

Hi Everyone!

Below is your ATC eNews for both November and December.

Of special interest is the January 26th event at the National Auto Museum featuring Altairnano <<http://www.altairnano.com>> and Phoenix Motorcars <<http://www.phoenixmotorcars.com>> is a go! (See "Next Meeting" item below for details.)

ATC officers and a representative from Altairnano will be meeting at the Northwest Reno Library on Thursday, December 13 at 5:30 PM, to begin organizing this event. If you wish to help please feel free to attend. (Note: we will meet in one of the small meeting rooms on the South wall of the library.)

Also, don't miss the events section of the newsletter! A "Soular" Block Party at the Reno Food Cooperative and showing a of _Who Killed the Electric Car_ at the Sierra Club meeting are coming up soon! The ATC will have an EV display at the Soular Block Party. (Details below.)

Also, new in this edition of the ATC eNewsletter is a classified section. A couple of vehicles and conversion candidates are for sale locally.

Finally, ATC treasurer, Peter Fletcher, got his 1993 Solectria Force running: Congratulations Peter! To see a short video of the Solectria follow this link: <<http://www.youtube.com/watch?v=jTwPbOhL4sc>>.

See everyone at the next meeting on January 26th at the National Auto Museum! Until then, I hope you have an electrifying Holiday Season and a prosperous New Year!

Be well,
Bob Tregilus
ATC Chair

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ALTERNATIVE TRANSPORTATION CLUB &
ELECTRIC AUTO ASSOCIATION OF NORTHERN NEVADA

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Soular Block Party, Saturday, December 22, 2007, 10 - 4 pm.

The Great Basin Community Food Cooperative <<http://www.greatbasinfood.coop>>, Reno Bike Project <<http://www.renobikeproject.com/>>, and the Alternative Transportation Club, EAA will be holding a block party at 271 Wonder Street. The party will feature solar cooking demonstrations and alternative transportation. See the ATC website for details <<http://ElectricNevada.org>>.

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Sierra Club - Great Basin Group meeting, January 10 (Thursday)

GB Group general meeting. "Who Killed the Electric Car?" This movie, narrated by Martin Sheen, will be an eye-opener for anyone who hasn't seen it. From the jacket: "Running solely on electricity, General Motors' fleet of EV-1 electric vehicles were so efficient they were on the brink of altering the future of driving in America—perhaps even the world. Those lucky enough to drive one gave it glowing reviews. So why were they all destroyed?" Running time is 1.5 hr, so we will start announcements at 7:00 and the movie at 7:15. Location: Bartley Ranch (South on Lakeside Dr., just before Windy Hill). Time: 7:00 Social, 7:15 Announcements, 7:30 - 8:30 Program. Info: Larry (786-8564) or visit their website <<http://tinyurl.com/365hvn>>.

LISTSERVS - GET INVOLVED AND INFORMED VIA EMAIL -

Alternative Transportation Club (ATC) general listserv -
<<http://tinyurl.com/3xs4jk>>.

Alternative Transportation Club (ATC) organizing listserv -
<<http://tinyurl.com/32kgbm>>.

Electric Vehicle Discussion List, founded in 1991 -
<<http://www.evdl.org/>>. (Editor's note: Be sure to select the "digest" option instead of individual emails as this is a very busy list and will fill up your inbox quickly.)

DIY Electric Car Forums -
<<http://www.diyelectriccar.com/forums/>>.

WATT'S UP? -

by Bob Tregilus, ATC Chair & J "EVJerry" Asher, Electric Auto Association - Chapters Relations East

In the evening of November 6, J "EVJerry" Asher, Electric Auto Association - Chapters Relations East, made a brief appearance at the Northwest Reno Library in PHEV#76 (the CALCars <<http://www.calcars.org>> converted Plug-in Hybrid Electric Vehicle). EVJerry was on a "show & tell" demonstration run across the Southwest: taking PHEV#76 from its inception at the Maker Faire at Austin, TX through Oklahoma, New Mexico, Arizona, Nevada, and finally into San Francisco, CA. Enroute EVJerry dropped in on various EAA chapters to gauge interest in plug-in hybrid electric vehicle (PHEV) conversions, which based on turned out, as evident by Reno EAA showing, is quite strong.

