DEVC NEWSLETTER

Denver Electric Vehicle Council
811 Iowa Ave
Colorado Springs, CO 80909
719-444-8645
www.devc.info

EAA Affiliate www.electricauto.org
www.facebook.com/ElectricAutoAssociation

Next Meeting: 18Jan20, 12:30PM
7525 W 57th Ave, Arvada

SPONSORING MEMBERS January 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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DECEMBER MEETING

Our annual DEVC Christmas Party was another success. A few regulars weren't able to attend this year but there were several newcomers to take their place. There were 17 guests in the total of 50 attending. Mark your calendars NOW for the next Christmas Party on Saturday, December 12, 2020.

JANUARY MEETING

The January DEVC meeting will be on Saturday the 18th from 12:30 to 2:30 PM in the Arvada Meeting Room at the Jeffco Library at 7525 W 57th Ave, in Arvada. This will be a business meeting for the annual election of officers for President, Vice President, Treasurer and Secretary. We will also confirm additional DEVC Board Member appointees for Webmaster, Newsletter Editor, EV Conversion, Education Outreach, Facebook and two at large positions. If you would like to run for any office, be considered for any appointed position, or provide written input, please email David at: jdmc44@comcast.net The meeting will then be open for input from the members and visitors on the upcoming 2020 DEVC meetings, events and activities.

We will also have an update on the progress of the Youth Ed program by Dave Pence, our Education Outreach Coordinator, and his assistant Richard Kenders.

ANNUAL EAA MEMBERSHIP MEETING, JANUARY 25TH

The Annual Members' Meeting of the Electric Auto Association will be held on Saturday the 25th at 9:00 AM at the Center for Sustainable Energy, 3980 Sherman St, Suite 170, San Diego, CA 3980. This meeting will be live streamed and recorded. A star-studded program includes special guest, Chris Paine, Director/Producer of *Who Killed the Electric Car?,* Ben Sullins, YouTube *Teslanomics* channel, and Larry Goldenhersh, Executive Director, Center for Sustainable Energy. Membership details at: https://www.electricauto.org/

FIRST DENVER CLIMATE ACTION TASK FORCE MEETING

Date: Thursday, January 16th
Time: 8:30am - 12:30pm
Location: The Commons on Champa, 1245 Champa St, Denver, CO 80204

For details about the Climate Action Stakeholder Process go to: https://www.denvergov.org/content/denvergov/en/environmental-health/environmental-quality/climate.html?mc_cid=fdc136021d&mc_eid=262bff304c then click on "Learn more >>".

ZERO MOTORCYCLES AT IMS IN DENVER, JANUARY 17-19

From Zero Motorcycles

Zero Motorcycles will be in the Denver Motorcycle Show at the Colorado Convention Center on January 17-19, 2020.

Details, including ticket information, are at: https://motorcycleshows.com/denver. Use special code **Zero20** to save on one-day tickets.

Zero is excited to invite you, to invite your friends, to "Discover the Ride". Discover the Ride is a fun new program designed to introduce motorcycling to non-riders at the eight IMS Show locations across the United States, including Denver. No motorcycle license required. More information at: https://motorcycleshows.com/content/discover-ride

Discover the Ride includes four main components:

- **New Rider Course** – Ride Zero motorcycles that are governed to safe speeds on a controlled, indoor course and in an educational atmosphere.
- **Kid Zone** – Basically the New Rider Course for kids, this is a closed course of battery-assisted balance bikes.
- **Wheelie Experience** – Wheelie machines with full speed Zero motorcycles. Rip the torque of a Zero without a motorcycle license.
- **New to 2** – Videos and in-person presentations all designed to educate new riders on essential ride training and techniques.

Make sure to RSVP on Facebook https://www.facebook.com/pg/zeromotorcycles/events/ and let your friends know which show you'll attend. We look forward to seeing you at Discover the Ride.

NEW XCEL ENERGY RATE COULD SPEED RTD'S PURCHASE OF ELECTRIC BUSES

From SWEEP by Matt Frommer

The electric bus market is booming. As of September, more than 200 transit agencies nationwide had purchased more than 2,000 electric buses. Colorado's Regional Transit District (RTD) has one of the largest electric bus fleets in the country with 36 all-electric MallRide buses traveling up and down the 16th Street Mall in downtown Denver.

