- and pollution-saving technology will likely be forced out of business. Without these entrepreneurs and small companies developing plug-in hybrids, awakening consumer demand for vehicles few knew were possible, and forcing a reluctant auto industry to take the technology seriously, the Board would not be here discussing plug-in hybrids -- vehicles that have the potential to significantly reduce air pollution and greenhouse gas emissions in our state, and ultimately, in our nation and the world. Please do not cripple this small but vibrant and growing conversion industry with premature, excessive regulation. These small companies are the innovators. I urge the Board to work with them to develop a realistic strategy that will foster the growth of this industry as well as ensure the long-term emission reductions that this technology offers.

Thank you for considering my comments.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 11:59:30

No Duplicates.

Comment 131 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Barry
Last Name: Wallerstein
Email Address: bwallerstein@aqmd.gov
Affiliation: South Coast Air Quality Management Dist.

Subject: SCAQMD Staff Support for the Proposed Test Procedures
Comment:

```
Please find attached the SCAQMD staff support for the proposed
Plug-In Hybrid Electric Vehicle Test Procedure Amendments and
Aftermarket Parts Certification Requirements.
```

Attachment: www.arb.ca.gov/lists/phev09/138-scaqmd_comments_-_plug-in_hybrid_test_proc_-_012009.pdf

Original File Name: SCAQMD Comments - Plug-in Hybrid Test Proc - 012009.pdf

Date and Time Comment Was Submitted: 2009-01-21 12:00:37

No Duplicates.

Comment 132 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jay
Last Name: Friedland
Email Address: jay@pluginamerica.org
Affiliation: Plug In America

Subject: Board Comments on Regulation of Plug-In Hybrid Conversions
Comment:

To the Chair and Members of the California Air Resources Board:

Plug In America strongly believes that plug-in hybrid electric vehicle conversions will play an important role in the next five years toward helping California meet the ambitious goals set forth in AB32. We are also listening to the voices of our constituents -- consumers who are eager to get behind the wheel of a highway-capable vehicle that is fueled by the state's clean electricity grid, as well as viable plug-in hybrid conversion companies that are eager to meet reasonable standards.

We believe that the plug-in hybrid vehicle conversions offer consumers a faster and more affordable way to get into plug-in vehicles while the general public waits for the plug-in automobiles which are expected to be introduced by the OEMs starting in late 2010 and beyond.

With this forward-thinking position in mind, Plug In America is also
cognizant that even well intentioned mechanic shops may be entering into unfamiliar territory. We have always taken the position that plug-in hybrid conversions of both existing hybrids as well as internal combustion engine vehicles should adhere to standards of health and safety involving both emissions and crash-testing.

We encourage CARB to take an approach in adapting regulations to balance the desires of consumers while creating opportunities in the marketplace for green businesses, small and large, to meet reasonable standards of battery warranty, emissions and OBD II compliance. We believe that staff has worked hard to deal with the complexity of these issues and will be able to clarify them so that plug-in hybrid conversions can truly deploy to consumers.

Plug In America has identified three themes in the current rulemaking that need either clarification or comment:
1. How hybrid conversions are expected to meet the new regulations.
2. How non-hybrid conversions are expected to meet the new regulations.
3. OBD II standards.

It is important for the marketplace, for consumers, and for air quality, to be very clear and specific about battery warranty requirements for different types of conversions. As long as a converted vehicle's original emissions standard is maintained

during the original emissions warranty period, we propose that CARB should certify the conversion. For plug-in hybrid conversions that do not modify the existing hybrid battery, there should be a separate and shorter warranty requirement.

Some significant private companies in California are not dismissing the possibility of converting thousands, if not millions of internal combustion engine vehicles to plug-in hybrid vehicles. In this case, there would be no prior batteries needing warranty clarification. It is important for ARB to delineate its requirements for conversions of existing hybrid cars versus ICEs. It is also important for ARB to be clear on its warranty range requirements for aftermarket conversions in these two different scenarios.

With regard to OBD II standards, the biggest issue is that many of the OEMs have proprietary data that is not available for during the testing process. Since you are offering gradual phase-in of OBD II standards as per the language in the Appendix of the Staff Report, you may want to consider making this more openly visible to all of the parties.

Given President Obama’s support for plug-in vehicles and the possibility that the upcoming Federal stimulus bill may include funding for aggressive deployment of fully electric and plug-in vehicles into the marketplace, it would be unfortunate if California's standards were too onerous to allow California consumers and companies to take advantage of this opportunity. We encourage the California Air Resources Board to act in a way that encourages the widespread development and deployment of plug-in hybrid conversions.

Thank you for your time and consideration of our comments.

Sincerely,

Jay Friedland
Legislative Director
Plug In America

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-21 12:40:46

No Duplicates.

Comment 133 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Susan
Last Name: Blachman
Email Address: susan@blachman.org
Affiliation:

Subject: plug in cars
Comment:

```
I support CalCars.org and the after market Plug In Hybrid industry
in their opposition to these proposed regulations. I urge CARB not
to pass these regulations as currently written and to sit down at
the table with all stake holders in the industry to arrive at a
compromise solution that will allow for the Plug-In Hybrid industry
to thrive.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-01-29 15:17:22

No Duplicates.

Comment 134 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: James
Last Name: Rieley
Email Address: jbrieley@rieley.com
Affiliation:

Subject: Plug-In Hybrid Vehicles
Comment:

I hope that the Board does not take this opportunity for the larger community and over-regulate it by following the model that has been used for traditional internal combustion vehicle standards. Hybrid electric vehicles can help the state to solve several of the complex and inter-related challenges that it faces...Let's try to ensure that the Board does all that it can to ensure that we, the auto purchasing and driving public, have an opportunity to use hybrid electric vehicles to help the state solve those challenges.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-12 19:41:34

No Duplicates.

Comment 135 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: David
Last Name: Hill
Email Address: david.hill@inergyautomotive.com
Affiliation: Automotive Fuel Systems

Subject: Contradiction in Terms
Comment:

```
Section II 1.12.6 and 5.4 seem to contradict each other.  One
requires a maximum state of charge prior to the 2/3 day diurnal
while the second clause requires a minimum state of charge so
that
the vehicle can maximize its amount of purge.

Can someone explain this contradiction?
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-20 16:02:48

No Duplicates.

Comment 136 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Daniel
Last Name: Sherwood
Email Address: daniel@3prongpower.com
Affiliation: 3Prong Power Inc.

Subject: 3Prong Power Inc. Comments on Plug-In Hybrid Test Proceedres
Comment:

Dear California Air Resources Board,

I would like to respectfully submit the following comments on behalf of our startup company, 3Prong Power, our employees, our customers and the customers we plan to serve in the years ahead. Our company enables owners of the popular Toyota Prius hybrid to reduce their air and climate impact and increase their fuel economy through the installation of an after-market plug-in electric upgrade.

We appreciate the thoughtfulness that CARB has put into drafting the proposed regulations and test procedures to address the newly available class of off board charging hybrid vehicles. We know your agency is aware of the enormous potential for this emerging class of vehicle, commonly known as Plug-In Hybrid Electric Vehicles (PHEVs), to improve California's air quality and to address global warming.

Since the last time these regulations were considered at a CARB board meeting in January, we have met on several occasions with CARB staff to discuss our concerns. We appreciate the CARB staff's willingness to meet with us and their movement toward a tiered structure for compliance with these proposed regulations.

At 3Prong Power we believe that PHEV conversions are a crucial first step in catalyzing a "virtuous cycle" or positive feedback loop in the marketplace, one that steadily raises electric driving's share of the transportation market, in foreseeable steps. The virtuous cycle we envision looks something like this:

* We start by converting existing vehicles to PHEV;
* These PHEV conversions lead to more recharging infrastructure;
* More infrastructure and market development lead to even more demand for plug-in vehicles;
* The plug-in vehicle market grows to the point where large businesses and automotive OEM's jump in;
* This leads to high volumes, lower costs and improved performance, encouraging more electric driving;
* Growing demand spurs installation of second generation charging technology such as fast charging, battery swap, and vehicle-to-grid technology.

Ultimately, as batteries and infrastructure improve, it becomes possible to dispense with the gas engine entirely and transition to

all electric transportation. That end result represents a dramatic paradigm shift.

Along the way, PHEV conversions help to:

* Clean the air;
* Slow global warming;
* Break our addiction to oil;
* Foster innovation;
* Create good, green jobs here in California.

Because it offers all these valuable benefits along the way to ultimately transformative change, our PHEV conversion technology merits a lighter regulatory touch than alternative technologies whose end results are merely incremental reductions in carbon and other criteria pollutants, technologies such as agricultural biofuels or "alternative" fossil fuels.

In fact, though, regulation of PHEV conversions should go further, and create incentives that grow this segment of the transportation market, rather than chill it or even stop it altogether.

In this spirit, we welcome the conceptual shift proposed by the CARB staff toward a tiered approach to certification in our industry. A tiered approach should allow small, innovative California businesses to operate, grow, and gain important market and technological feedback at a low and manageable cost of compliance, while ramping at a reasonable rate toward full compliance with necessary regulations at an appropriate stage.

An appropriately tiered ramp-up in regulatory requirements is crucial to the survival of these companies, which are presently very young and highly vulnerable to significant cost burdens. Costs such as those imposed by the laboratory testing requirements in Tier 2 would cripple us, and other California PHEV conversion companies, if imposed too early.

Unfortunately, we feel that these concerns are not reflected in the CARB staff's current proposal.

We respectfully request the following modifications to the proposed regulations:

1. Tier 1 Ceiling. First and most imporant, we urge CARB to raise the Tier 1 ceiling to 100 vehicles (up from 10 as currently proposed).