PHEV#76 is owned by Darren Overby <<http://diy-mpg.com>>, a San Francisco EAA Member, and is one of the first PHEVs to feature a "bolt-in" conversion kit. The CALCars conversion in Austin was coordinated by Jim Philippi, a Houston EAA Member, who earlier in 2007 had his Prius converted to a CALCars PHEV at the Maker Faire in San Mateo, CA.

The conversion is very well engineered. A vented battery compartment manufactured by Plug-in Supply <<http://Plug-inSupply.com>> replaces the Prius' stock storage box that lies immediately above the spare tire. A hydraulic piston assembly lifts the battery compartment out of the way when access to the tire is required. The conversion is a bolt in operation and comes with the necessary wiring harnesses, charger, and adapters. The complete installation adds about 300 pounds to the vehicle.

For everyday commuting use, about half of the PHEV Prius' first 20 miles of driving are powered by electricity obtained from any standard 120vac outlet. Depending on local mileage the PHEV#76 can easily exceed 100 mpg. This can result in commuting costs of 2-4 cents per mile instead of a standard gasoline car's 8-20 cents per mile. And, of course, your carbon footprint diminishes proportionally as well. Not to mention you are using a domestic source of energy for your transportation needs instead of an imported one.

The trick to a successful conversion lies in fooling, or spoofing, the on-board Prius CAN (computer area network) into thinking its actual 1.4Kw NiMH batteries are full so the vehicle will travel solely on electricity from the added lead-silicon gel battery pack instead of using the gasoline engine. This is achieved by use of a CAN Bus <<http://hybridinterfaces.ca>>, a computer portal array where all the computer programs interface. Thus, the CAN Bus controls the added battery pack. The CAN View screen provides a wealth of visual information to the Prius PHEV's on-board MFD display panel.

Therefore, you need three things for PHEV Prius conversions:

- 1) An added battery pack, whether lead acid, NiMH or Li-ion, along with a box to support the pack. Note: Choice largely depends on the range you want and your budget.
- 2) An assembly that switches power from your added pack into your stock pack.
- 3) CAN Bus and CAN View -- devices to control the overall system and show you how its operating as you drive.

The goal here enables Prius owners to enroll EAA members, possibly with local electrician and computer engineers into converting their cars into PHEVs for under \$6,000 with lead acid batteries. Minimum time requires two plus person-weekends of time. Local EAA chapters, such as the Alternative Transportation Club, EAA are possible pools of technical talent for these Do It Yourself (DIY) projects. After all, the ATC's goal is to educate the community about alternative forms of transportation as well as to facilitate the public's ready adoption of these practical alternatives in keeping all of America green and cleaner.

The Advanced Do It Yourself/EAA-PHEV <<http://eaa-phev.org/wiki/PriusPlus>> project is modeled after the open-source "free" software movement. See footnote* below.

In the near future, the ATC will host a teleconference call with J. "EVJerry," and hopefully, with other CalCars PHEVolunteers, particularly Jim Philippi and Darren Overby in order that they all can describe the CalCars PHEV conversion program in more detail and suggest ways the ATC can join in. The conversation will include methods for members to perform pure BEV conversions as well.

In related news: The ATC voted at the October meeting to endorse the Plug-in Partners National Campaign <<http://pluginpartners.org>>. Several excellent videos on the campaign and the benefits of PHEVs are located as this link <<http://tinyurl.com/3cqoox>>.

Finally - be sure to mark your calendars! On Saturday, January 26, 2008 the ATC will be hosting Altairnano and Phoenix Motorcars at the National Auto Museum in Reno! The Phoenix

"no compromise" SUV <<http://phoenixmotorcars.com>> will be on display next to 1914 Detroit Electric 46 Gentleman's Roadster. And Reno's own Altairnano <<http://altairnano.com>> will be displaying and telling us about their Nanosafe™ Li-ion batteries and the technology that powers the Phoenix. There will be an electric bike raffle as well! Visit our website for more details <<http://ElectricNevada.org>>.

*Footnote: The following is an explanation of the free software movement from its originator, The GNU Project <<http://gnu.org>>:

"Free software" is a matter of liberty, not price. To understand the concept, you should think of "free" as in "free speech", not as in "free beer". Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it refers to four kinds of freedom, for the users of the software:

* The freedom to run the program, for any purpose (freedom 0).

