Electric Vehicles: Experience from the Field

Learn about the many benefits of providing EV charging infrastructure. The panel will discuss opportunities to expand EV charging infrastructure regionally from the perspective of the local power utility, county and city government, EV vehicle owners and industry.

RCAP IMPLEMENTATION WORKSHOP
APRIL 30, 2015
Accelerating PEV Growth in Florida

Todd Jensen
Program Manager - Commercial Electrification
FPL has been promoting electric vehicles for years due to the benefits that they offer our customers.

**Get charged up about driving electric!**

**Plug-in and save**
An electric vehicle takes your dollar further.

$0.70
electric
$2.28
gallon gas

Charge up with electricity for less than the equivalent of $1 per gallon, saving you more than 70 percent on fuel costs.

**Clear the air**
No to low tailpipe emissions.

70%
fewer emissions

Cars powered by FPL’s clean electricity have 70 percent fewer emissions than gas-powered vehicles when power plant emissions are considered — making them a feel-good option for car buyers.

**Reduce oil-dependence**
Fuel your car with domestic electricity rather than foreign oil.

less than
1%
fuel oil

Less than 1 percent of all FPL power comes from oil — so FPL customers can charge their cars with electricity generated from largely domestic sources of fuel.

**An electric vehicle that’s right for you!**

**Electric vehicles go as far as you do**
Choose an electric range to suit your driving needs.

Up to 540 total miles Plug in Hybrid Electric Vehicle
Up to 260 total miles Fully Electric Vehicle

**Many plug-in models**
Choose from sports cars to family sedans.

20 models in 2015
32 models in 2016*

**Convenient charging**
More than 500 public charging stations in Florida.

*estimated
Southeast Florida Planning Grant

- One of sixteen grants nationwide to stimulate infrastructure planning and policy development
- Award of $500,000 was for a seven-county regional planning effort to help prepare Southeast Florida for PEV growth
- Teams focused on:
  - Fleet adoption,
  - Infrastructure development,
  - Policy/permitting/codes/incentives,
  - Education & outreach,
  - U.S. 1 corridor demonstration project
- Funding through June 2013

There were nearly 100 Southeast Florida stakeholders from public and private sectors involved in the work.
The grant allowed for the creation of many tools and resources to help our communities prepare for the PEV future

Tools and Resources

Contact us
Electric-vehicles@FPL.com

Review the fact sheets on topics including:
• Installation at multi-unit dwellings
• Equipment selection
• Siting charging stations
• Workplace charging
• Fleet considerations
• and more…

The full report – and nine topical fact sheets can be found at www.DriveElectricFlorida.org
After grant completed, a transition from regional planning to statewide coordination was needed; Drive Electric Florida was formed and formalized into a 501 (C)6 organization in January.

**Mission**
Advance the energy, economic and environmental security of the state of Florida by promoting the growth of plug-in electric vehicles and equipment and the needed infrastructure to support it.

**Vision**
Accelerate the adoption of plug-in electric vehicles and equipment in Florida by engaging and educating public, business, and policy-makers to gain support for smart electric policies and programs.

**Success Factors**
- Engaged membership
- In kind contributions
- Shared resources
- State-wide scope
- Focus on limited number of annual priorities

**Structure**

**Executive Committee**
- Education & Awareness
- Incentives & Policy
- Organization & Funding

**Member Organizations**
- Electric Equipment Manufacturers / Automakers
- Utilities
- Environmental Organizations
- Universities
- Enthusiast Groups

Consider joining Drive Electric Florida – membership materials available here today.
PEV sales continue growth in Florida and in FPL’s territory

Florida PEV Sales through March 2015

FPL’s share of PEVs within its territory is continuing to increase

FL Source: Florida Dept. of Highway Safety and Motor Vehicles
The strong growth in Florida is also seen in 1st quarter installations by state
Though installations are strong compared to other states, Florida seems to have a need for more.