Setting the first tier ceiling at only 10 vehicles, while placing the most expensive part of compliance in the second tier, defeats the intended purpose of the tiered approach. All the businesses in California currently offering PHEV conversions have already exceeded the proposed 10 vehicle first tier limit.The one notable exception to this pattern is an out-of-state company which has been able to pay for laboratory testing with financial resources unavailable to the California companies Setting the first tier ceiling so low would be highly disruptive to the nascent California PHEV industry.

Instead, the number of vehicles sold under Tier I should be sufficient to allow room for product refinement, feedback from consumers, business development, and revenue generation, before

companies like ours face the most expensive area of compliance: laboratory testing. If we assume $200,000 as a reasonable estimate of the cost of testing, spreading this cost over just 10 vehicles effectively adds $20,000 to the cost of each one. It's easy to see that this figure is prohibitive from the consumer's perspective -- roughly equaling the base cost of a new Prius, and more than tripling the cost of conversion alone.

We suggest that a Tier 1 ceiling of 100 vehicles is more appropriate. A Tier 1 ceiling of 100 will vehicles allow PHEV businesses still in their infancy to continue operating in the first Tier, while integrating customer feedback, refining their products, developing their businesses, and generating revenue. Spreading the testing cost over 100 sales effectively adds just $2,000 to the cost of each vehicle, which is manageable.

2. Evaporative Emissions. We request that the test procedure be modified so that only a charge sustaining drive cycle is required before evaporative emissions testing.

The current test procedure calls for a short drive cycle in charge depletion mode before testing for successful canister purge. Depending on the PHEV architecture, it may be possible to complete this short drive cycle using only the electric motor. Using solely the gasoline engine will result in no purging of the canister and cause the vehicle to fail the test procedure.

We believe this is flawed reasoning for two reasons. Firstly, real world experience has shown that most of our customers have longer drive cycles than required by the test procedure, so that the engine does, in fact, run in charge sustaining mode most days. This enables a proper purge of the canister. Secondly, those customers that are able to keep their driving to a minimum and maintain the vehicle in charge depletion mode, will quickly realize that their needs can be as easily met by an EV as a PHEV and therefore will likely become early adopters of that technology. Even if that transition does not materialize, this situation is not worse than the situation where someone decides to ride their bicycle or take public transportation most days and leave their car at home.

Requiring a PHEV to operate only in charge depletion mode before testing for canister purge is analogous to requiring standard hybrids to be parked while the driver rides a bicycle around before testing for canister purge. Both situations, commuting by bicycle and driving a PHEV in electric mode only, will increase evaporative emissions, however we believe that both situations deserve to be encouraged not prohibited due to technicalities of a test procedure. Therefore we request that the test procedure be modified so only a charge sustaining drive cycle is required before testing for evaporative emissions.

3. Warrany Issues. The warranty requirement should explicitly exclude a performance warranty on the battery.

The staff recommendations continue to focus on the length of the warranty, and seek to hold PHEV supplemental batteries up to the high standard set by the HEV industry. We do not disagree with the warranty length as recommended. However, we believe that what exactly is covered by the warranty should be more clearly spelled out. Specifically, for current HEVs, the hybrid battery warranty does not warranty against degradation of the battery capacity over

time. It warranties that the vehicle will run and that it will meet emission requirements. We believe that the supplemental battery should be held to that standard, i.e. to warranty that emissions will not be impacted and that the vehicle will continue to run. Performance degradation of the battery over time should not be interpreted as a reason to replace the entire battery under warranty. The exact nature of the warranty requirements are not explicit in the staff proposal. We request that an explicit exclusion of performance warranty on the battery be included.

Thank you for the opportunity to provide this input on how to create a set of regulations for PHEVs and ZEVs that will best provide Californians with increasingly clean alternatives for personal transportation.

We hope very much that you will choose to adopting the changes requested here. We believe these are the best ways CARB can support the California consumers who want to drive Plug-In Hybrids, the young California companies that provide the technology, our employees, and clean air and a healthy climate for everyone. With your help, we'll do all we can to advance California's transition to electric driving as smoothly and quickly as possible.

Respectfully submitted,

Daniel Sherwood

President, 3Prong Power
Daniel@3prongpower.com

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 10:36:26

No Duplicates.

Comment 137 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Kiet
Last Name: Chau
Email Address: kchau@vivid-hosting.net
Affiliation:

Subject: Plug-in hybrid regulations
Comment:

```
Dear California Air Resources Board, please support the California
Plug In Hybrid conversion industry by raising the Tier 1 ceiling to
100 vehicles up from the currently proposed 10.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 14:34:33

105 Duplicates.

Comment 138 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michael
Last Name: Bender
Email Address: membender@hotmail.com
Affiliation:

Subject: Tier 1 caps for small PHEV Conversion companies
Comment:

Dear CARB,

I work in the PHEV-advocacy "business," and know that your proposed cap of a mere TEN vehicles for Tier 1 in your latest proposal is too low for nascent conversion companies and will put most if not all out of business. And during these economic times, especially here in California, these small and innovative companies are exactly the WRONG kind that we want to see disappear. Some could be the Hewlett-Packards of the future (especially since most of them got started, appropriately, in GARAGES), but *not if they are put out of business before they can gain a foothold*. So please, raise the cap on Tier 1 to 100 or 200, so that these companies can afford to stay in business and grow to become well-established, job-producing and GREEN companies.

Thank you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 15:13:12

No Duplicates.

Comment 139 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gerry
Last Name: Gaydos
Email Address: gerry.gaydos@hotmail.com
Affiliation: EAA member

Subject: testing requirements for PHEV conversions
Comment:

Please consider raising the number of PHEV conversions that would trigger the requirement for emissions testing, from 10 vehicles to 100 units. Start-up PHEV ventures will be unduly burdened with the cost of these tests at the proposed limit of 10 conversions, to such an extent that it would become impractical (unprofitable) to lunch a business to perform Plug-In conversions. At 100 vehicles, the burden of testing costs on each car could be at least manageable, ($2000) even if not ideal, allowing us to collectively proceed with the important work of improving the fuel economy of tens of thousands of existing hybrid vehicles on the roads in North America. A business that fails due to excessive external costs, can't help the cause.

Thank you for your continued efforts on behalf of all who care about the air.

regards,
Gerry Gaydos
founder, CEO Funkymotoªelectric Vehicles Inc.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 16:15:15

1 Duplicates.

Comment 140 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Wesley W
Last Name: Schilling
Email Address: flwrman@sbcglobal.net
Affiliation:

Subject: Save Plug-In Hybrid EV's
Comment:

```
Please do not limit or do away with the Plug-In Hybrids in CA.  I
believe this is a retro fit that is a great alternative for those
of us that do most of our driving in town and not on the highway.

Thank you for listening to me.

Wesley W Schilling
Fremont, CA 94536
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 16:18:03

No Duplicates.

Comment 141 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: barry
Last Name: nicholls
Email Address: bnhappy5@aol.com
Affiliation:

Subject: phev's
Comment:

```
I WANT THIS FLEDGLING INDUSTRY TO BE A SUCCESS AND HELP IN THE
FIGHT AGAINST GLOBAL WARNING. GIVING THESE COMPANYS THE 100 CAR
LIMIT HELPS THEM GET ESTABLISHED AND REFINE THEIR FINAL TECHNIC
BEFORE THEY FACE A LARGE HURDLE OF TESTING AND CERTIFICATION. I
HOPE TO OWN A PHEV AND WOULD LIKE AND DESERVE THE WIDEST POSSIBLE
RANGE OF VEHICALS TO CHOOSE FROM.

                      THANK YOU BARRY
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 17:24:30

No Duplicates.

Comment 142 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Zakiya
Last Name: Harris
Email Address: zakiya9@gmail.com
Affiliation:

Subject: Plug In Hybrids
Comment:

```
Save the hybrids, reduce our dependency on foreign oil and help
reduce our carbon footprint!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 22:00:34

No Duplicates.

Comment 143 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jamie
Last Name: Knapp
Email Address: jamie@jknappcommunications.com
Affiliation:

Subject: Environmental NGO Comments on PHEV Conversion Proposal
Comment:

```
Comments of Union of Concerned Scientists, American Lung
Association in California, Coalition for Clean Air, and Center for
Energy Efficiency and Renewable Technologies.
```

Attachment: www.arb.ca.gov/lists/phev09/218-09-05-4-phev-env-comments.pdf

Original File Name: 09-05-4-PHEV-env-comments.pdf

Date and Time Comment Was Submitted: 2009-05-21 22:02:48

No Duplicates.

Comment 144 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: William
Last Name: Henry
Email Address: bhenry@nvidia.com
Affiliation:

Subject: Raise conversion limit from 10 to 1000
Comment:

Companies that convert hybrids to plug-in hybrids are indeed focused on doing the right thing for the planet and our economy. TO make a dent in the electric vehicle market we need many more start-ups to convert vehicles. People recently displaced from the auto industry can get into the car conversion game to rapidly expand the expertise and production base of plug-in hybrids. The current 10 unit limit will stop every entreprenuer in his tracks since you cant build a business with only 10 individual customers. Let these businesses support many customers before imposing such an onerous burden

The limit is quite ridiculous in the first place. Plug in hybrids will use less fossil fuels. In my case, driving my electric car is totally carbon neutral since I have solar panels to fuel the car. We need more affordable electric vehicles on the road. Converting a Prius to plug in covered my daily commute.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 22:43:56

No Duplicates.

