

DEVC NEWSLETTER



Denver Electric Vehicle Council **EAA Affiliate** www.electricauto.org
811 Iowa Ave www.facebook.com/ElectricAutoAssociation
Colorado Springs, CO 80909
719-444-8645 Next Meeting:
www.devc.info **No February Meeting**

SPONSORING MEMBERS

February 2020

- Bob Andersen**, Facebook Administrator and GEM Car/TEZ Driver, 303-810-6104
Boulder Nissan, 2285 28th St, Nigel Zeid, 303-443-8110, www.bouldernissan.com
Canopy Airport Parking, A **Green** Facility, 303-574-9800, www.canopyairportparking.com
Century Chevy, Alex Roberts, 303-469-3355 Ex201, AlexRCentury@gmail.com
6105 West 120th Avenue, Broomfield www.CenturyChevy.com
Colorado Renewable Energy Society, CRES, www.cres-energy.org
Kelly Cookson, "Supports EV's"
Kit Davlin, "Conversion Interest", www.evalbum.com/5125
Denver Metro Clean Cities, Steve Trowbridge, 303-518-3253, Steve@DenverMetroCleanCities.org
www.DenverMetroCleanCities.org
e-Bike of Colorado, "Just Try It", 544 Front St, Louisville, www.ebikeofcolorado.com
720-739-0299, contact@ebikeofcolorado.com
EV Trail, EV Charging Stations where you need them, Curtis Claar, curtis@evtrail.com
719-645-4944 www.evtrail.com
Golden Real Estate, Jim Smith/Owner, 303-525-1851, jim@goldenrealestate.com
17695 S Golden Road, Golden www.GoldenRealEstate.com
Scott Gordon, "EV Enthusiast"
Jiggawatt Racing, Scott Stanley, "Racing to bring EVs to the Mainstream" info@jiggawatt.net
Judd Johnson, 2935 3rd Ave, Boulder, 80304, 303-449-5005, jaj_356b@indra.com
Peak View Solar, Charge your EV with sunshine! Leaf Driving Energy Consultant, John Duprey,
719-338-3535, jduprey@peakviewsolar.com
Pedego Southlands, Electric Bikes, 303-627-5788, www.pedegosouthlands.com
REEVA, Mark Hanson, President, Community Service RE & EV's, www.reevadiy.org
Steve Szabo, "Clean Energy" Advocate
Bill Williams, "Build, Don't Buy!"

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JANUARY MEETING



The first item on the agenda was the election of officers. Since no one was nominated, or volunteered to run for any position, and none of the existing officers indicated a desire to step down, a unanimous vote was made to keep the current officers. Current Board members were also reconfirmed for another year. The complete list is located at the bottom of the last page of this newsletter. A treasurer report was then given as to the financial status of the DEVC. Next our Webmaster, Drew Gaylo, had some items to discuss for input from the thirteen that attended the meeting. The subject of future meetings was brought up including discussion on annual requests for DEVC presence at various events throughout the year.

A big announcement as a first for the DEVC, after being in existence for 45 years, our very first affiliated chapter; **EV Four Corners!** A quote from their "About Us" page:

"As Durango Electric Vehicle Enthusiasts grew and changed, we decided to change the format from one of local informational meetings and events to a website which could be easily accessed and allow for discussion and participation of more people. EV 4 Corners was created to meet that purpose.

We are now affiliated with the Denver Electric Vehicle Council (DEVC). DEVC was founded in 1974, after the first "gas shortage" crisis in 1973 when turmoil in the Middle East disrupted US oil markets. They have an excellent, free monthly newsletter. They are the Denver chapter of the Electric Auto Association (EAA)."

Thanks to Sarah Kelly and Gordon Rodda, from the Durango area, for their excellent job in creating an informative and functional website; **EV Four Corners!** They are both EAA members and thus assigned to the DEVC chapter. You can check them out at: <https://ev4corners.org/> There is a link to the DEVC website in the upper right hand corner of their home page. You can scroll down to their blog, and if you like, on the right hand side you can subscribe to EV 4 Corners via email and receive notifications of new posts.

