Electric Autos and West Virginia Energy

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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 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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