Comment 145 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: lisa
Last Name: nordman
Email Address: lisanordman@telus.net
Affiliation:

Subject: battery power for the future
Comment:

```
This is a positive and critical step towards the green future of
our planet.  Whether we are stewards, grandparents or parents by
what initiatives do we want our legacies to remember us?  Let us
make all viable greenways available to as many as we can today.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-21 23:13:27

No Duplicates.

Comment 146 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: James
Last Name: Rieley
Email Address: jbrieley@rieley.com
Affiliation:

Subject: Plug-In Hybrid Vehicles
Comment:

Dear Air Resources Board...

As someone who first owned an electric car in the 1970's (one that wasn't all that practical), I have been watching with keen interest all the work done by 3-Prong to offer a sound, rational alternative to our current automotive options. In a time in which we are being hammered with economic problems, clear environmental challenges, and the need to find more sustainable choices; the hybrid options that 3-Prong offers are welcomed...and I trust that you will do whatever possible to give them and the other hybrid suppliers the opportunity for consumers to make better transportation choices.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 00:45:49

No Duplicates.

Comment 147 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Steve
Last Name: Woodruff
Email Address: steve@autobeyours.com
Affiliation: AutoBeYours.com

Subject: my personal message about plug in hybrids
Comment:

```
Please make it easier for smaller companies to make and sell plug
in hybrid conversions.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 04:41:11

No Duplicates.

Comment 148 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ingram
Last Name: Schwahn
Email Address: ips330@att.net
Affiliation:

Subject: Pros and Cons of plug-in Hybrids
Comment:

```
Do Plug-in Hybrids cost less than self-charging Hybrids ?

The advantage of self-charging Hybids is obvious: no wasted time
to plug in to electrical outlets after finding out where they are
if needed on a trip.

Thanks for doing this research.

Ingram Schwahn
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 08:11:12

No Duplicates.

Comment 149 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: novella
Last Name: carpenter
Email Address: novellacarpenter@yahoo.com
Affiliation: biofuel oasis

Subject: Plug in hybrids
Comment:

```
Hello CARB:
Please, let's make the right choice and allow the production of
plug-in hybrids. This kind of innovation will only lead to better
electric cars and thus will decrease the amount of CO2 in the air.

Sincerely,
Novella Carpenter
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 13:39:54

No Duplicates.

Comment 150 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Edward
Last Name: Rollins
Email Address: edwardrollins@hotmail.com
Affiliation: small business owner

Subject: 3 Prong Power
Comment:

```
Hi,I am writing to encourage the California EPA's Air Resources
Board to do everything they can toencourage the use of battery
powered vehicles in the state of California.

The rest of the country has come to depend on the state of
California to lead the way for the rest of the country when it
comes to clean emissions and environmental action!

Thank you,
Edward L. Rollins
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 15:52:49

No Duplicates.

Comment 151 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: melanie
Last Name: barna
Email Address: melbarna@comcast.net
Affiliation:

Subject: support 3 prong power
Comment:

```
To Whom It May Concern,

Please support clean car energy research.  Please support the
efforts of 3 Prong Power, allowing them to continue their work in
creating a more carbon emission free system with plug in hybrid
vehicles.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 16:08:42

No Duplicates.

Comment 152 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jean
Last Name: Woo
Email Address: jean.woo@gmail.com
Affiliation:

Subject: Plug-In Hybrids
Comment:

1442A Walnut St #368
Berkeley, CA 94709
5-22-09

Dear folks at CARB:

I have followed your work for many years, and am overall very proud of the work that you are doing. I have a 2004 Prius with over 100,000 miles on it, and last year put a solar array on my house specifically because I plan to convert my Prius to a plug-in car and run it primarily on solar power. I use very little electric power personally, and oversized the array just for this purpose. I believe that we (the general public) and the owners of cars taht can be run on electric power via a plug-in device are much better served by increasing the Tier One limit from 10 to 100, even 1000. The ability to run our economy, even if only a small percentage of the transportation sector, using solar panels and clean non-polluting non-CO2 producing energy, will be a necessary and critical part of our new low carbon economy. As the viability of plug-in hybrids increases in the market, and in particular vis-a-vis the traditional American SUV, truck and auto, we the people of the world will all benefit. We in the US need this time and opportunity to create a manufacturing/retrofit industry and pathway, open to a large cross-section of society. Please raise the cap for the Tier One segment to at least 100, and better, 1000. We have precious little time to get off of oil and fossil fuels, and into the new low-carbon economy.

As potential consumer interested in converting my Prius, I would like to add--do not burden us with additional costs for this testing. Please please use some of the stimulus funding for the state to support the testing effort and promote the plug-in hybrid --the sooner that the issues are resolved, the faster state and local governments can purchase low-carbon plug-in fleets, and replace older dirty cars and trucks, and the sooner that shops that are engaged in retrofits will be able to standardize their processes and bring down costs. Better than just covering the cost of the testing, include incentives to cover the cost of retrofitting an existing hybrid to a plug-in car. Additional funds released for (1) solar parking lots equipped with fast-charging stations (2) Battery swap-out systems in places that they will be convenient and cost-effective for customers and (3) a "smart card" system similar to the zip car or other "credit-type" cards in which the power used from the plug-ins to support the grid can be saved onto a card, from which one can draw to either decrease the homeowner's electricity bill, or to purchase and support organic

and green services and products (paints, energy audits, solar systems, small wind and hydro systems, microfinance systems, groceries, clothing, toys and so forth, even makeup (!)) and to support non-profits doing good in other parts of the world, will make owning and charging a plug-in car bring value to the most sectors of the economy in the most seamless way. In this way, the plug-in electric car can be part of a system to create jobs and kick-start our economy - all without using or importing oil and gas, or using food crops to create transportation fuel.

Thank you for your time and attention to this matter,

Jean Woo MD MPH

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 17:04:17

No Duplicates.

Comment 153 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Patrick
Last Name: Rentsch
Email Address: patrick@coastside.com
Affiliation:

Subject: PlugIn Hybrid conversions
Comment:

To the California Air Resources Board,

The entire world recognizes the need for all electric and plug-hybrid vehicles. Yes, we also need to ensure that these vehicles do not have adverse impacts.

The proposed limit of Tier 1 conversions of 10 cars is way too low. This will place a huge burden on early adopters, and be overly restrictive on a developing technology. We need options, we need to fine-tune the possibilities. It is unrealistic to think this can be achieved with just 10 units.

Make it 1,000, or at least 100. Even one "legacy" (i.e., more than 30 years old) automobile will pollute more than all of the proposed plug-hybrids. In fact, the plug-hybrids will pollute less than even some of the cleanest cars (e.g., the Prius).

Please, help this country lead again.

Thank you,

Patrick Rentsch
650.738.0876

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 17:08:52

No Duplicates.

Comment 154 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Tim
Last Name: Rentsch
Email Address: txr@alumni.caltech.edu
Affiliation:

Subject: Proposed Rulemaking for Plug-In Hybrid Electric Vehicle etc
Comment:

```
The proposed numbers for each tier all seem marked too low.
The tier 1 number should be more like 100;
the tier 2 number should be more like 500;
the total number should be more like 25,000 or maybe 50,000.
These are necessary for economic health of small companies
and also to prevent domination by a few large concerns.
Diversity is what will make the effort succeed.
The proposed rule making should be revised with these
concerns, including the economic viability of small
companies kept in mind.

thank you,

Tim Rentsch
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-22 17:22:54

No Duplicates.

Comment 155 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: nicholas
Last Name: cederlind
Email Address: nickelonious_c@yahoo.com
Affiliation:

Subject: Hybrids are the way to go!
Comment:

```
Hi,

     Plug-in Hybrids are ALL my friends talk about - 3 already
have them and 3 more are getting them. Even regular hybrid owners
are saying to me they feel left behind! I'm getting one next year
and I feel we need to support this new wave of the future!

- Nick Cederlind
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-23 13:15:55

No Duplicates.

Comment 156 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: David
Last Name: Lincer
Email Address: dalincer@comcast.net
Affiliation:

Subject: Size of a Company
Comment:

As I understand the proposed rule, the CARB intends to require a $200,000 test once a company has modified 10 vehicles.

The costs of such testing spread over 10 vehicles make a "small" company not viable. At $20,000 / car for #1-#10 your rule will prevent the innovation that a small company can bring.

Large companies that intend and have the resources to build thousands of vehicles can amortize the cost of such testing over the design cycle and initial manufacturing.

I request consideration that 100 vehicles possibly emitting more air pollution while definitively reducing their gasoline usage is worth our efforts to support. Note that POSSIBLY emitting more air pollution, not guaranteed to do so.

I agree that the testing needs to be done once the design of the modifications has stabilized. I support the requirement for testing at 100 vehicles, not the ten that the proposed rule would require.

David Lincer

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-23 18:32:25

No Duplicates.

Comment 157 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Rose
Last Name: Vasquez
Email Address: novaacademy@hotmail.com
Affiliation:

Subject: Electric Cars
Comment:

If America is to live up to the great potential our founding fathers fought for, it is time for a new revolution. Electric cars by any and all means possible! We, the people, will no longer sit idling by in our combustion engine vehicles waiting for government and/or corporations to take the lead. So lead, follow or get out of the way. The wheels of the future are already in motion.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-24 08:55:08

No Duplicates.