The last item on the meeting agenda was a presentation by Dave Pence, our DEVC Education Outreach Coordinator:

"The latest version of our EV prototype minibike is being tested and is almost complete. It's been a fun process and I have learned a lot about EVs and conversions. The goal is to hold a one day STEM workshop for middle school girls in the fall of 2020 in Boulder to teach them about EV/battery safety, how EVs work and how electric vehicles can make a positive difference in the environment. Female engineering mentors will be there to facilitate and talk about women in STEM careers. In the introductory workshop, teams of girls will assemble four minibikes and then have fun riding them plus EV bicycles and scooters. Many thanks to the Denver Electric Vehicle Council for their sponsorship, DEVC member contributions and the many GoFundMe donors who made the EV Club/Girls in STEM program possible. Sincere gratitude and thanks to Rich Kenders, our electrical engineer guru and David McNeil, the DEVC secretary/treasurer for their support and guidance."

If you know of any women engineers who would like to volunteer for a day to be mentors/facilitators at an EV Club/Girls in STEM workshop, please contact me, Dave Pence at 303/910-6086.

DEVC DIYer conversion folks..... we are looking for donated 1/4" 6061 aluminum sheets to use as mounting plates.

Hey all you DEVC MOSFET Monkeys, Tesla, Leaf and Prius owners!.....Got a funny EV saying/graphic (copyright free) that would look good on a DEVC education outreach fundraising t-shirt? Pass it along and if we use it, you get a free shirt! Send it to: arhsdave@aol.com

Girls in STEM rock!

Thanks,

Dave Pence
DEVC Education Outreach Coordinator



IT'S A NEW YEAR FOR THE CSEVC!

By Wilson Hitchings



There have been a lot of changes at the CSEVC as far as email and newsletters go. We are trying an email / marketing service and hope you like it. You can unsubscribe directly in the email if you like, and

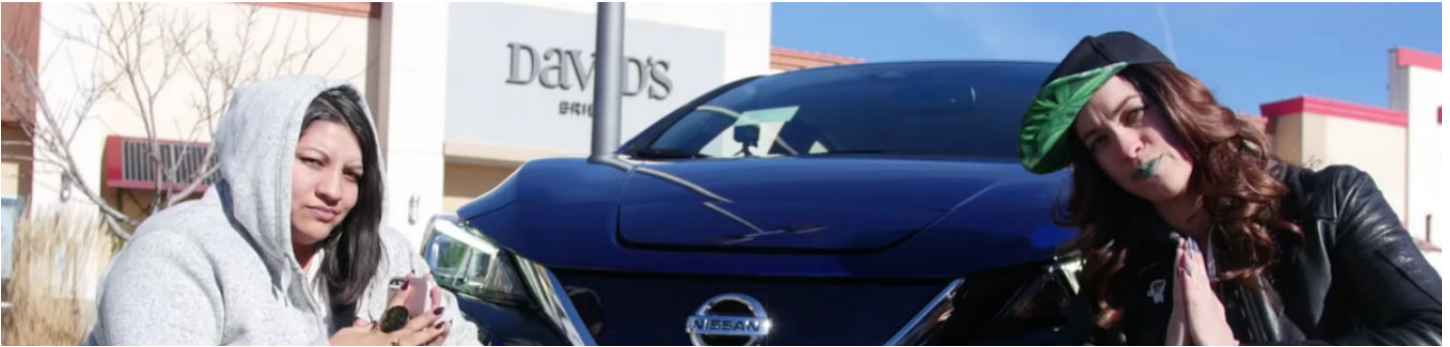
this service helps us know how many people are reading our messages. Our newsletter has a new format, and [the February issue] is available online at:

<https://drive.google.com/file/d/1EXYCfNxjnR83gqmDq0XEDtDhnGLIfacG/view?usp=sharing>