* The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.

* The freedom to redistribute copies so you can help your neighbor (freedom 2).

* The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.

The free software model has enjoyed worldwide success and offers do it yourselfers an alternative to the restrictions imposed on us by corporate licenses and limitations. For example this eNewsletter is authored on a computer running Kubuntu <<http://www.kubuntu.org>> - not Microsoft Windows! - using Writer word processor by OpenOffice <<http://www.openoffice.org>>.

FEATURED ALTERNATIVE TRANSPORTATION WEBSITE -

AUSTIN AREA ELECTRIC AUTO ASSOCIATION
<http://www.austinev.org>

We are a group of people who gather to discuss electric vehicles, their construction, the technologies that make them work, and how we can further their continued re-introduction into central Texas.

[Editor's note: This site is where the world class Electric Vehicle Photo Album <<http://www.austinev.org/evalbum/>>, & Tradin's Post <<http://www.austinev.org/evtradinpost/>> are hosted! It's a wonderful resource for gathering information on what kind of EVs are available and what others have modified, converted, or created.]

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ELECTRIC YARIS
<http://www.electricyaris.com>

This is a beautiful website documenting a top-notch home conversion of a Toyota Yaris. This site is a must see and the Yaris is currently for sale!

EVs IN THE NEWS -

LITHIUM BATTERIES TAKE TO THE ROAD

"Lithium-ion cells are poised to take an increasing share of the auto battery market, just as electric drive seems set to begin a long, slow climb to become, at last, a serious power-train option. But what's rarely understood is how much that second revolution depends on the first."

Full story here:

<http://spectrum.ieee.org/sep07/5490>

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CALIFORNIA TO RULE ON FATE OF EVS

"Phoenix, a start-up in Rancho Cucamonga, Calif., bets that rapid charging will eventually make battery EVs more popular with consumers by eliminating the threat of being stranded with a dead battery. But Phoenix is also counting on a more immediate payoff: the company may be eligible to cash in on California's ambitious and controversial zero-emissions vehicle mandate. The ZEV directive requires car manufacturers to market ultraclean and emissions-free vehicles or buy credits earned by others making such vehicles—credits that could translate into tens of thousands of dollars in extra income per vehicle for Phoenix."

Full story here:

<http://www.spectrum.ieee.org/nov07/5657>

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ELECTRIC-CAR MAKER TOUTS 10-MINUTE FILL-UP

"Thanks to an uncommonly stable lithium chemistry and high-surface-area nanopatterned electrodes, Altair Nanotechnologies' lithium-ion batteries for electric vehicles (EVs) charge up fast. Very fast. One of the Reno, Nev.-based battery developer's 35-kilowatt-hour packs, capable of propelling an EV pickup truck for 160 kilometers, can fully charge in just 10 minutes—a feat that would be downright dangerous with most lithium batteries. What remains to be seen is whether such rapid charging will prove practical on the street. Although some EV developers, battery experts, and utilities see a breakthrough that will take battery-powered EVs mainstream, others see a technological dead end."

Full story here:

<http://www.spectrum.ieee.org/nov07/5685>

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WHAT IS THIS CARBON OFFSET GAME AND HOW DO I PLAY?

"You've probably heard these guilt-inducing buzzwords by now: carbon footprint and carbon offset. "What is this miraculous means by which I can reduce my personal assault on Planet Earth?" you might be thinking. "Can I actually offset all the carbon dioxide emissions I'm responsible for?" you're saying to yourself. Well, it's actually pretty easy and affordable. Take me to your carbon offset leader!"

Full story here:

<http://tinyurl.com/2vyd64>

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PLUG-IN MOTORCYCLE

"Those who lean toward two wheels rather than four will be interested in this: A stylish, cutting-edge electric motorcycle that will be brought to market by its Oregon manufacturer in early 2008."

Full story here:

<http://tinyurl.com/3yffbc>

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CABINET TO VOTE TO ENDORSE ELECTRIC CAR DREAM TODAY

"Israel - The cabinet will officially announce its support for an electric car at its weekly meeting today. The idea is to back Shai Agassi's initiative to revolutionize transport by building an entire electrically powered system for cars, starting with solar energy, non-polluting electric vehicles and infrastructure to charge the cars - all without dependence on oil."