Comment 158 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Russell
Last Name: Brown
Email Address: rbrown@adobe.com
Affiliation: Human

Subject: Plug in hybrids
Comment:

```
California Environmental Protection Agency,

Just as your name implies, we all need to protect the environment
in which we live.
Making it more difficult for consumers to help you with this cause
is not logical.
Your current plans for adjusting the regulations for hybrid
conversions is not going to help the situation, but instead make
things more difficult.

Please, Please, Please, support the California Plug In Hybrid
conversion industry by raising the Tier 1 ceiling to 100 vehicles
up from the currently proposed 10.

You can save the planet or kill it.
You decide.

Sincerely,
Russell Brown
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-25 10:44:50

No Duplicates.

Comment 159 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Marvin
Last Name: Schafer
Email Address: Schaferdds@yahoo.com
Affiliation:

Subject: California citizens require your vote this week
Comment:

To the members of the California Air Resources Board:

In years past the Board has helped to make California a leader in the world, and at other times it has buckled under the pressure and legal threats of the automotive industry. The industry opposed seat belts, air bags, and increased fuel economy standards. Their interests are at odds with the needs of the citizens of California.

I urge each of you to vote to allow free enterprise to flourish in California by allowing entrepreneurs to build at least 100 Plug-In hybrid cars before being subject to the Tier 2 testing requirements.

Adding batteries to capture the momentum in a car so less of the kinetic energy is wasted in heating the brakes can only reduce emissions.

Please vote for small business and raise the Tier 1 ceiling to 100 vehicles up from the currently proposed 10 cars. Make a vote for Californians, the environment, and small businesses, and not for the auto industry.

M P Schafer
Former Development Engineer
Hewlett-Packard Company

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-25 23:49:40

No Duplicates.

Comment 160 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Marston
Last Name: Schultz
Email Address: mschultz@cleanpower.coop
Affiliation: Clean Power Cooperative of Nevada County

Subject: Rules for Plug-in hybrid electric vehicles
Comment:

I bought a Toyota Prius with the intention to conver it to a plug-in. Now I see the plug-in conversion market is about to take off but is threatened with excessive restrictions before the industry can even get off the ground. Why do you require a 10 year warranty on plug-in. Are catlytic converters on non hybrids warrantied for ten years?

I understand that you are concerned about the catalytic converter will not stay warm and will release more undesirable emissions.

The whole purpose of a hybrid is to be able to drive in electric mode locally and to return home withiut ever using the internal combustion engine, hence no use of the caolytic converter unless going on long trips.

Please let the Plug-in conversion industry move ahead without excessive regulatuion.

Raise the Tier 1 ceiling to at least 100 vehicles

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-25 23:59:08

No Duplicates.

Comment 161 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gary
Last Name: Gerber
Email Address: gary@sunlightandpower.com
Affiliation: President, Sun Light & Power

Subject: Zero Emission Vehicles
Comment:

As an electic car driver for the past eight years, I know from a customer's point of view what a struggle it can be to adopt and use EV's. There is virtually no support structure for EV's, and most of the progress that has been made in this technology seems to have come from small, independent, dedicated but undercapitalized start-ups, supported by a small, independent and dedicated group of EV owners.

I understand that CARB rules are being considered which may force some of the pioneers of plug-in hybrid technology out of the market and consequently out of business. PLEASE consider raising the Tier 1 ceiling for emission testing to at least 100 vehicles, to make it possible for small businesses to continue the work that they started years ago. Not only is this a good policy decision, but is the moral and ethical thing to do. Many of these good people have put their life savings on the line to promote a public good, and have done so without any government support. Now that the government is getting involved, it would be a sad day if one of the first things CARB does is to take actions which put these people out of business and hand over the reins of Plug In Hybrid technology exclusively to big businesses.

Pioneers and leaders deserve to be supported and rewarded, not destroyed. We have already seen what happened to the EV mandate nearly a decade ago. Lack of support for small businesses will ultimately erode the innovative spirit that feeds innovation.

Thank you.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 09:30:43

No Duplicates.

Comment 162 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Gonzo
Last Name: Rock
Email Address: grocks@gmail.com
Affiliation:

Subject: DO NOT LOCK OUT THE INNOVATORS!
Comment:

```
Creating Tiers, and then capping Tier 1 at 10 vehicles, though
seemingly an improvement, is not any better than the first
proposal.  You must allow for small firms to get a footing before
saddling them with expensive emission testing.  To do otherwise
creates an unfair advantage and eliminates the innovation that only
comes from small firms scrapping to provide a solution to our
planets problems.  DO NOT LOCK OUT THE INNOVATORS!
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 10:49:47

No Duplicates.

Comment 163 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Fred
Last Name: Neff
Email Address: OrdDepot@hotmail.com
Affiliation: Cal-Cars

Subject: Please don't over regulate the PHEV pioneers
Comment:

Without them we wouldn't even be having these public discussions, and there wouldn't be any hybrids let alone the plug in type.

It is just silly to let the special interest, big auto makers influence you into regulating the small shops out of existence. There is just no way these small upstarts could be a threat to California's air quality, and in fact would be quite the opposite!

Please don't be a chump for big oil and the big three auto industries, they aren't big enough to retrofit all the vehicles that are already on the road. If we are to get a handle on this global warming threat, we need the small shops to take up the challenge to modify vehicles already on the road to accellerate the changes our country need to the fleet of personally owned vehicles.

I may not be from California, but all of us in the states are looking for your leadership in this area; as everyone knows that where California goes, so does the nation!

Sincerely,

Fred Neff

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 10:53:41

No Duplicates.

Comment 164 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Peter
Last Name: Peteet
Email Address: petes_garage@earthlink.net
Affiliation:

Subject: Plug in testing
Comment:

```
Please do not require extensive emission testing of plug-ins at the
level of only 10 units;100 units is a more reasonable and realistic
level.Thanks-Peter
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 13:21:27

No Duplicates.

Comment 165 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michael
Last Name: Chiacos
Email Address: mchiacos@cecmail.org
Affiliation: Community Environmental Council

Subject: Please raise the Tier 1 ceiling for small PHEV conversion companies
Comment:

Dear CARB Directors,

The Community Environmental Council (CEC) is a 39 year old organization based in Santa Barbara, CA. We work exclusively on sustainable transportation, energy efficiency, and renewable energy issues.

My organization is working on a pilot grant to test products that convert existing gasoline or diesel vehicles to PHEVs. Numerous companies have established proof of concept for this technology, but no fleet testing has been done yet. While we propose to test the technology on a small number of vehicles, the testing and waiver requirements are large. The current requirements impose significant financial hardships that will stifle innovation among small companies.

Please consider raising the Tier 1 ceiling to 100-1000 vehicles. This will enable smaller companies to test their products at a reasonable scale and establish an income stream before investing in expensive emission testing. Raising the Tier 1 cap from 10 vehicles will not harm air quality as the current Tier 1 regulations require a company to show detailed engineering analysis that its modifications will only reduce air pollution.

Burdensome regulations have caused many innovative companies to not be able to bring their technology to the market. Please help the nascent PHEV retrofit community survive and thrive.

Sincerely,

Michael Chiacos
Transportation Specialist
Community Environmental Council

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 14:39:17

No Duplicates.

Comment 166 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Steven
Last Name: Douglas
Email Address: sdouglas@autoalliance.org
Affiliation:

Subject: Alliance of Automobile Manufacturers Comments on PHEV09
Comment:

```
Attached is the Alliance of Automobile Manufacturers comments on
the PHEV test procedure.
```

Attachment: www.arb.ca.gov/lists/phev09/294-alliance_comments_on_phev_hearing_5-26-2009.doc

Original File Name: Alliance Comments on PHEV Hearing 5-26-2009.doc

Date and Time Comment Was Submitted: 2009-05-26 14:59:18

No Duplicates.

Comment 167 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Jean
Last Name: Woo
Email Address: jean.woo@gmail.com
Affiliation: Presidio School of Management

Subject: Plug in Conversion for Prius
Comment:

I have been following this thread for a while. I think that if the engineering fix is to have the engine start at the beginning and heat up the catalytic converter, then run the car in EV mode--this can be done without requiring several cars to undergo extensive testing --just mandate it for the conversions and the plug-ins will be less polluting but still viable. Adding a huge price-tag seems like over-kill. CARB can sub-contract with one provider, test the ----- out of the car in ev and other modes, and come up with an engineering fix that should satisfy both the need to reduce overall emissions, and the need to not spend an extraordinary amount of money to do it. Certainly some of the Stimulus money must be oriented to the transportation sector--this would be a small issue for that large pot of money. But a big win for the environment if we can run our electric cars (largely) without the fossil fuel that we are running them on now. As I said before, I put a solar array on my roof just so I could run my car on sun power. I think everyone (and every corporation that can get a parking lot involved with on-site solar and chargers) should do the same. We can definitely dial down our GHG's this way.

Thanks for listening.

Jean

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 16:03:01

No Duplicates.

Comment 168 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Elmer
Last Name: Baum
Email Address: bshelter6@msn.com
Affiliation:

Subject: PluginsRaise the limit
Comment:

```
Raise the the limit to 100.
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-26 20:08:17

No Duplicates.

Comment 169 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Frank
Last Name: Kuchinski
Email Address: fkuchinski@poulsenhybrid.com
Affiliation: Poulsen Hybrid, LLC

Subject: Comments from Poulsen Hybrid, LLC
Comment:

```
Attached are comments from Poulsen Hybrid, LLC on
the proposed PHEV test procedures.
```

Attachment: www.arb.ca.gov/lists/phev09/299-poulsen_hybrid_comments_052709.pdf

Original File Name: Poulsen Hybrid Comments_052709.pdf

Date and Time Comment Was Submitted: 2009-05-27 06:27:48

No Duplicates.

Comment 170 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Peter
Last Name: Sinz
Email Address: pwsinz@onelinkpr.net
Affiliation:

Subject: Aftermarket Plug In Hybrid Conversions
Comment:

It is unbelievable to se bickering on allowing 10, 100 or even 10,000 conversions being questioned.

If I have the money and interest to increase my vehicle(s) mileage and use less fuel to get around, that's my business and freedom to do. Who am I hurting by doing this ? The Arabs/Venezuelans ? too bad.

We are actively converting in Puerto Rico, with cheering enthusiasm by the public and auto owners.

Think of what a (only) 40 mile range recharge can do for the citizens of the small islands (Lesser Antilles, Bermuda, etc)who cannot drive too far because the small size of the island who could recharge their batteries with photovoltaic or wind. ZERO pollution, ZERO gas. Incindentally, the gas used in these islands has to be imported as a finished prouduct at $3.00 to $4.00 MORE than stateside cost. $7.00 a gallon is not unheard of.

Do you know jow many units will have to be converted to make a dent in the millions of autos sold YEARLY in the US.

Let the grassroots builders do their thing. You never know whar really great discoveries can be made, but only if you are active in the field.

