

# Electric Auto Association Flagstaff Chapter

Wednesday, September 5, 2007  
7 pm – 9 pm  
Connect-Tech  
4402 E Huntington Dr.  
Flagstaff

## MINUTES

### 1. Welcome and Call to order – *President Barkley Coggin*

Please be sure to sign in with your name, email, and phone as appropriate so we can keep you informed of meetings and events. There is no set agenda for this meeting, as the Chapter is still in the forming stages, so this will be a casual meeting to give people the opportunity to learn what we are about and to ask questions about Electric Vehicles. Please consider joining the national Electric Auto Association if you are not already a member. The application can be found on the website: [www.eaaev.org](http://www.eaaev.org). You can also find lots of information about electric vehicles and about the goals of EAA on the website. The purpose of the EAA is to raise awareness of electric vehicles and alternatives to fossil fuels. Barkley introduced the officers of the Flagstaff Chapter: Barkley Coggin is president, Bill Schlanger is Vice-President, and Jo Starr is Secretary/Treasurer. Barkley also said that he would like the Chapter to focus on campaigning to get public charging stations installed. Most folks around will allow you to charge up at their home/business but it would be good to have some open public stations.

### 2. Discussion/Questions & Answers - *All*

- How much does it cost to convert a car to electric? It can be done for under \$10,000 – it depends on the components you use.
- What are some good vehicles to consider for a conversion? Geo Metro, small Hondas, Chevy s-10's. Primarily look for a good solid vehicle that you really like. It should have a standard transmission.
- There are a number of good sources for assistance and parts online and you should compare prices because there are a lot of good deals out there.
- Yes, you can convert a 4-wheel drive vehicle. Bill S. is currently working on converting a LandRover.
- Bill S. said that the chapter members and participants will also be a great resource for people looking to do a conversion.

#### Flagstaff Chapter Officers

President: Barkley Coggin - [cbcoggin@yahoo.com](mailto:cbcoggin@yahoo.com)  
Vice-President: Bill Schlanger - [bschlanger@connect-tech.com](mailto:bschlanger@connect-tech.com)  
Secretary/Treasurer: Jo Starr - [FlagstaffEV@Arizona.USA.com](mailto:FlagstaffEV@Arizona.USA.com)



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- Bill S. is starting a company here in Flagstaff for converting new cars to electric, at a cost of around \$10,000. He will be using lead-acid batteries, a direct current (DC) system, and regenerative braking would be optional.
- What is the typical life of batteries? Most come with a 3-year warranty, but actual life will depend on the use and discharge amount.
- How many batteries do you need? It depends on the car and how many you can fit in – the more you have, the longer range you get. 6-volt batteries are a good option.
- There was a suggestion to approach Bookmans' for a charging station. Apparently the one in Tucson area is an inductive paddle system which was only used on the EV-1 and is now useless.
- Barkley reiterated that one purpose of the Chapter is for us all to help each other and share knowledge, equipment, labor, etc. Most people who have Electric Vehicles are thrilled to share what they know. Nobody is in this for the money, and there are a lot of other issues that many of us are concerned about – environment, reducing the carbon footprint, etc. Charging a car off your solar array would be a great way to recharge without using coal and contributing more to pollution.
- Can we offer classes or workshops? Yes, this is a good suggestion. The next meeting will feature a presentation on battery technology. It would be good to have some type of presentation at most meetings.
- What is the typical range on an electric car? It depends on the batteries and components you use, but a typical range would be around 40 miles per charge.
- What is the charge time? Barkley said that s his S-10 fully charges in about 4 hours.
- What about winter driving? With cold weather you can get 20-25% fewer miles on a charge. You can get a portable 12 volt space heater and use it in your car – Wal Mart has some pretty inexpensive. Bill noted that he will be using the existing heater core to install heaters in the cars he builds.
- How do you go about converting a car? You obviously don't need the engine or gas tank so you pull those out. It's crucial to have intact wiring.
- What about other vehicles? Electric ATV's, bicycles, motorcycles, dragsters, etc., can all be found.
- A good resource for parts is [www.evparts.com](http://www.evparts.com).
- Why would you want to convert a car versus building one from the ground up? Existing cars are already "road-ready" and have passed all the safety, engineering, etc., standards. Cost is the largest factor. It's much cheaper to

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convert than to do all the research and engineering to make the car up to standards for US Highways.

- Why is the range so short? The battery technology for higher range vehicles is not widely available and is very expensive.
- What type of battery is best? Lead Acid is the best and most cost-effective at this time. Nickle-Metal-Hydrde (NiMH) have heat issues and Lithium Ion batteries are being researched.
- Benefits of membership of EAA – besides contributing to the cause you get a great informative newsletter each moth.
- Chapter meetings: for now, meetings are being held monthly on the first Wednesday evening of each month. We would like to find a more centrally located place that is free or very cheap.

**3. Next Meeting:** Wednesday, October 3, 2007 – Batteries Plus, 602 W Route 66. John Conley will give a presentation about battery technology.

**4. Adjourn** – at 8:20 pm, meeting adjourned and attendees got to see members' electric vehicles in all stages of conversion from just purchased to complete and on-the-road.

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