We're hoping for a monthly publishing rate, but that will depend on how much material we accumulate. You can get on our email / newsletter list at: <http://www.csevc.com/>

SWEEP RELEASES COMIC ELECTRIC VEHICLE VIDEO

From SWEEP by Tammy Fiebelkorn, SWEEP New Mexico Representative



The Southwest Energy Efficiency Project (SWEEP) launched a humorous video about the benefits of electric vehicles, starring the famous New Mexico character “Lynette” played by Lauren Poole. “Lynette’s Albuquerque” channel has garnered more than 1 million views on YouTube.” See the video at: <https://ev.swenergy.org/>

“Electric vehicles (EVs) are part of the foundation for New Mexico’s clean energy future,” said Tammy Fiebelkorn, New Mexico Representative for SWEEP. “EVs help reduce air pollution, save their owners hundreds of dollars annually in fuel and maintenance costs, and do not directly emit carbon pollution, which worsens climate change.”

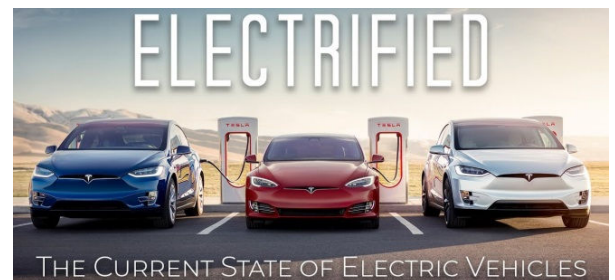
The video release coincides with the introduction of **The Electric Vehicle Income Tax Credit (SB2)**, a bipartisan bill sponsored by Republican Senator Pat Woods, Democratic Senator Bill Tallman, and Democratic Representative Jim Trujillo. The bill, which is a priority for Governor Lujan Grisham, would provide an income tax credit to make electric vehicles more affordable for New Mexico families, with a larger tax credit for lower-income households.

“SWEEP is delighted to work with Lynette who, in her own inimitable way, explains how accessible and affordable electric vehicles are for most New Mexicans,” Fiebelkorn said. Learn more at: <https://www.swenergy.org/press-release?PressID=233>

“ELECTRIFIED” DOCUMENTARY EXPLORES THE CURRENT STATE OF ELECTRIC VEHICLES

From Plug In America by Noah Barnes

Filmmaker Ryan Hunter recently released a 37-minute documentary that explores many aspects of electric vehicle adoption and includes interviews with Plug In America founders Chelsea Sexton and Paul Scott. Note: This is a great video for those who are new to the EV world and would like to know more about EVs. You can see the



video at: <https://pluginamerica.org/electrified-documentary-explores-the-current-state-of-electric-vehicles/?eType=EmailBlastContent&Id=c34029cd-8f14-4548-941d-2d92e923216a>

MPE TO HELP WEST GRAND SCHOOL DISTRICT **GET ONE OF THE FIRST ELECTRIC SCHOOL BUSES IN COLORADO**

From Mountain Parks Electric, Inc



This fall, West Grand School District (WGSD) plans to add an electric school bus to its fleet – a 78-passenger Bluebird All American with a 120-mile range, to be used on daily routes. Perhaps the best thing about it, if you were to ask a WGSD board member, aside from its superior torque (v. standard diesel buses) and eco-friendly attributes (no tailpipe or exhaust), is the fact that the district will acquire the bus at no cost. That’s because it is being

entirely funded by a state grant and contributions from its local and regional electric providers.

“We really appreciate everyone’s help on this project,” said WGSD Superintendent Darrin Peppard, “especially Mountain Parks Electric, for encouraging us to apply for the state grant and for providing additional financial support.”


In late December, the Colorado’s Regional Air Quality Counsel (RAQC) announced its grant award of more than \$250,000 to West Grand School District. The grant was open to all public, private and non-profit fleets statewide, earmarked specifically for the replacement of medium- and heavy-duty vehicles, including buses. RAQC awarded a total of 20 grants in this cycle.