Shame on you for trying to "regulate" new field.

Peter W. Sinz
San Juan Puerto Rico

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-27 09:31:21

No Duplicates.

Comment 171 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ben
Last Name: Jones
Email Address: ben@pluginsupply.com
Affiliation: Plug-In Supply, Inc.

Subject: Comments from Plug-In Supply Inc on Proposed PHEV09 Regulations
Comment:

```
Attached are comments from Plug-In Supply, Inc. on the proposed
PHEV09 regulations.
```

Attachment: www.arb.ca.gov/lists/phev09/302-carbphev-comments-pluginsupply.pdf

Original File Name: carbphev-comments-pluginsupply.pdf

Date and Time Comment Was Submitted: 2009-05-27 09:39:35

No Duplicates.

Comment 172 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Robb
Last Name: Protheroe
Email Address: robb@pluginsupply.com
Affiliation:

Subject: PHEV09
Comment:

Submission to CARB on proposed PHEV test regulations

Madame Chairman, Board of Directors and Staff.

My name is Robb Protheroe and I am the President of Plug-In Supply. We manufacture PHEV conversions in California.

I support PHEV conversions and ask that these unnecessary regulations be delayed for several years.

There are many reasons to justify a delay but simply put, these regulations are based on testing first generation PHEV conversions that use Toyota EV mode and produce more pollution.

Our next generation conversions produces less pollution than the unmodified car and do not use Toyota EV mode. There are no provisions in these procedures to test advanced PHEV conversions. We asked Staff for a simple test to prove we reduce emissions. Instead we got expensive, make-work, phone book thick test procedures.

At the last meeting I heard the Board tell Staff to work with the PHEV conversion industry. I attended the meetings with Staff. We made reasonable suggestions to promote our industry and help clean the air. Every answer from Staff was the same: no, no and no.

I also want to comment on the evaporative canister venting issue. This is a red herring. This 40-year-old design is an antiquated and primitive device found on every car. Much better designs exist. Instead of making the car companies modernize this device Staff has pushed it onto PHEV converters. Their twisted logic goes like this. If a hybrid is modified into a plug-in, the car could drive around for days, doing short trips, without using the gas engine. After 3 days of no gas engine operation the evap canister will vent releasing a few grams of benzene. The PHEV conversion caused this and that is an emissions increase compared to an unmodified hybrid and not allowed. If millions of hybrids are converted to PHEVs we will have a major problem. To solve this imagined problem they want us to start the gas engine every time the car is used to prevent evap canister venting. We must release a few pounds of CO2 every time the car is used to prevent releasing a few grams of benzene every 3 days. Every gas car that sits for 3 days vents. Following Staff logic all cars should be started every 3 days to prevent evap canister venting. Car salesmen should start every car on their lots every 3 days. If I ride my bike to work the canister vents. If I

ride the bus the canister vents. If I walk to work the canister vents. All this is encouraged but if a PHEV causes venting by keeping a gas engine off, it’s a crime. I hope you see the lunacy in this.

My final comment is on the cost of testing PHEV conversions. Staff released a document: APPENDIX K TECHNICAL SUPPORT DOCUMENT FOR ECONOMIC IMPACTS RELATED TO THE PROPOSED EXHAUST AND EVAPORATIVE TEST PROCEDURE AMENDMENTS. This document clearly state that these regulations will increase the cost of testing a PHEV modified car by 50%. And to add insult to injure, the more pure electric range the PHEV car has the more it will cost to test. I am not making this up.

I ask the Board to tell Staff that all vehicle electrification products including PHEVs should be tested and approved for free and the cost of gas vehicle testing increased by 50%.

Thank you for listening to my comments today.

Robb Protheroe

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-27 10:55:19

No Duplicates.

Comment 173 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Taylor
Last Name: Davis
Email Address: taylorsdavis@gmail.com
Affiliation: SunPower Corp.

Subject: I Support Plug-In Hybrid Conversions
Comment:

```
If I had a nickel for everyone I've explained hybrids, plug-in
hybrids and biofuels to over the last six years I'd be a rich man.
I am very interested in the widespread adoption of these
technologies and I drive a biodiesel truck and a hybrid car.  In
the aftermath of the fall of automakers that were considered "too
big to fail" the new CARB restrictions on independent plug-in
hybrid conversion companies threaten to make them "too small to
succeed".  Please support a worthwhile industry by raising the Tier
1 ceiling to AT LEAST 100 vehicles up from the currently proposed
10.  I am astonished that it is perfectly legal to add
superchargers to V8 gas guzzlers, but the plug-in hybrid conversion
industry is stymied by the thought that their kits MIGHT in some
POSSIBLE circumstance increase emissions.  Now is the time to give
these small businesses the help they need and deserve.
Thank you,
Taylor Davis
```

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-27 10:59:15

No Duplicates.

Comment 174 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ed
Last Name: Kulik
Email Address: ekulik@ford.com
Affiliation:

Subject: Ford Comments
Comment:

```
Thank you for the opportunity to provide public comment. Please
find attached Ford's letter of support and input for consideration
regarding the PHEV aftermarket conversion requirements.

Ed Kulik
```

Attachment: www.arb.ca.gov/lists/phev09/305-ford_comments_phev_aftermarket_conversion_requirements_may_27_2009.doc

Original File Name: Ford comments_PHEV Aftermarket Conversion Requirements_May 27 2009.doc

Date and Time Comment Was Submitted: 2009-05-27 11:23:58

No Duplicates.

Comment 175 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Michael
Last Name: Lord
Email Address: michael.lord@tema.toyota.com
Affiliation: Toyota Motor Eng & Manufacturing NA

Subject: Toyota Comments on PHEV Test Procedure Revisions for OEM and Aftermarket Conversions
Comment:

```
Please see attached.
```

Attachment: www.arb.ca.gov/lists/phev09/306-09063.pdf

Original File Name: 09063.pdf

Date and Time Comment Was Submitted: 2009-05-27 11:25:14

No Duplicates.

Comment 176 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Chuck
Last Name: Protheroe
Email Address: chuck@pluginsupply.com
Affiliation: PHEVIA

Subject: Comments from the Plug-In Hybrid Industry Association
Comment:

PHEVIA's Comments to the California ARB

Dear Board members and Staff,

The Plug-In Hybrid Industry Association would like to submit for your consideration the following comments on the proposed regulations for aftermarket conversions of plug-in hybrid electric vehicles, PHEVs (OVCC HEVs).

The Plug-In Hybrid Industry Association (PHEVIA) is an association of aftermarket PHEV conversion manufacturers and non-profit advocacy groups. It was formed at the beginning of the year to give voice to the many small but innovative manufacturers who have pushed the PHEV conversion industry into existence.

We appreciate the Board's January decision to have these regulations revisited and we also appreciate Staff's attempt to provide a more financially viable path to compliance. However, the currently proposed regulations will financially bar the majority of conversion manufacturers from selling in California for the same reasons as the original regulations. Therefore, we are offering the following alternatives to make certification financially possible for conversion manufacturers:

-Keep regulations as is, but have them not come into effect for a period of 2 years or industry-wide sales of 14,000 units (5% of HEVs currently on the road)

This will give successful manufacturers the time needed to raise funds to pay for certification while keeping the number of conversions to a non-significant level for California's air quality.

We realize there are concerns with this approach, for setting precedent in aftermarket regulations, and for having sub-par PHEV conversions taint the public's perception of PHEVs. We therefore offer this second alternative:

Keep regulations very similar to those proposed, and provide incentive for PHEV conversions by funding all successful emissions testing.

This will allow successful manufacturers to demonstrate the quality and cleanliness of their products while enforcing strict regulations on all conversions. It will also put California on

track for the AB32 requirements of 15% greenhouse gas emission reductions by 2020 and put California at the forefront of President Obama's goal of having 1 million PHEVs on the road by 2015.

For this approach the durability to vehicle's useful life, and battery durability test requirements, would have to be delayed from 100 units to 500 units or 3 years as this data would take at least this long to accumulate. Additionally testing access and certification processing would have to be expedited, or an in-process exemption would have to be granted, as current certification times of 6 months to 1 year per tier would be too long for smaller manufacturers to not be doing business.

Please consider the following environmental and economical effects of passing the proposed regulations unmodified:

-Most conversion manufacturers would not be able to sell their products in California, giving many a high-chance of going out of business entirely. Includes but is not limited to, 7 PHEVIA member manufacturers

-California dealers and installers of these manufacturers would go out of business. Includes but not limited to 12 current member businesses and hundreds of potential businesses.

-California distributors and contractors would loose a significant amount of business immediately and loose the potential for an enormous amount of business with future increased demand for conversions. Includes but not limited to roughly 50 businesses per member manufacturer.

-Loss of environmental benefits (emissions reductions, electrification infrastructure improvements, etc.) from conversion systems that would have been done in California. Includes but not limited to projected average 300 units per member manufacturer per year.

-Less pressure on vehicle manufacturers to produce PHEVs themselves leading to slower mass-production.

While PHEVIA believes that the above-mentioned alternatives are the most important changes the Board can make, and would give conversion manufacturers access to certification, we would also like you to consider the following issues we see with the currently proposed regulations.

Warranty: conversion systems failing, or conversion systems battery degrading results in stock vehicle operation and therefore stock vehicle emissions. While a 5-10+ year warranty on conversion systems is something to strive for, and in the future may be appropriate to mandate, it is not currently necessary and would result in higher-cost conversion systems and less innovative designs. Both leading to less PHEVs on the road and the negative effects of this. We instead suggest the ARB mandate a warranty that the conversion system will not adversely affect vehicle emissions. Let performance and consumer protection warranties be dictated by the private sector.

Evaporative emissions: the problem of evaporative canister purging is one found unaddressed in all vehicles, be they conventional gas

vehicles, HEVs, or PHEVs. While a PHEV may operate its gas engine less, burning less fossil fuels and producing less exhaust emissions, this does not make it responsible for the sub-ideal design found in the stock vehicle. The PHEV is not any more polluting then the car left in the garage on bike-to-work-week.

