Electric Transportation, Far Ranging and Affordable

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March 30, 2017
Electric Vehicle Transportation Center

- Consortium, University of Central Florida, Tuskegee University, University of Hawaii
- Focus On EV Technology, Transportation Planning, Infrastructure, Social And Environmental impact
- U.S. DOT Funded Research Center Co-located With The Florida Solar Energy Center in Cocoa, Florida
- [http://evtc.fsec.ucf.edu/](http://evtc.fsec.ucf.edu/)
What are EVs?
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EV Charging

**Level 1**
110v/55A, Residential AC
Toaster
4 Travel Miles/hour
NEC Article 625/UL

**Level 2**
220v/35A, Residential AC
208v/35A, Commercial AC
Cloths Dryer
15 Travel Miles/hour

**Level 3 DC Fast Charge**
480v/60A, Commercial AC
15 Residential Central Air Conditioning
80-100 Travel Miles, 20-30 Minutes
EV Charging

MEET PLUGLESS

PREMIUM WIRELESS CHARGING FOR YOUR EV

Level 2
220v/35A, Residential AC
208v/35A, Commercial AC
Cloths Dryer
15 Travel Miles/hour
EV Upside

• Achieving Price Parity With CFVs
  — Battery Prices Declined 35% 2014-2015

• Much Less Expensive To Operate
  — Typically $1.00/gallon
  — No Radiator, Transmission, Lubricants

• 230+ Travel Miles On Single Charge

• Quiet And Fun To Drive

• Very Environmentally Friendly
Cost of Fuel

Average Retail Fuel Prices in the U.S.

- Gasoline
- E85
- CNG
- Propane
- Diesel
- B20
- B2/B5
- B99/B100
- Electricity

Last updated: March 2017
What’s Coming?

• Florida, 19,000+ Passenger EVs And Growing
• Tesla has 373,000+ Reservations For Model 3
• Chevy Now Selling The 230 Mile Bolt
• 300+ Mile Travel Range Beginning 2018
• Ford Adding 13 New Models by 2020
• BMW Has EV Versions Of All Models By 2019
• Autonomous/Wireless Technologies Advancing
What Are The Challenges?

- **EV Stakeholders Need To Do A Better Job:**
  - Consumer, Dealer And Policy Maker Education
  - Engagement With MPO, TPOs, DOTs
  - Engage Planning & Design Consulting Firms

- **Charging Infrastructure Is/Will Be A Problem**

- **OEMs, Parts Manufacturers, Oil Companies**
Conclusions

*EV Transportation At The Tipping Point!*

Less Expensive To Manufacture

Less Expensive To Fuel And Maintain

The Rest Of The World Doesn’t Subsidize Fuel
Contact Information

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