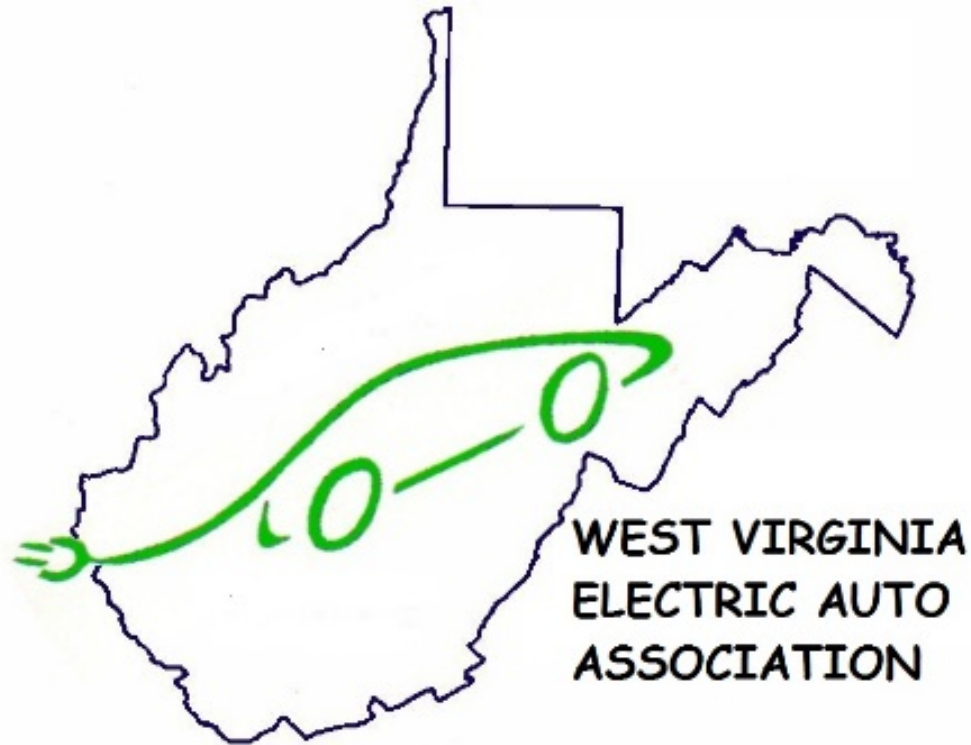


Electric Autos and West Virginia Energy



Marty Weirick, president
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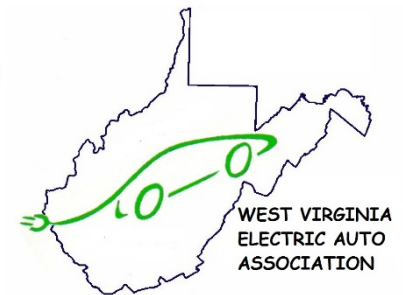


**ENERGY
INNOVATION
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THE GOVERNOR'S
ENERGY
summit

Electric autos are not a new concept



1909 Baker Electric
EV market leader
over ONE HUNDRED years ago



2018 top selling plug-in vehicle



Tesla Model 3

National Drive Electric Week event



2018 Tesla Model X SUV on 9/8/2018, South Charleston

U.S. EV market today

- EVs delivered since Dec 2010: **1,002,506**
- 36 months of year-to-year sales growth
- Sept. '18 sales 111% above Sept. '17 sales
- 42 models, 20 makes sold in Sept. '18
- Over 100 new models announced for '19-'23

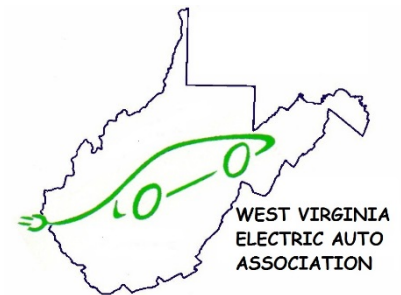
EVs can help West Virginia economy using West Virginia-made electricity