Emissions testing procedures: current emissions testing procedures are outdated, based on driving patterns observed in the 70's before HEVs and PHEVs existed. These procedures no longer accurately reflect PHEV owners' driving which leads to PHEVs and HEVs that have been optimized for passing tests instead of performing efficiently and cleanly.

Thank you for your consideration.

Sincerely,

Chuck Protheroe
Representative
Plug-In Hybrid Industry Association

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-05-27 11:48:56

No Duplicates.

Comment 177 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Ronald
Last Name: Gremban, CalCars
Email Address: rgremban@calcars.org
Affiliation: CalCars

Subject: Comments to PHEV09
Comment:

Comments to the California Air Resources Board
by Ronald Gremban, CalCars Technical Lead, 5/27/2009

The attached file is a formatted version of these comments.

1. These are comments to the “Supplemental Staff Report for the Proposed Rulemaking for Plug-In Hybrid Electric Vehicle Test Procedure Amendments and Aftermarket Parts Certification Requirements”
2. Why are PHEV conversions important to California?
2.1. Automotive emissions vs. AB32
2.1.1. Automotive emissions make up around 40% of California’s GHG emissions
2.1.2. If automotive emissions decrease by only a small amount by 2020 (see below), all other segments will need to decrease by over 45% by then to make up for the shortfall toward the required overall 30% reduction from business-as-usual
2.2. Plug-in hybrids (PHEVs) are the only low carbon automotive option available in the short term, requiring no huge new infrastructure, and capable of renewable energy as the eventual energy source
2.2.1. PHEVs
2.2.1.1. The electric grid has excess nighttime capacity
2.2.1.2. Increasing renewable portfolio standards are already in progress
2.2.1.3. PHEV energy storage can eventually help even out renewable energy supply intermittency to enable higher proportions or renewables
2.2.1.4. Only ordinary outlets (120VAC, 15A) are required for overnight charging
2.2.1.5. Homes with garages usually already have outlets, and
2.2.1.6. Ordinary outlets can be added to apartment complex garages and carports by ordinary electricians and with minor if any local grid upgrades
2.2.2. Biofuels
2.2.2.1. Huge cellulosic or algae refineries, not yet proven at commercial scale, and transport infrastructure for feedstocks and resulting fuels, are needed to make enough biofuels to make a difference
2.2.2.2. As with PHEVs, most new vehicles will need to be forced to be capable of using the fuel(s) much sooner than anticipated, and existing vehicles will need to be converted en masse
2.2.3. Hydrogen: all infrastructures must be built from scratch
2.2.4. CNG
2.2.4.1. As with PHEVs and biofuels, vehicles will need to be converted en masse

2.2.4.2. Vehicle range is decreased
2.2.4.3. Although natural gas is nearly as ubiquitous as electricity, fueling stations with high pressure pumps and storage will need to be built
2.2.4.4. The 30% improvement in GHG is a dead end, as unlike electricity, it cannot eventually come from renewable sources as easily and efficiently as electricity
2.3. Best-case and likely worst-case new PHEV production
2.3.1. If 100k PHEVs are built in 2011 and production increases by 50% each year, 21% of new vehicles, and 3% of the nationwide fleet, will be PHEVs by 2020, reducing overall CO2 emissions by about 1%
2.3.1.1. If ¼ of these are in California, PHEVs might command 84% of the new car market by 2020 and 12% of the fleet, still reducing CO2 emissions by less than 4%.
2.3.2. If PHEV new-car penetration occurs at the same rate as for hybrids, only 2.2% of new vehicles, and 0.3% of the nationwide fleet, will be PHEVs by 2020, reducing CO2 by only 0.1%!
2.3.2.1. If ¼ of these are in California, PHEVs might command 8.8% of the new car market by 2020 and 1.2% of the fleet, still reducing CO2 emissions by less than 0.4%.
2.4. The importance of HEV-to-PHEV conversions, despite few hybrids
2.4.1. There are only XXX hybrids in California after a decade of sales. At this rate, there will be YYY by 2020. Converting these will reduce overall fleet GHG emissions by only ???%. However, HEV-to-PHEV conversions have (and can continue to):
2.4.1.1. Brought public attention to PHEVs
2.4.1.2. Provided the first actual experience of PHEVs operating in customers' hands: customers' responses, actual drive patterns, and how the vehicles perform
2.4.2. Handling the PHEV battery reliability and endurance 'chicken and egg problem'
2.4.2.1. Battery reliability and endurance testing takes years for each specific design
2.4.2.1.1. Accelerated bench testing is expensive, time consuming, and is too limited to be certain to apply to actual vehicle use
2.4.2.1.2. On-road experience requires many vehicles on roads for many years
2.4.2.2. No manufactured PHEVs and only a few conversions have been in consumer hands so far
2.4.2.3. Conversions (both from HEVs and ICEs) are an exceptionally good platform for gaining in-field battery experience, as
2.4.2.3.1. Many can be put in the field far faster than via new PHEVs
2.4.2.3.2. Each vehicle can be returned to OEM non-PHEV status if the battery fails, minimizing the impact. This can even be arranged to happen automatically.
2.4.2.3.3. Small conversion manufacturers can try a far wider variety of battery chemistries, manufacturers, and products than could possibly be brought into automotive production
2.4.2.3.3.1. Some will fail, but in doing so will leave knowledge in their wake
2.4.2.3.3.2. Others will succeed that otherwise might never have had the financial backing to make it to market via the auto manufacturers
2.4.3. Getting a significant number of designs on the road in the next few years, so that
2.4.3.1. The automotive and conversion industries discover what works in real customer hands, and use that knowledge to ramp up ASAP to millions of new PHEVs and ICE conversions soon enough to significantly impact 2020 GHG emissions.

2.4.3.1.1. GM was inspired to design the Volt via both PHEV conversions and Tesla Motors, then to commit to building it only after huge public response – enabled by the media response to conversions – to the Volt prototype
2.4.3.1.2. GM has solicited information from drivers of conversions to help tune the Volt's design.
2.4.3.2. Conversion customers and the people they talk to will help pressure the auto manufacturers to begin building, then quickly build more and more PHEVs of all shapes and kinds
2.5. ICE conversions are needed to meet AB32's 2020 goals
2.5.1. ICE conversions can target the least fuel-efficient vehicles
2.5.1.1. They are most cost-effective as well as most effective for larger, less fuel-efficient vehicles: SUVs, pickup trucks, and vans on up through many heavy-duty trucks and buses
2.5.2. ICE conversions can be rapidly scaled up
2.5.2.1. Though starting more modestly, a ramp-up rate much faster than that of new PHEV manufacture is possible, as
2.5.2.1.1. Other than the battery, only a few components need to be fabricated
2.5.2.1.2. The relatively time-consuming installation process can be farmed out to service shops throughout the state (and nation)
2.5.2.2. Battery availability is the limiting factor, but, unlike auto manufacturing, which depends on high volume designs, multi-year design and pre-production processes, and heavily capitalized suppliers, ICE conversions can
2.5.2.2.1. Use batteries of multiple chemistries and from smaller manufacturers
2.5.2.2.2. Be a venue for companies with innovative batteries to get field experience despite being too small or new to be an automotive OEM supplier
2.5.2.2.3. Cause the battery industry to scale up faster and sooner
2.6. Though these rules are for HEV-to-PHEV conversions, we are concerned about the implications for the ICE-to-PHEV rules that will also be needed
2.6.1. Poulsen Hybrid, LLC, has already been attempting to get their ICE-to-PHEV conversion certified, so far without success
3. What is the nature of the industry and its innovation?
3.1. The first are – and must be – small, experimental, and self-funded
3.1.1. Venture capital is not yet available
3.1.1.1. The market is as yet unproven
3.1.1.2. There is little experience of battery longevity in the field until many PHEVs have been driven for many years
3.1.1.2.1. This is a chicken vs. egg problem that a small-scale, innovative conversion industry can help break through by getting many possi
3.1.2. Start-up funds from home refinancing or small business loans – both especially difficult now
3.1.2.1. Total funds excluding receipts from early sales are typically within a factor of 2 or 3 of $100k
3.1.2.2. As well as supporting development and testing, these funds must also support the founders until sales can do so
3.1.2.3. Therefore, compliance costs must be funded as a percentage of sales receipts up to when the compliance is required
3.1.2.3.1. Figures higher than 25% of pre-compliance sales receipts will drive many entrepreneurial converters out of business
3.1.3. Speed
3.1.3.1. Most pre-sale engineering must be on paper, then one prototype