Electric buses have zero tail-pipe emissions and produce about half as much global-warming pollution as diesel buses making them better for public health and the environment. They also deliver big savings in lower fuel and maintenance costs, especially when compared to their diesel counterparts.

For example, the Chicago Transit Authority (CTA) rolled out its first two electric buses in 2014. After only four years, CTA found that each bus saved the agency $24,000 in fuel costs and $30,000 in maintenance costs annually, savings that could then be used to improve transit service and buy more electric buses.

However, these economic benefits depend on favorable electricity rates and the ability to manage bus charging at the depot. RTD found this out the hard way with its MallRide shuttles. Earlier this year, The Denver Post reported that despite the anticipated cost savings of replacing the MallRide buses with electric ones, RTD was paying 60 percent more in energy costs to run electric buses than it was for its diesel buses. Fueling costs were estimated at 73 cents per mile for all-electric electric buses versus 46 cents per mile for a typical diesel bus.

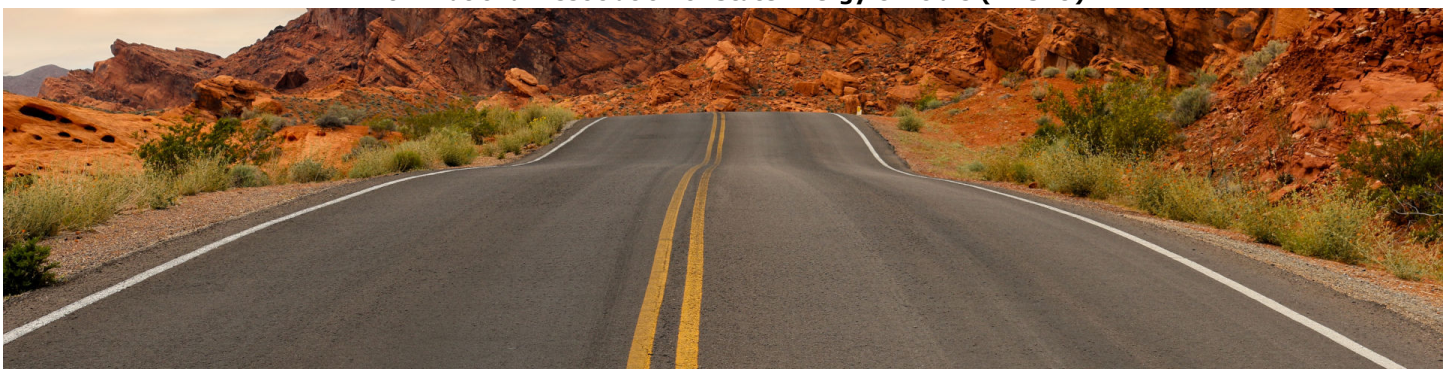
As it turns out, RTD has been paying high-demand prices to recharge its electric buses. Demand charges are typically designed for large commercial and industrial customers with steady electricity load profiles, and not for periodic loads like electric bus charging. These demand charges account for about 80 percent of RTD's annual bus electricity bill.

Electric transportation presents new challenges for the electricity grid and utilities in Colorado and nationwide. Earlier this year, the Colorado Legislature passed Senate Bill 77, which requires Colorado's electric utilities to support transportation electrification. In response, Xcel Energy introduced a new electricity rate for commercial electric vehicle fleets, including RTD buses. The new rate, which takes effect in 2020, could reduce RTD's fuel costs by as much as 70 percent, making electric buses a much better investment than diesel ones.

Under the new rate, if RTD optimized its bus charging to avoid the higher "on-peak" electricity rates, it could reduce charging costs from 73 cents per mile to 13 cents per mile -- a huge savings. See the complete article at: https://swenergy.org/new-xcel-energy-rate-could-speed-rtd%e2%80%99s-purchase-of-electric-buses-

2019 REV WEST MEMORANDUM OF UNDERSTANDING (MOU)

From National Association of State Energy Officials (NASEO)



Eight Intermountain West Governors Commit to Coordinating on Regional Electric Vehicle Charging Infrastructure, and Release Voluntary Minimum Standards for Stations

December 13, 2019, Las Vegas, Nevada – Governors from Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming today announced their recommitment to collaborate as electric vehicle charging infrastructure is developed along major transportation corridors in the Intermountain West.