- West Virginia coal: 11 lbs/day
- West Virginia natural gas: 110 standard cubic feet/day
- West Virginia renewables:
~10 large solar panels
(3,300 watts) with net metering



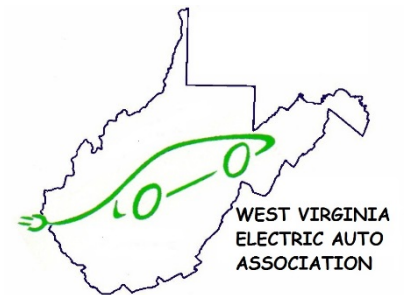
EVs charging at Pipestem Resort State Park

***** EVs do not use imported oil *****



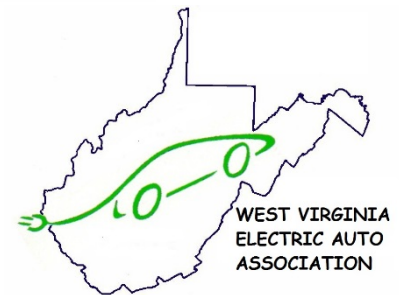
Fast charging analysis assumptions

- Sept. '18 California Tesla fast chargers: 87 cars per DCFC plug
- Sept. '18 Appalachian Power residential tariff: \$0.1098/kWh
- Assumed DCFC pricing: \$0.25/kWh
- 88% of charging occurs at home
- 1kwh = 4 miles
- Average is 37 miles per day

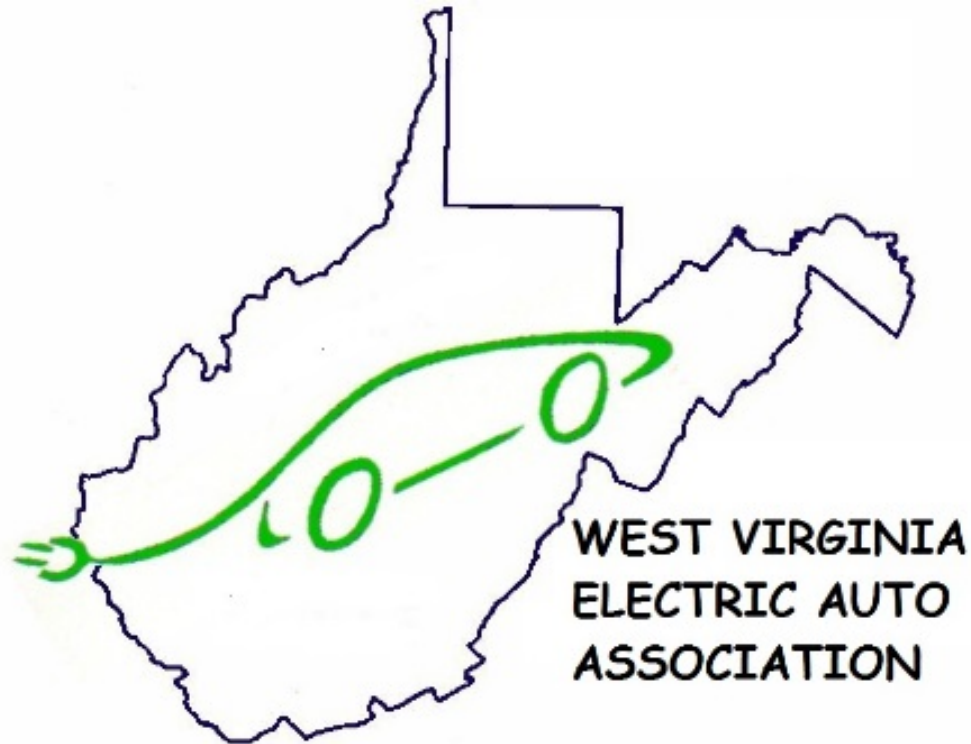


Projected power sales per DCFC per plug

- Residential power sales of 87 cars: \$28,300 / year
- DCFC power sales of 87 cars: \$8,900 / year
- Total power sales per DCFC plug: \$37,200/year



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