3.1.3.1.1. Cannot afford even to buy vehicles beyond those used for the founders' own transportation
3.1.3.1.2. Neither time nor money for extensive, instrumented experiments
3.1.3.1.2.1. To verify field usage except in customer vehicles
3.1.3.1.2.2. To check operation in temperature and other extremes
3.1.3.1.3. Further engineering must be done by tracking and acting on feedback from the field
3.1.3.1.3.1. Customer feedback
3.1.3.1.3.2. Data from instrumented vehicles in customer hands (more below)
3.1.3.1.4. Much development is by field-inspired improvements, often inspiring retrofits to the rest of the converted fleet
3.2. As the industry matures, funding will become available and competitively necessary
3.2.1. For production engineering, bulk supply purchases, production processes, dealer/installer network development, marketing, etc.
3.2.2. A123's purchase of Hymotion, started on a shoestring, illustrates one developing avenue
3.2.3. Once a market and industry are established, venture capital will also be possible
4. Possibly-unacknowledged existing SULEV/PZEV high-emissions scenarios
4.1. Engine start-up under load due to untested but possibly common driving regime
4.1.1. Unconverted: Warm-up under load occurs if accelerating (e.g. uphill) immediately after vehicle activation (start-up)
4.1.2. Conversions
4.1.2.1. This is the only known non-evaporative mechanism of emissions increase in conversions.
4.1.2.2. There are various well-known ways of controlling this at least as well as in the unconverted vehicles.
4.2. Evaporative emissions due to lack of use
4.2.1. Due to airport parking, mass transit or bicycle use, carpooling, etc, beyond 3 days
4.2.2. Why count pure EV trips in conversions differently?
4.2.2.1. If pure EV trips are counted as "vehicle unused" occasions, then conversions need only make sure to purge the OEM canister during non-EV trips
4.2.2.2. Otherwise, in order to purge the OEM canister, the engine must be used for long enough on every trip, thereby always causing gasoline use and emissions.
5. Tier quantities
5.1. The proposed quantities are a problem for early, necessarily self-funded conversion companies, as design and testing must be largely funded through sales
5.1.1. Compliance engineering and testing costs should be measured as a percentage of pre-requirement sales income
5.2. Our major new proposal will show how higher numbers will not risk higher emissions
5.3. However, we propose a new requirement for instrumentation of some converted vehicles and public release of anonymzed collected data
5.3.1. A major value of accommodating conversions is that of learning about driver behavior, battery requirements, and component reliability under real road conditions
5.3.2. Systems to collect, record, and transmit CAN bus information to a central server are commercially available at reasonable prices for use on a representative sample of vehicles
5.3.2.1. This data can be invaluable to
5.3.2.1.1. CARB

5.3.2.1.2. Both auto and conversion manufacturers, and
5.3.2.1.3. All researchers working to project the value of transportation electrification toward petroleum displacement and GHG emissions reductions
5.3.2.1.3.1. Projections can be refined with real data where only unvalidated assumptions have been available up to now
5.3.3. We propose that one Tier 1 vehicle, 5% of all Tier 2 vehicles, and 1% of Tier 3 vehicles be required to be so outfitted, with anonymzed data made available monthly or quarterly to CARB, which will immediately publish it its website
5.4. Please verify CARB staff’s indication that the 5000 vehicle total limit is for Tier 1 and 2 only
5.4.1. On page 5 it says, "After 5,000 vehicles are converted industry-wide, Tier 1 and Tier 2 options are no longer available. This limits and controls the overall potential emissions and economic impacts for the tiers as will be discussed in the next section."
5.4.2. At the recent session with CARB staff, we were led to believe that this 5000 is a limit of all vehicles in tiers 1 and 2 -- which would allow for up to 50 manufacturers -- not a total of all conversions. Since Tier 3 conversions will have been tested as per the previous non-tiered proposal, they do not have the perceived (see our new proposal, below) potential of impacting emissions that Tier 1 and 2 vehicles might have. On the other hand, if Tier 3 conversions are counted, one or two manufacturers could easily install more than 5000 (mostly Tier 3) conversions before other potential manufacturers get the chance to take advantage of the Tiered system at all. Therefore, we request that the 5000 limit be clarified in the rules to apply only to Tier 1 and Tier 2 conversions.
6. Warranty issues
6.1. Does the proposed conversion warranty extend OEM vehicle warranty in some cases?
6.1.1. Though recent revisions have reduced the cases where this may occur, the conversion warranty is required to extend beyond the OEM warranty on the vehicle when a conversion is applied on a vehicle with a shorter remaining or run-out OEM warranty. Though this may be clarified elsewhere, it is not clear from the conversion standards documents whether in this case the conversion warranty applies just to the conversion and any OEM parts that it may harm, or if it applies to the whole powertrain as necessary to keep it in compliance with emission requirements.
6.1.1.1. We see the former as an appropriate requirement and no problem.
6.1.1.2. However, if, as part of the required conversion warranty, the conversion manufacturer must also warranty the OEM powertrain beyond its OEM warranty, this could pose a serious hardships, as the converter would thereby become responsible for possibly expensive and near-worn-out OEM parts (such as engine, transmission, and catalytic converter components) beyond their design life. If this is indeed required, it would be economically unfeasible for conversion manufacturers to allow the conversion of vehicles without sufficient remaining OEM warranty to match the required conversion warranty.
6.2. PHEV battery warranty
6.2.1. As of yet, PHEV battery longevity in actual vehicles is somewhat of an unknown, as few if any such vehicles have been operating for even 3 years or 50,000 miles. Additionally, some inexpensive batteries have expected lifetimes nowhere near the 5 year / 75,000 mile requirement, let alone the possible 10 year / 150,000 miles required of a brand new PZEV vehicle conversion. For example, lead-acid batteries, with an expected lifetime of 2-3

years but a low enough cost to allow for multiple replacements during the vehicle's lifetime, are often employed because of low up-front costs, an initial savings that would be removed by having to prepay for the expected replacements via an extended performance (as opposed to emissions-only) conversion warranty requirement.
6.2.2. We suggest that the required conversion warranty cover only whatever battery capacity or capability is required, given the conversion’s electronics, to maintain required emissions levels (some conversions may be able to accomplish this with a completely dead conversion battery), not what may be necessary for any particular level of plug-in performance.
6.2.3. For consumer protection, require only that the vehicle work as well as before conversion during the warranty period, and that the conversion manufacturer state its additional battery warranty. Competition will no doubt independently lead conversion manufactures to offer additional battery performance warranties consistent with the capabilities, costs, and developing track records of the batteries used in their conversions.
7. Durability testing
7.1. Though other components may be hard to ‘prove’, the batteries are the main issue
7.2. It is completely unfeasible for small conversion manufacturers to life-test the batteries that go into its conversions, as batteries are especially difficult to test for durability.
7.2.1. Battery manufacturers' test data is seldom directly applicable to PHEVs, is usually on a cell (vs. pack) basis, and is often unavailable to small conversion manufacturers anyway.
7.2.2. Accelerated cycle testing of packs requires large and expensive automated test equipment, is difficult to match to expected road use and conditions, the timeline can often be accelerated by a factor of only 4 or 5, and the effects are nonlinear and cannot necessarily be extrapolated from early results.
7.2.2.1. The Electric Power Research Institute (EPRI) has had a major accelerated PHEV-cycle battery testing project going on for years that has so far managed to test only one NiMH and one now-obsolete Li-ion pack to around 3/4 of its lifetime.
7.2.3. Vehicle lifetime testing therefore takes years per possible battery pack, each of which is obsolete by the end of the test and may or may not end up acceptable anyway.
7.3. It is totally unfeasible for largely-sales-financed small conversion manufacturer to be able to show vehicle-life durability beyond a few thousand miles prior to selling 100 conversions and requiring Tier 3 certification to continue, as -- unless a special deal can be reached with a taxi company -- to do so would require both paying drivers to put miles on a converted vehicle nearly 24-7 and prematurely wearing out the multi-thousand-dollar vehicle itself.
8. CalCars’ major new proposal to minimize testing costs to validate low conversion emissions
8.1. There are only two known sources of added emissions in HEV-to-PHEV conversions
8.2. There are simple solutions to each of these problems that have already been demonstrated to work (though at the cost of less gasoline displacement), and innovative new solutions can be validated as necessary
8.2.1. Engine warm-up under load
8.2.1.1. Do not disable engine start-up and warm-up upon initial vehicle activation. Then, force periodic restart of the engine to ensure maintenance of the catalytic converter’s (CAT’s) temperature.

8.2.1.1.1. Periodic restarts can be timed for pauses no longer than the maximum encountered in unconverted vehicles, or
8.2.1.1.2. The CAT temperature can be measured, and a restart initiated before its temperature falls below a specified ignition temperature
8.2.1.2. To run the vehicle as a pure electric, with no engine start, engine start must be inhibited until a no-load warm-up period is ensured, or until the vehicle is deactivated and reactivated in a mode where the engine is immediately started and warmed-up.
8.2.2. Reduced purging of evaporative canister
8.2.2.1. Do not disable engine start-up and warm-up upon initial vehicle activation
8.2.2.2. Once every day (or every X days, as decided by CARB), force engine operation for long enough to purge the canister
8.3. The validation that a conversion reliably uses a known-to-work solution for each of the two areas of concern is much easier and just as effective as full emissions testing
8.4. Once ICE-to-PHEV conversions are shown to have a similar small set of areas of concern, they, too, should be subject to similar abbreviated certification requirements
8.5. Our proposal
8.5.1. To be certified Tier 1, a conversion must be shown on paper to reliably incorporate a known solution to each of the two areas of concern, or to incorporate another method that is logically proven to CARB staff to also solve the problem.
8.5.2. As above, we propose a new requirement for instrumentation of some converted vehicles and public release of anonymzed collected data
8.5.2.1. A major value of accommodating conversions is that of learning about driver behavior, battery requirements, and component reliability under real road conditions
8.5.2.2. Systems to collect, record, and transmit CAN bus information to a central server are commercially available at reasonable prices for use on a representative sample of vehicles
8.5.2.2.1. This data can be invaluable to
8.5.2.2.1.1. CARB
8.5.2.2.1.2. Both auto and conversion manufacturers, and
8.5.2.2.1.3. All researchers working to project the value of transportation electrification toward petroleum displacement and GHG emissions reductions
8.5.2.2.1.3.1. Projections can be refined with real data where only unvalidated assumptions have been available up to now
8.5.2.3. We propose that one Tier 1 vehicle, 5% of all Tier 2 vehicles, and 1% of Tier 3 vehicles be required to be so outfitted, with anonymzed data made available monthly or quarterly to CARB, which will immediately publish it its website
8.5.3. To be certified Tier 2, the operation of these solutions must be demonstrated to CARB staff, either by direct demonstration or by results from an instrumented Tier 1 conversion
8.5.4. Tier 3 certification will require ongoing verification of the solutions on instrumented Tier 2 and Tier 3 vehicles
8.5.5. We believe this proposed alternative to CARB staff proposals greatly reduces the potential for emissions from conversions while simultaneously greatly reducing the costs to conversion manufacturers. An additional advantage is the availability of valuable operational data for use by many parties.