Underserved Areas – PEV to Public EVSE Ratio above 20
FPL will continue to do its part to increase adoption of electric vehicles – while saving money for its customers

**FPL’s Electric Vehicles Program**

**FPL’s Corporate Electric Fleet**
- Operating electric vehicles since 1990s
- 92 percent light duty fleet is HEV/PEV
- Purchased additional electric vehicles in 2014
  - 68 bucket trucks with PHEV systems
  - 4 PHEV system materials handling buckets
  - 50 electric passenger cars
- Electric pool car program
- All results in significant fuel cost savings

**Support Residential & Commercial PEVs**
- Consumer awareness and education
  - Display PEVs at ~ 100 community events
  - Robust PEV website, fact sheets, articles
- Commercial outreach
  - Customer, government fleet acquisition support
  - Educating business and government on benefits of electric equipment
- Industry engagement
  - Exec committees of EDTA, CALSTART, etc.
  - Co-Founder of Drive Electric Florida
Broward County: Strategy to expand plug-in electric vehicles infrastructure

POLICY 19.2.5 OF THE BROWARD COUNTY COMPREHENSIVE PLAN CLIMATE CHANGE ELEMENT

Maribel Feliciano, Planning Administrator
Environmental Protection and Growth Management Department
In February 12, 2013 the Broward County Board of County Commissioners adopted the Broward Comprehensive Plan Climate Change Element

www.broward.org/planningandredevelopment/comprehensiveplanning

Policy 19.2.5: Broward County shall continue to work with the Department of Energy Florida Gold Coast Clean Cities Coalition to support initiatives which seek to diversify fuel options for public transit and fleet vehicles, expand infrastructure for charging electric and hybrid electric vehicles, and incentivize parking for alternative fuel vehicles.
Purpose:
To increase PEV public infrastructure and vehicles in Broward County by identifying common barriers and potential solutions.
The Strategy

Strategy to Implement Policy 19.2.5 of the Broward County Comprehensive Plan Climate Change Element

Goal: To expand the use of alternative fuels and infrastructure

April 28 • 2014

Includes Model Ordinances for Local Governments

PLANNING AND REDEVELOPMENT DIVISION

BROWARD COUNTY FLORIDA
Broward County Recognized by the US Department of Energy Workplace Charging Challenge

Leading by Example
Electric Vehicle Charging Station Locations

Find electric vehicle charging stations near an address or ZIP code or along a route in the United States. For more alternative fueling stations, use the Alternative Fueling Station Locator.

More search options

Electric stations near broward
Excluding private stations

- **Sawgrass Ford**
  14501 W Sunrise Blvd
  Sunrise, FL 33323
  Phone: 800-622-0300
  Fuel: Electric
  Electric charging types: Level 2
  Distance: 3.3 mi

- **Coral Springs Nissan**
  9350 W Atlantic Blvd
  Coral Springs, FL 33071
  Phone: 954-753-1700
  Fuel: Electric
  Electric charging types: Level 2
  Distance: 7.9 mi
Regional Climate Action Plan Implementation Workshop

Electric Vehicles: Experience from the Field

April 30, 2015

John Morgan
Sustainability Officer
City of Delray Beach

CITY OF DELRAY BEACH
Electric Vehicle (EV) Charging Stations

- Partnering with Plug In Florida
- Provide and install up to six (6) Electric Charging Stations within the Downtown Area at no cost to the City
- Three (3) stations operational in Bankers Row Parking Lot
Cost of Electric Service for Stations

- Less than $3 per month in 2011 (GM and Nissan didn't start formal deliveries in Florida until early 2012)
- Less than $10/month in 2012
- Less than $20/month in 2013
- Less than $45/month in 2014
- Less than $60/month in 2015
- Electrical cost for lighting the Banker's Row parking lot -- just that one lot -- each night, runs about $252 per month
Usage and Feedback

- Average of 17 charging sessions per day in March 2015
- Increase of 425% since summer of 2014
- EV drivers are choosing to visit downtown Delray Beach to have a meal or shop because they can use our charging stations
Trouble-shooting and Station Growth

- Tesla trips circuit breakers
- New developments voluntarily installing stations (becomes condition of approval)
- Site selection for 3 new City stations underway
EV Charging Technology and Infrastructure

Carlos de Jesus, President/Owner, Crown Electric Electric Florida.
Regional collaboration to align sustainable transportation options with funding opportunities

Gregory Stuart, AICP. Executive Director, Broward Metropolitan Planning Organization