The remaining funds needed to purchase WGSD’s school bus came Mountain Parks Electric (MPE), a not-for-profit electric cooperative headquartered in Granby, Colo., which contributed a portion of its members’ unclaimed patronage capital from years past, and from Tri-State G&T, MPE’s power provider. “We are thrilled to see the school district go electric,” said Mountain Parks Electric GM Mark Johnston. “Mountain Parks Electric’s power supply is becoming increasingly renewable. And one of the best ways to put that renewable energy to work is to replace fossil fuels with electric alternatives, like this school bus.”

WGSD expects to receive its new bus - the first electric bus in Grand County – in August. The bus will be used on daily routes beginning in the 2020-2021 school year.



Mountain Parks Electric, Inc.

A Touchstone Energy® Cooperative 
The power of human connections

<http://www.mpei.com/>

2020 COLORADO EV RELATED BILL

SB20-094 Plug-in Electric Motor Vehicle Registration Fees (Introduced 1-13-20)
 Concerning the imposition of additional plug-in electric motor vehicle registration fees by the high-performance transportation enterprise, and, in connection therewith, making the total amount of registration fees imposed on such vehicles roughly equal to the combined amount of registration fees and motor fuel taxes imposed on vehicles powered by internal combustion engines. <https://leg.colorado.gov/bills/sb20-094>

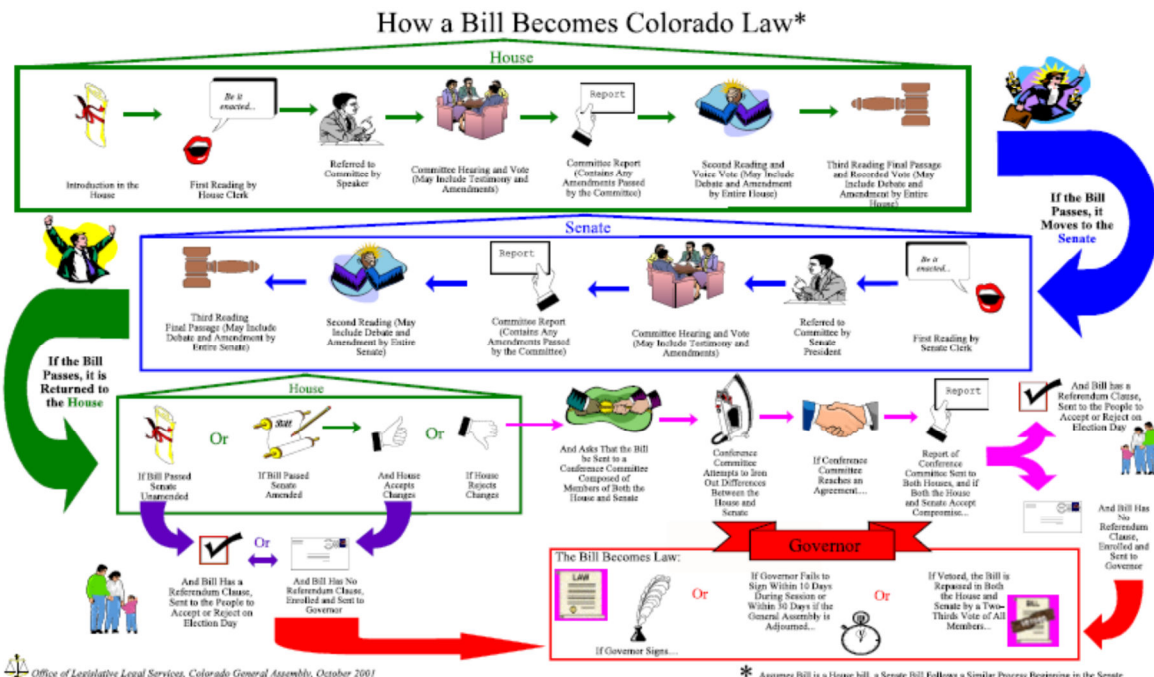
Bill Summary

For the purpose of making the amount of plug-in electric motor vehicle registration fees roughly equal to the combined amount of registration fees and motor fuel taxes levied on motor vehicles powered by internal combustion engines, the bill authorizes the high-performance transportation enterprise to impose the following fees upon the registration of a plug-in electric motor vehicle:

- An inflation-indexed surface transportation infrastructure equivalent use fee to be imposed at a maximum initial rate of \$120 and thereafter indexed to inflation; and
- A longevity fee that annually increases for each year in which a vehicle is in service until the vehicle reaches its 18th year of service.