Thank you.

Attachment: www.arb.ca.gov/lists/phev09/309-ronscalcarscomments_090527.doc

Original File Name: RonsCalCarsComments_090527.doc

Date and Time Comment Was Submitted: 2009-05-27 11:55:56

No Duplicates.

Comment 178 for Plug-In Electric Hybrid Vehicles (phev09) - 45 Day.

First Name: Alan
Last Name: Weverstad
Email Address: Non-web submitted comment
Affiliation:

Subject: General Motors
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/314-alan_weverstad.pdf

Original File Name: Alan Weverstad.pdf

Date and Time Comment Was Submitted: 2009-05-29 09:47:09

No Duplicates.

Comment 1 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Randy
Last Name: Reisinger
Email Address: Non-web submitted comment
Affiliation:

Subject: Cal Cars
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/150-randy.pdf

Original File Name: Randy.pdf

Date and Time Comment Was Submitted: 2009-01-27 08:57:41

No Duplicates.

Comment 2 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Patrick
Last Name: Huberty
Email Address: Non-web submitted comment
Affiliation:

Subject: Gold Peak Industries
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/151-patrick.pdf

Original File Name: Patrick.pdf

Date and Time Comment Was Submitted: 2009-01-27 08:58:38

No Duplicates.

Comment 3 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Steven
Last Name: Douglas
Email Address: Non-web submitted comment
Affiliation:

Subject: Alliance
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/152-steven.pdf

Original File Name: Steven.pdf

Date and Time Comment Was Submitted: 2009-01-27 08:59:12

No Duplicates.

Comment 4 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Robb
Last Name: Portherse
Email Address: Non-web submitted comment
Affiliation:

Subject: Plug-In Supply
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/153-robb.pdf

Original File Name: Robb.pdf

Date and Time Comment Was Submitted: 2009-01-27 09:00:04

No Duplicates.

Comment 5 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Sanjeev
Last Name: Choudhary
Email Address: Non-web submitted comment
Affiliation:

Subject: A123 Systems
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/154-sanjeev.pdf

Original File Name: Sanjeev.pdf

Date and Time Comment Was Submitted: 2009-01-27 09:00:40

No Duplicates.

Comment 6 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Paul
Last Name: Kydd
Email Address: Non-web submitted comment
Affiliation:

Subject: Partnership 1, Inc.
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/155-paul.pdf

Original File Name: Paul.pdf

Date and Time Comment Was Submitted: 2009-01-27 09:01:21

No Duplicates.

Comment 7 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

This comment was posted then deleted because it was unrelated to the Board item or it was a duplicate.

Comment 8 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Ronald
Last Name: Gremban
Email Address: Non-web submitted comment
Affiliation:

Subject: CalCars
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/315-ronald_gremban.pdf

Original File Name: Ronald Gremban.pdf

Date and Time Comment Was Submitted: 2009-05-29 11:21:02

No Duplicates.

Comment 9 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: Paul
Last Name: Guzyk
Email Address: Non-web submitted comment
Affiliation:

Subject: 3Prong Power
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/316-paul_guzyk.pdf

Original File Name: Paul Guzyk.pdf

Date and Time Comment Was Submitted: 2009-05-29 11:21:30

No Duplicates.

Comment 10 for Plug-In Electric Hybrid Vehicles (phev09). (At Hearing)

First Name: John
Last Name: White
Email Address: Non-web submitted comment
Affiliation:

Subject: A123 Systems
Comment:

please see attached

Attachment: www.arb.ca.gov/lists/phev09/317-john_white.pdf

Original File Name: john White.pdf

Date and Time Comment Was Submitted: 2009-05-29 11:21:56

No Duplicates.

Comment 1 for Plug-In Electric Hybrid Vehicles (phev09) - 15-1.

First Name: Doug
Last Name: Korthof
Email Address: doug@seal-beach.org
Affiliation:

Subject: That's a lot of trouble to kill perhaps 100 PHEV
Comment:

I can understand how CARB spent millions to kill real EVs, and allow GM, Honda and the others to CRUSH them and thus destroy the evidence.

But CARB spent a lot of time on these "PHEV" regulations, to kill perhaps only 100 PHEV in all! Won't CARB even let one plug-in car live?

Instead, they spend all their time (and our money) devising ways to stop alternatives to oil -- even when there aren't any!

Spending so much to create onerous regulations to kill PHEV, when there aren't any, is, to paraphrase a comment by Mr. Elon Musk, "worrying about grooming unicorns before checking to see if there are any...".

Unkempt unicorns??

That's like CARB worrying about unclean PHEV??

What a waste, all that effort to kill a technology that hasn't even arrived yet.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-08-28 14:20:11

No Duplicates.

Comment 2 for Plug-In Electric Hybrid Vehicles (phev09) - 15-1.

First Name: Michael
Last Name: Bailey
Email Address: michaelebailey@cox.net
Affiliation:

Subject: Plug-in Hybird Electric Vehicle Test Procedure Amendments
Comment:

The Amendments as laid out in the proposal and attachments seem fair and balanced in meeting economic and environmental needs relating to electric vehicles and conversion of vehicles to electric power. Manufacturers have options to meet the fuel vapor emissions requirements that will allow both for accurate testing and less cost. One example is the choice builders have between the 95% fuel tank fill and vehicle drivedown steps or the bench purge allowance. The important safety issues are also recognized by placing battery charging for vehicle testing at the car soak pheriod for off-vehicle charge capable hybird electric vehicles. The vehicle conversion process also seems fair in that it allows different converter companies to submit different plans and each company to submit multiple plans for the first 50 cars while ensuring that current emissions controls on the cars will not be downgraded as a result of conversion. But once 5,000 conversions have been done conversion tiers 1 and 2 go away and all makers must satisfy tier 3 requirements. These proposals are needed to improve air quality. California air quality was recently downgraded by the state in several districts including Southern California. Electric powered vehicles will play a major role in cleaning up the air while these amendments work to make sure electric cars don't add any more additional pollution. The amendments should be passed. I am a member of People First, California, Orange County Chapter. People First works with and for disabled persons. Thank you and best wishes Michael E. Bailey, 25801 Marguerite Parkway, No. 103, Mission Viejo, CA 92692.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2009-08-29 23:59:24

No Duplicates.

Comment 3 for Plug-In Electric Hybrid Vehicles (phev09) - 15-1.

First Name: Steven
Last Name: Douglas
Email Address: sdouglas@autoalliance.org
Affiliation: Alliance of Automobile Manufacturers

Subject: PHEV Test Procedures - 15- Day Notice Comments
Comment:

```
Attached are the Alliance of Automobile Manufacturer comments on
PHEV Test Procedures 15-Day Notice.
```

Attachment: www.arb.ca.gov/lists/phev09/324-alliance_-_15-day_notice_evap_comments.zip

Original File Name: Alliance - 15-Day Notice EVAP Comments.zip

Date and Time Comment Was Submitted: 2009-09-14 12:25:04

No Duplicates.

Comment 4 for Plug-In Electric Hybrid Vehicles (phev09) - 15-1.

First Name: Tommy
Last Name: Chang
Email Address: tommy_chang@ahm.honda.com
Affiliation: American Honda Motor Company

Subject: Honda comments on CARB PHEV Test Procedure Amendments
Comment:

```
Dear California Air Resources Board (CARB):

American Honda Motor Company, Inc. (AHM) appreciates the
opportunity to provide comments on CARB's Notice of Public
Availability of Modified Text regarding Plug-In Hybrid Electric
Vehicle Test Procedure Amendments published on August 28, 2009.

Thank you.
```

Attachment: www.arb.ca.gov/lists/phev09/326-honda_comment_on_carb_phev_15_day_notice_sept_14_2009.pdf

Original File Name: Honda comment on CARB PHEV 15 Day notice Sept 14 2009.pdf

Date and Time Comment Was Submitted: 2009-09-14 12:50:33

No Duplicates.

Comment 1 for Plug-In Electric Hybrid Vehicles (phev09) - 15-2.

First Name: Tommy
Last Name: Chang
Email Address: tommy_chang@ahm.honda.com
Affiliation: American Honda Motor Company

Subject: Comment on CARB Second 15 Day Notice.
Comment:

```
American Honda Motor Company, Inc. (Honda) appreciates the
opportunity to provide comments on CARB's Second Notice of Public
Availability of Modified Text regarding Plug-In Hybrid Electric
Vehicle Test Procedure Amendments published on November 2, 2009.

Honda is submitting comments to Attachment 1 and Attachment 2,
please refer to the attached for detail explanations and
proposals.
```

Attachment: www.arb.ca.gov/lists/phev09/327-honda_comment_on_carb_phev_2nd_15_day_notice_nov_17_2009.pdf

Original File Name: Honda comment on CARB PHEV 2nd 15 Day notice Nov 17 2009.pdf

Date and Time Comment Was Submitted: 2009-11-17 07:04:29

No Duplicates.

Comment 2 for Plug-In Electric Hybrid Vehicles (phev09) - 15-2.

First Name: Giedrius
Last Name: Ambrozaitis
Email Address: gambrozaitis@autoalliance.org
Affiliation: Alliance of Automobile Manufacturers

Subject: Alliance comments to 2nd notice of PHEV Test Procedures
Comment:

```
Please see teh attached Alliance comments to the 2nd notice of PHEV
Test Procedures
```

Attachment: www.arb.ca.gov/lists/phev09/328-alliance_phev_2nd_15-day_notice_exhaust___evap_comments_11-17-2009.pdf

Original File Name: Alliance PHEV 2nd 15-Day Notice Exhaust & EVAP comments 11-17-2009.pdf

Date and Time Comment Was Submitted: 2009-11-17 09:01:15

No Duplicates.