Southeast Florida Clean Cities

Hollywood, FL
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U.S. Plug-In Car Sales Currently On 4th Consecutive Monthly Record (Data Through February 2016)
Plug-in Electric Vehicles (PEVs):
Includes PHEVs, EREVs and BEVs

- **PHEV**
  - Plug-in Hybrid Electric Vehicle
  - Plug-in Prius
  - Ford C-MAX Energi

- **EREV**
  - Electric Vehicle with “Extended-Range”
  - Chevrolet Volt
  - Cadillac ELR

- **BEV**
  - Battery Electric Vehicle
  - Chevy Spark EV
  - Nissan Leaf
  - Tesla S
  - Ford Focus

- 10-20 EV miles
- 40-60 EV miles
- 80-200 EV miles
• More range ➔ 420 mile total range -- **53 EV miles** (40% improvement)
• More fuel economy ➔ 41 MPG / 102 MPGe
• More performance ➔ 0 to 30 in 2.6 seconds (19%);
                           0 to 60 in 8.4 seconds (7%)
• $33,995 ($26,495 after federal incentives)
• Gen 2 Volt owners may expect…
  – Nearly **90% of trips will be all EV**
       (in moderate climates, such as CA, TX and FL)
  – More than **1,100 miles between gasoline fill ups**
  – To displace 25% more gasoline
Current MY17 Volt Inventory in Florida

Orlando – 11
Starling Chevrolet - 2
Carl Black Chevrolet - 3
David Maus Chevrolet – 6

Miami – 10
Miami Lakes Chevrolet – 1
Lorenzo Bomnin Chevrolet – 4
Autonation Chevrolet Pembroke Pines – 2
Grand Prize Chevrolet – 1
Ed Morse Sawgrass Chevrolet - 1
Autonation Chevrolet Ft. Lauderdale - 1

Jacksonville - 2
Nimnicht Chevrolet – 1
Coggin Chevrolet - 1

Tampa – 32
Ferman Chevrolet – 7
Gordon Chevrolet – 1
Autonation Clearwater – 1
Dimmitt Chevrolet – 7
Maher Chevrolet - 14
Stingray Chevrolet – 1
Ferman Chevrolet Tarpon Springs - 1

Pensacola – 3
Sandy Sansing Chevrolet – 2
Lou Sobh’s Milton Chevrolet - 1

Also, note...
Atlanta - 30301
Steve Rayman Chevrolet – 2
Jim Ellis Chevrolet - 1
Rick Hendrick Chevrolet - 3
Industry-changing Battery Electric Vehicle

- **More range** ➔ 200 mile range (2.5x improvement)
- **More availability** ➔ 50-state availability
- $30,000 (net federal incentives)
- To be built in Michigan at Orion Assembly

2nd Generation BEV: Chevrolet Bolt EV (Fall 2016)
Chevrolet Volt Battery Cell Quality

- Total Miles Driven = 1 Billion miles
- EV Miles Driven = 700 Million miles
- Fuel Saved = 36 Million gallons

- 22 Million battery cells produced
- Fewer than 2 problems per million cells produced

“Pharmaceutical-level quality”

Industry-leading battery quality
Volt Customers Describe Their Car

J.D. Power APEAL winner for satisfied customers for three years
Consumer Charging - Behaviors

• **Home Charging:** ($1.70 per night for 40 miles of EV driving – U.S. avg)
  – 60-80% of all charging is done at the home
  – 50% of Volt buyers use a 120V outlet (L1) to charge overnight

• **Workplace Charging:**
  – 30-40% of all charging is done at work (if they offer workplace charging)
  – DOE data shows employees with access to workplace charging are **6X more likely** to purchase an EV (both L1 and L2 charging can make sense)
  – Proving to be the **most helpful promoter of PEVs** through awareness and incentive

• **Public Charging:**
  – 3-4% of all charging is done in public
  – DC Fast-Charging as a **Home-Charging Alternative** for MDUs (apartments,...)
  – DC Fast-Charging as a solution for longer range driving (**perception matters**)
Consumer Charging – Why do we need to do more?

• Home Charging:
  – Because this is where most charging is done

• Workplace Charging:
  – Because this is the most helpful way to directly influence EV adoption

• Public Charging:
  – Because this tells a story consumers understand
GM / EPRI / Utility Collaboration:

• Largest existing auto-utility collaborative effort -- formed in 2007
• Over 50 utility members and the Electric Power Research Institute (EPRI)
• Focus areas: Aligned Messaging and Policy Priorities, Customer Outreach and Infrastructure, Vehicle-to-Grid Technology, New Business Opportunities
The education, awareness, and promotion value of these efforts magnifies the incentive value.

Examples of Meaningful Engagement – Central/Eastern U.S.