Fee proceeds are credited to the statewide transportation enterprise special revenue fund for use by the high-performance transportation enterprise in funding surface transportation infrastructure projects.

This bill will be up before the Senate Transportation & Energy Committee on Thursday, February the 13th. If you would like to voice your views you can attend the hearing and testify in person (three minute maximum) or you can send an email to the five committee members. At this link <https://leg.colorado.gov/committees/transportation-energy/2020-regular-session> you can scroll down and click on each member to obtain their email addresses.



View the above chart at: https://leg.colorado.gov/sites/default/files/bill_becomes_law_chart.pdf

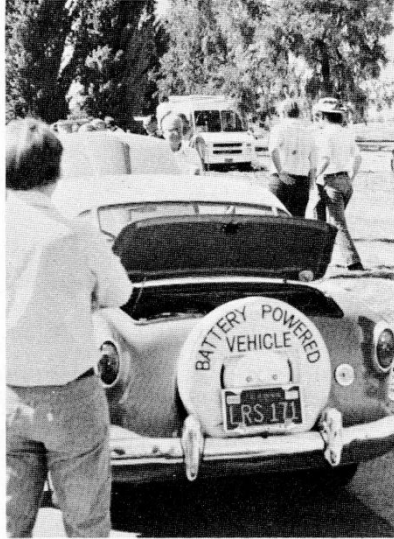
FROM THE ELECTRIC VEHICLE NEWS 40 YEARS AGO

This page is about EAA activity in California in 1979 and the next page shows commercial EV activity in Colorado in 1980. Those were also exciting times!

EAA Holds 7th Annual Rally

Members of the Electric Auto Association recently held their 7th Annual Rally, sponsored by the Santa Clara (California) Chapter. These EAA rallies have become important annual events for members of the EAA, providing them with opportunities to compete with each other and to share in each other's successes. The competition results indicate that members, most having engineering talent and training, are continuing to make significant gains both in technical improvements and performance levels.

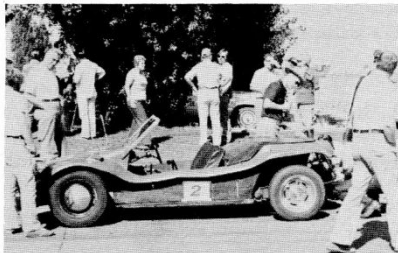
The EAA was founded over ten years ago to promote the construction of electric vehicles by talented do-it-yourselfers. Since that time it has grown to include ten chapters in California alone. In addition to sharing their expertise, the chapters sponsor public exhibits during the year to increase consumer awareness of progress being made in EV development. These exhibits also help to stimulate further interest and experimentation with EV's for personal use, ultimately intended to contribute to the development and acceptance of electric vehicles for urban transportation.