The governors signed a new Regional Electric Vehicle Plan for the West Memorandum of Understanding (REV West MOU), updating an MOU signed in October 2017 with a goal to ensure drivers can "seamlessly drive an electric vehicle across the Signatory States' major transportation corridors." The new document builds on lessons learned by the REV West states as they work together to enable public and private sector investment in electric vehicle charging stations and grow EV adoption in the region.

The REV West states also released Voluntary Minimum Standards for Direct-Current Fast Charging (DCFC) Stations, including standards for administration, interoperability, operations and management. The standards are the result of collaboration between the signatory states, with input from the private sector, as required in the 2017 REV West MOU.

The Voluntary Minimum Standards are meant to guide the public and private sectors in developing their EV charging stations, ensure a consistent and easy experience for EV owners, and inform station developers of expectations for DCFC stations in the region. Each REV West state will determine how to apply these standards.

REV West is a collaboration of eight intermountain states, and is facilitated by the National Association of State Energy Officials (NASEO). For more information about REV West, visit https://www.naseo.org/issues/transportation/rev-west

NREL MODEL CAR COMPETITIONS

From NREL's Education Center

NREL hosts car competitions that include building and racing solar- and battery-powered model vehicles. Middle school teams from around Colorado participate in this fun, educational, and exciting event every May.

Building solar- and battery-powered cars requires skills in both math and science. The goals of the competition include:

- Generating enthusiasm for science, technology, engineering, and math (STEM)
- Improving students' understanding of scientific concepts and renewable energy technologies
- Encouraging young people to consider technical careers at an early age.

Teams work together to build cars with guidance from a parent, teacher, or coach to compete in race and design categories. A "Spirit Award" is also presented to one team to recognize good sportsmanship.

2020 Model Car Competition

This is an all-day event, and participants will receive a free t-shirt and lunch. Watch this two-minute video https://www.youtube.com/watch?v=DW13lbU-pgQ&feature=youtu.be to learn more about the competition from past participants.

Date: Saturday, May 16, 2020
Location: To be announced by February 2020
Registration: Opens February 2020

Learn more at: https://www.nrel.gov/about/car-competitions.html

LIGHTNING SYSTEMS RAISES $41M
AS DEMAND FOR ELECTRIC TRUCKS GROWS

From Freight Waves by Linda Baker https://www.freightwaves.com/news/lightning-systems-raises-41m

. **Image Lightening Systems** .

Electric powertrain manufacturer Lightning Systems announced a $41 million funding round to help meet growing demand for electric powertrains in U.S. commercial fleets.
BP Ventures led the investment round, which was announced Dec. 3, with additional funds from Cupola Infrastructure Income Fund.

Colorado-based Lightning Systems designs and manufactures zero-emission, all-electric powertrains for commercial fleets — Class 3 to Class 7 vehicles. The company is currently delivering powertrains for over $25 million in orders from major public and private entities in the U.S. — from food and delivery trucks to passenger vans and city buses.

The new funds will be used to ramp up production to fulfill new orders for electric powertrains for Ford Transits, Ford E-450s, Ford F-59 step vans, Chevrolet Low Cab Forward 6500XD trucks and Lightning Electric city buses.

"We are now delivering powertrains for over $25 million in orders from major fleets, propelling Lightning Systems to the position of the established premium provider of a full range of platforms for commercial vehicle fleets," said Tim Reeser, CEO of Lightning Systems, in a statement. The ramp-up, he added, involves "high-quality powertrains for new and repowered commercial vehicles across Class 3-7 on five major platforms that are on the road with customers today."

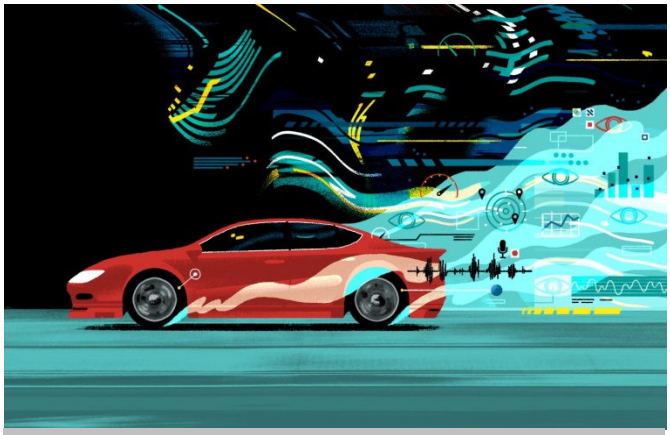
Bowing to regulatory and environmental pressures, a growing number of commercial vehicle manufacturers and fleets are investing in electric propulsion. Last month, California proposed the nation's first zero-emissions manufacturing standard, a policy that, if adopted, would require commercial vehicle manufacturers to sell a certain percentage of electric trucks.