Full story here:

<http://tinyurl.com/3ydr58>

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BROWN GOES GREEN

"It will be a green holiday this season for United Parcel Service (UPS), who rolled out a small parcel delivery service this week in Northern California using 42 electric cars and trucks from ZAP."

Full story here:

<http://www.zapworld.com/node/200>

EV VIDEO CLIPS -

DRIVINGTHEFUTURE.COM

Interesting video clips discussing NiMH batteries and the Toyota RAV4-EV.

Watch videos here:

<http://drivingthefuture.com/>

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DALLAS' J.R., AKA LARRY HAGMAN, GOES ELECTRIC AT HIS OJAI RANCH

Watch video here:

<http://tinyurl.com/2afxcz>

ENERGY NEWS -

False Promise of Big Coal

"On this edition of Earthbeat, we hear about the Appalachian elementary school that is just downhill of a massive pond of 'slurry' left behind from Mountain Top Removal mining."

"Host Daphne Wysham speaks to Coal River Mountain Watch's Judy Bonds, Bobby Mitchell, Lorelei Scarboo as well as Alan Johnson for Christians for the Mountains.

"Mary Anne Hitt is the director of Appalachian Voices and a native to the area. She spoke passionately about the effects of coal mining on both the land, and the culture, of Appalachia. Following up on her talk at the IFG/IPS Teach-In was Jeff Goodell. He's a contributor to the New York Times magazine, and the author of Big Coal: The Dirty Secret Behind America's Energy Future."

Listen to the story here:
<http://tinyurl.com/2wmrhl>

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SCIENTISTS MAKE ADVANCES IN EXTRACTING HYDROGEN

Talk of the Nation, November 16, 2007 · Researchers have developed a more efficient way to extract hydrogen from biological materials using a bacterial fuel cell. Bruce Logan, one of the scientists working on the project, discusses the efforts and whether the new method might change the debate over biofuels.

Guest: Bruce Logan, director of the Hydrogen Energy Center and professor of environmental engineering at Pennsylvania State University

Listen to the story here:
<http://tinyurl.com/2v1rpf>

CLASSIFIEDS -

I have a 70s vintage GE 36 volt Elec-Trak lawn tractor I would like to sell. It is in need of a fair bit of restoration and a set of batteries I have the complete factory service manual also. This site has some good info: <http://tinyurl.com/2qe456>

For more information contact Bill Brinsmead - 775 784-1502

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I will have a 95 dodge avenger for sale to club member it still has a great 4 cylinder gas engine which could be sold for \$ And the car converted. Body is Good needs clutch repair sometime soon but I still would put 5,000 miles on it before I repaired Clutch. It's deep forest Green. Great Style and Looks 1995 4 cylinder 5 spd. Price \$850 great deal Great Stereo beautiful car. High miles but strong car rebuilt engine 40,000 ago.

Call Randell for more information - 760 709-1706

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Can you tell me what shops in this area can convert a car to electric? I have a car with a cracked engine block, beyond repair, so it maybe an ideal candidate for conversion.

Call Marty at 775-841-1553

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I was wondering if [anyone has] a source where I can get a cheap or free motor for an Electric Dirtbike project I am embarking on? I am stripping away all the ICE components and installing an Electric Motor, (Between 15 & 20hp), a controller and the batteries. I have researched many online and it seems relatively easy for someone that has a little mechanical knowledge.

Call Mark at 775 690-7313

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ARTICLE CONTRIBUTIONS AND LEGAL STUFF -

CONTRIBUTIONS -

Your article contributions, letters to the editor, and classified listings are welcome! Please submit original articles to Bob Tregilus: lakeport104@yahoo.com. In the interest of accuracy you are requested to provide citations for any facts stated in your article(s). This is a "plain text" eNewsletter and as such no photographs can be published. All contributions maybe edited for length and clarity. They may be messed up by mistake as well. Warning: dyslexic editor at work!

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COMMENTS -

Please call 775 826-4514 or email your comments to Bob Tregilus at <lakeport104@yahoo.com>.

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