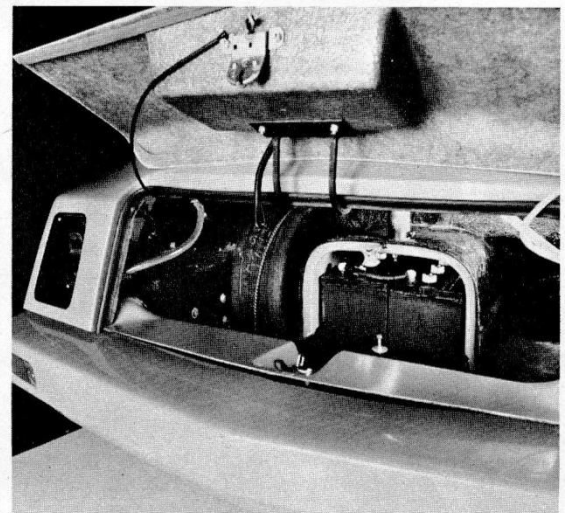
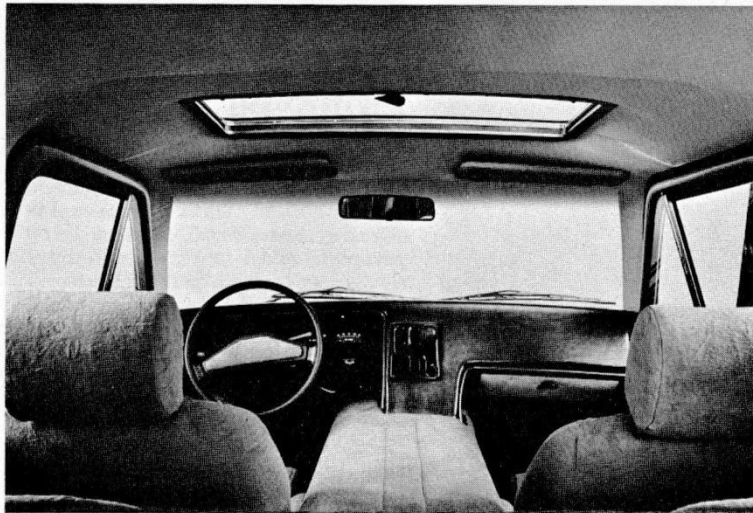
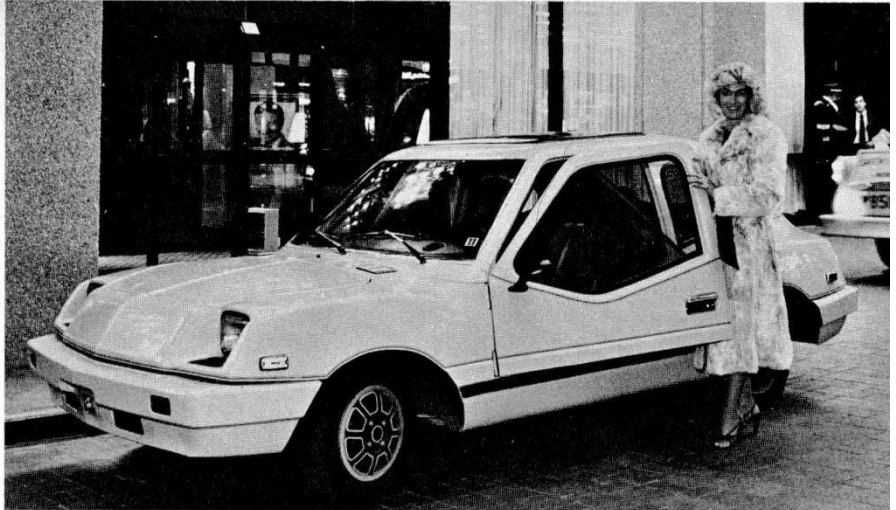
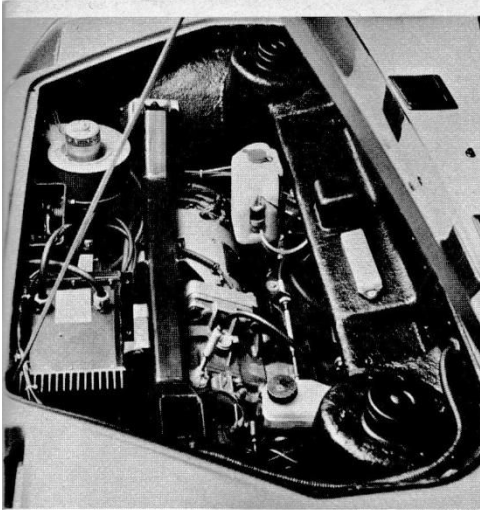