- **DTE and Consumers Energy (MI):** $2,500 home 240V rebate (5,000)
- **Green Mountain Power:** $3,000 employee EV rebate + $2,000 as 6mo EV ambassador
- **PSE&G (NJ):** Workplace Charging – 150 free 240V EVSE’s to businesses
- **KCP&L (MO, KA):** Install & Operation 1,000+ charging stations
- **Jacksonville Energy Authority (FL):** $1,000 vehicle rebate
- **Alabama Power (AL):** $1,000 rebate - $750 to PEV buyer; $250 to dealership
- **FPL (FL):** 2013 -- 100 outreach and events
  - 57 outreach - presentations, meetings with customers
  - 80 events (includes ride and drives, booths, electric vehicle display)
501 GM WORKPLACE CHARGING STATIONS
Including 25 Assembly Plants

(19% Solar; 2 ADA friendly; 400 add’l private; 66% 240V and 33% 120V)

Also: Chevrolet and Cadillac dealers have installed approximately 5,900 charge stations at their locations for owner use – 17 of these dealerships use solar charging canopies.
“RetailCo’s” 9-month study of a California location with EV charging:

- 1,134 unique charging sessions took place
- Average customer in-store dwell time increased from 22 to 72 minutes (327% increase)
- Cost of electricity = $430
- Gross revenue increased approximately $56,000 (average spend at RetailCo is $1 per minute)
- Nationwide rollout of EV charging now underway

DC Fast-Charge Infrastructure Strategy for Florida
(43 DC sites shown - illustrative)

- Build consumer confidence in ability to drive an EV “anywhere” in Florida
- Show Florida leadership
- Strategic, methodical, cost-effective placement of DC stations

“Tell a Story”
Current Key EV (vehicle) Incentives by State
13 States (plus WDC) offer vehicle incentives: rebates, state income tax credits or sales/excise tax exemptions

**Rebate:**
- **CA** – $2,500 BEV; $1,500 PHEV
- **CT** - $3,000 (>18kWh); $1,500 (>7kWh); $750 (<7kWh) ($800k fund)
- **IL** – $4,000 BEV/EREV (currently suspended)
- **MA** – $2,500 BEV/EREV; $1,500 PHEV ($3.72Mil fund)
- **NY** – pending $2,000 rebate for PHEVs, EREVs, BEVs, and FCES
- **PA** – $2,000 BEV/EREV (>10kWh); $1,000 (<10kWh) (250 limit)
- **RI** - $2,500 BEV/EREV (>18kWh); $1,500 (<$18kWh) ($200k fund)
- **TN** - $2,500 BEV; $1,500 PHEV ($682.5k fund)
- **TX** – $2,500 BEV/EREV (>4kWh) (2,000 limit)

**Other Notes:**
- **CA** – San Joaquin rebate of $3,000 BEV; $2,000 EREV
- **FL** – JEA rebate of $1,000 BEV/EREV (>15kWh)
- **VT** – Drive Electric VT – was $500; Phase 2 planned

**State Income Tax Credit:**
- **CO** – $6,000 BEV/EREV
- **GA** – $5,000 BEV
- **LA** – $1,500 BEV/EREV
- **SC** – $2,000 PHEV only? (>9mi)
- **UT** – $1,500 BEV/EREV (>10kWh); $1,000 PHEV

**Sales Tax Exemption:**
- **DC** – $2,400 value (Volt)
- **MD** – $2,300 value (Volt)
- **NJ** - $2,000 value BEV only
- **WA** - $2,000 value (BEV/EREV) – pending proposal – exempt tax up to $32k for EV MSRP <$42,500 (max 7,500 EVs)

**Expiration Dates:**
- **PA** – 12/31/2015
- **UT** – 12/31/2016
- **SC** – 2017
- **MD** – 6/30/2017
- **WA** – July 1, 2019
- **CO** – 2021
- **CA** – annual review
- **MA** – no sunset
- **LA** – no sunset
- **DC** – no sunset
- **IL** – suspended 3/2015
- **TX** – expired 6/26/2015
- **GA** – ended 7/1/2015
- **RI** – til funds expire

**HOV states:**
- AZ, CA, FL, GA, HA, MD, NV, NJ, NY, NC, TN, UT, VA

**WDC** states:
- MA

**Green** is BEV/EREV (Volt/ELR)
**Blue** is BEV only

**ZEV States** = CA, OR, NY, NJ, VT, ME, MA, CT, RI, MD
**Add’l Section 177 States** = WA, DE, PA, GA, NC, NM

**Green states:**
- CA, OR, NY, NJ, VT, ME, MA, CT, RI, MD

**Blue states:**
- WA, DE, PA, GA, NC, NM

**HOV** states:
- AZ, CA, FL, GA, HA, MD, NV, NJ, NY, NC, TN, UT, VA
What will it take to Grow the PEV Market?

- **Drive Consumer Demand!**
  - Keep a Laser-like Focus on the Vehicles

- **Build Awareness**
  - National Awareness Campaign
  - Ride and Drives ➔ Butts-in-Seats

- **Install Charging Infrastructure at a faster pace (incl. role for utilities)**
  - Workplace Charging
  - Public DC (SAE Combo)

- **Governments**
  - Grow and maintain incentives near term to drive private investment
  - Stay steady until we reach a meaningful tipping point