"The global electric vehicle market is growing at an unprecedented rate, and we are seeing the electrification of more and more commercial fleets," said David Hayes, chief investment officer for BP Ventures, in the statement. Lightning already has a very wide base of vehicles that use its powertrains, Hayes added, "which will be key as fleets look to scale their investments in zero-emission vehicles."

Founded 10 years ago as a builder of hydraulic hybrids, Lightning Systems pivoted toward fully electric powertrains two years ago. The company works with fleets to provide electric powertrains sized for the customer's drive cycle, with a full suite of telematics, analytics and charging solutions to maximize energy efficiency.

WHAT DOES YOUR CAR KNOW ABOUT YOU? WE HACKED A CHEVY TO FIND OUT

From The Washington Post by Geoffrey A. Fowler



. **Matt Chinworth for The Washington Post** .

On a recent drive, a 2017 Chevrolet collected my precise location. It stored my phone's ID and the people I called. It judged my acceleration and braking style, beaming back reports to its maker General Motors over an always-on Internet connection. Cars have become the most sophisticated computers many of us own, filled with hundreds of sensors. Even older models know an awful lot about you. Many copy over personal data as soon as you plug in a smartphone. But for the thousands you spend to buy a car, the data it produces doesn't belong to you. My Chevy's dashboard didn't say what the car was recording. It wasn't in the owner's manual. There was no way to download it.

We're at a turning point for driving surveillance: In the 2020 model year, most new cars sold in the United States will come with built-in Internet connections, including 100 percent of Fords, GMs and BMWs and all but one model Toyota and Volkswagen. (This independent cellular service is often included free or sold as an add-on.) Cars are becoming smartphones on wheels, sending and receiving data from apps, insurance firms and pretty much wherever their makers want. Some brands even reserve the right to use the data to track you down if you don't pay your bills.

When I buy a car, I assume the data I produce is owned by me — or at least is controlled by me. Many automakers do not. They act like how and where we drive, also known as telematics, isn't personal information.

Cars now run on the new oil: your data. It is fundamental to a future of transportation where vehicles drive themselves and we hop into whatever one is going our way. Data isn't the enemy. Connected cars already do good things like improve safety and send you service alerts that are much more helpful than a check-engine light in the dash.

But we've been down this fraught road before with smart speakers, smart TVs, smartphones and all the other smart things we now realize are playing fast and loose with our personal lives. Once information about our lives gets shared, sold or stolen, we lose control.

There are no federal laws regulating what carmakers can collect or do with our driving data. And carmakers lag in taking steps to protect us and draw lines in the sand. Most hide what they're collecting and sharing behind privacy policies written in the kind of language only a lawyer's mother could love.

Car data has a secret life. To find out what a car knows about me, I borrowed some techniques from crime scene investigators. To see the rest of the story go to: https://www.washingtonpost.com/technology/2019/12/17/what-does-your-car-know-about-you-we-hacked-chevy-find-out/

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
Facebook: https://www.facebook.com/groups/m3den/

Women Who Charge
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/UC1v98CLykkHXNTMEXJ5F2vA

Colorado State University Vehicle Innovation Teem
Web: http://ecocar3.org/colostate/about-us/
Facebook: https://www.facebook.com/CSUEcoCAR3/

Drive Electric Northern Colorado
Web: http://driveelectricnoco.org/
Meetup: https://www.meetup.com/Drive-Electric-Northern-Colorado-EV-Enthusiasts/

Shared Paths Boulder
Web: http://www.sharedpathsboulder.org/

Northern Colorado Clean Cities
Web: http://northerncocleancities.org/

EV Owners Network
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
Web: http://www.csevc.com/
Facebook: https://www.facebook.com/groups/123192271678145/

Colorado Springs e-Bike Meetup
Facebook: https://www.facebook.com/CSeBikeMeetup/

Durango Electric Vehicle Enthusiasts
Meetup: https://www.meetup.com/Durango-Electric-Vehicle-Owners-and-Drivers-Meetup/

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 **835** newsletters via email per month which includes our courtesy list containing other interested persons, companies and community leaders.

BOARD MEMBERS:

President; Gary Skinner, gsknnr@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