This year, thirty vehicles in four classes — All Electric Conversions, Hybrids, Two and Three Wheelers, and Commercial Vehicles — competed on a 1.5 mile course simulating stop and go driving through city streets. In each of the four classes, a trophy was awarded to the vehicle that traveled the farthest on a single battery charge. In all categories, performance was markedly improved over last year's levels. The Volkswagen Dune Buggy, which was the winner in Class I for the third straight year, covered the greatest overall distance — 61.5 miles in 41 laps.

Spectators were invited to take an active part in the rally by choosing their favorites in two categories. The vote went to the Aztec as the "best looking" and the Jet Electra Van as the "most practical." Many spectators also had opportunities to ride in EVs for the first time.

With attendance growing each year and performance levels constantly improving, the 8th Annual Rally in 1980 promises to be an even more spectacular event, according to a spokesman for the group. □





New EV Offers Ground-up Design

After five years in engineering and designing a new EV known as the "Electrek" has been unveiled. It's a high-style sporty job, built from the ground up. The manufacturer is Unique Mobility, Englewood, Colorado. The company plans to make 100 during 1980, and then redesign for additional production in 1981 as they move into new facilities in Castle Rock, Colorado.

The vehicle is available as a 2+2 sedan, or a two-seat hatchback. It was designed from the ground up with an eye toward performance capability that would meet the needs of urban commuter travel. Acceleration is zero to 30 in 9 seconds; top speed is 75 mph, and the cruising range is 100 miles at a constant 40 mph.

Unique Mobility began making specialty vehicles in the late 1960s — then started in electric vehicle research and development in 1973. The company's first experimental EV was road-tested in 1974. According to a company spokesman the major design and engineering features are results of

Unique's own efforts — a new solid state controller, a new separately excited field motor and, of course, the body and chassis designs.

Production of a prototype vehicle was begun early in 1977. The major tooling was completed by December 1977, and by March of 1978 fabrication and assembly were complete and the first maiden run conducted. Since that time, testing and resultant modifications and refinements have brought Electrek to its present production state.

The batteries are in a centrally located tunnel that runs the length of the car. This stabilizes the vehicle and contributes to its exceptional handling qualities, says Unique. The unitized body-chassis structure is completely fabricated from fiberglass reinforced plastic for the best strength-to-weight advantage. Use of the FRP body enabled Unique to keep the total weight down to 2,650 pounds including 1,041 pounds of batteries.

The brain behind the vehicle is a solid

state controller of Unique's own design. The controller provides regenerative braking, diagnostic readout on the instrument panel, and a fail-safe design to protect against short circuits and runaway motor.

The 32 horsepower DC motor was designed by Unique Mobility. The vehicle has a four-speed transmission. Suspension, steering, and braking systems feature McPherson front suspension with independent rear suspension, front wheel disc brakes, and drum rear brakes. The steering is rack and pinion.

Unique estimates that the Electrek can be operated for about 1¢ per mile. Both models feature nicely appointed interiors with a full complement of instruments, and come standard with heater, radio, and sunroof. The 2+2 comes in cream color with a beige interior. The hatchback comes in white with a beige interior. Company executives indicate that almost any color is available on special request. □

COLORADO EV GROUP LINKS

- Denver Electric Vehicle Council
Web: <http://devc.info/> Facebook: <http://facebook.com/groups/devc.info>
- Denver Tesla Club
Web: <https://denverteslaclub.org/>
Facebook: <https://www.facebook.com/groups/902089643268988/>
- Model 3 Club of Denver Women Who Charge
Facebook: <https://www.facebook.com/groups/m3den/> Facebook: <https://www.facebook.com/WomenCharge/>
- Tesla Motors Colorado
Facebook: <https://www.facebook.com/groups/634758276674229/>
- Wheat Ridge STEM Engineering
Web: <https://sites.google.com/a/jeffcoschools.us/wrhs-stem/>
Facebook: <https://www.facebook.com/Wheat-Ridge-Stem-Engineering-1511925885713601/>
YouTube: <https://www.youtube.com/channel/UC1v98CLykhXNTMEXJ5F2vA>
- Colorado State University Vehicle Innovation Team
Web: <http://ecocar3.org/colostate/about-us/>
Facebook: <https://www.facebook.com/CSUEcoCAR3/>
- Drive Electric Northern Colorado Shared Paths Boulder
Web: <http://driveelectricnoco.org/> Web: <http://www.sharedpathsboulder.org/>
Meetup: <https://www.meetup.com/Drive-Electric-Northern-Colorado-EV-Enthusiasts/>
- Northern Colorado Clean Cities EV Owners Network
Web: <http://northerncocleancities.org/> Web: www.facebook.com/EVOwnersofColorado?ref=hl
- Colorado Electric Vehicle Coalition
Web: <https://www.colorado.gov/pacific/refuelcolorado/colorado-electric-vehicle-coalition>
- Denver Electric Ride
Meetup: <https://www.meetup.com/Denver-Electric-Bike-Rides-Meetup/>
- Electric Bicycle Club of Colorado
Meetup: <https://www.meetup.com/Electric-bicycle-club-of-Colorado/>
- Southlands Adventure Bike & e-Bike Fitness Rides
Meetup: <https://www.meetup.com/Southlands-Adventure-Fitness-Rides/>
- Colorado Springs EV Club Colorado Springs e-Bike Meetup
Web: <http://www.csevc.com/> Facebook: <https://www.facebook.com/CSeBikeMeetup/>
Facebook: <https://www.facebook.com/groups/123192271678145/>
- EV Four Corners (Durango)
Web: <https://ev4corners.org/>
- Western Colorado EV Club
Facebook: <https://www.facebook.com/groups/1691902797561519/>
- Colorado Electric Car EV Network
Facebook: <https://www.facebook.com/groups/1879818525642801/>
- Colorado i3 (BMW)
Facebook: <https://www.facebook.com/groups/1444710492515574>
- Nissan LEAF Owners Group Colorado
Facebook: <https://www.facebook.com/groups/167205677149247/>

DENVER ELECTRIC VEHICLE COUNCIL CHARTER

The Denver Electric Vehicle Council, Inc. is an incorporated non-profit 501(c)(3) educational organization. The goal of the DEVC is to offer 1) a forum for information exchange about electric vehicle concepts, designs and developments; 2) instructive information and opinion to interested individuals and the public; plus 3) assistance in promotion of the development and use of EVs throughout Colorado.

Services are: 1) to arrange talks and tours by universities, companies, and individuals who are involved with EVs or components and 2) to provide information about EVs through a monthly newsletter, current EV literature, lectures and panel or group discussions at DEVC and other meetings; plus through the news media, shows and rallies to the public.

Anyone may join. Sponsoring member dues are \$50 per year and besides receiving the DEVC Newsletter, they are listed on the front page of the newsletter and in our website Sponsor list with their business contact information. Regular member dues are \$20 per year and receive the DEVC Newsletter. The DEVC sends out approximately **780** newsletters via email per month which includes our courtesy list containing other interested persons, companies and community leaders.

BOARD MEMBERS:

President; Gary Skinner, gsknrr@gmail.com **Vice President;** Kathy Pitts, kpitts@verdek.com **Secretary/Treasurer/Newsletter Editor;** J. David McNeil, jdmc44@comcast.net **Web Master;** Drew Gaylo, drewgaylo@gmail.com **EV Conversion Committee;** Brendan Miller, brendandeanmiller@gmail.com **Education Outreach Committee;** Dave Pence, arhsdave@aol.com **Facebook Committee;** Bob Andersen, bobandersen251@hotmail.com **At Large Members;** Jill Bishop, jbanounou@gmail.com & Kit Davlin, kdavlin@yahoo.com