

# Get Ready Central Florida:

## A Local Planning Guide for Electric Vehicle Success (*Perhaps?*)

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September 9, 2011



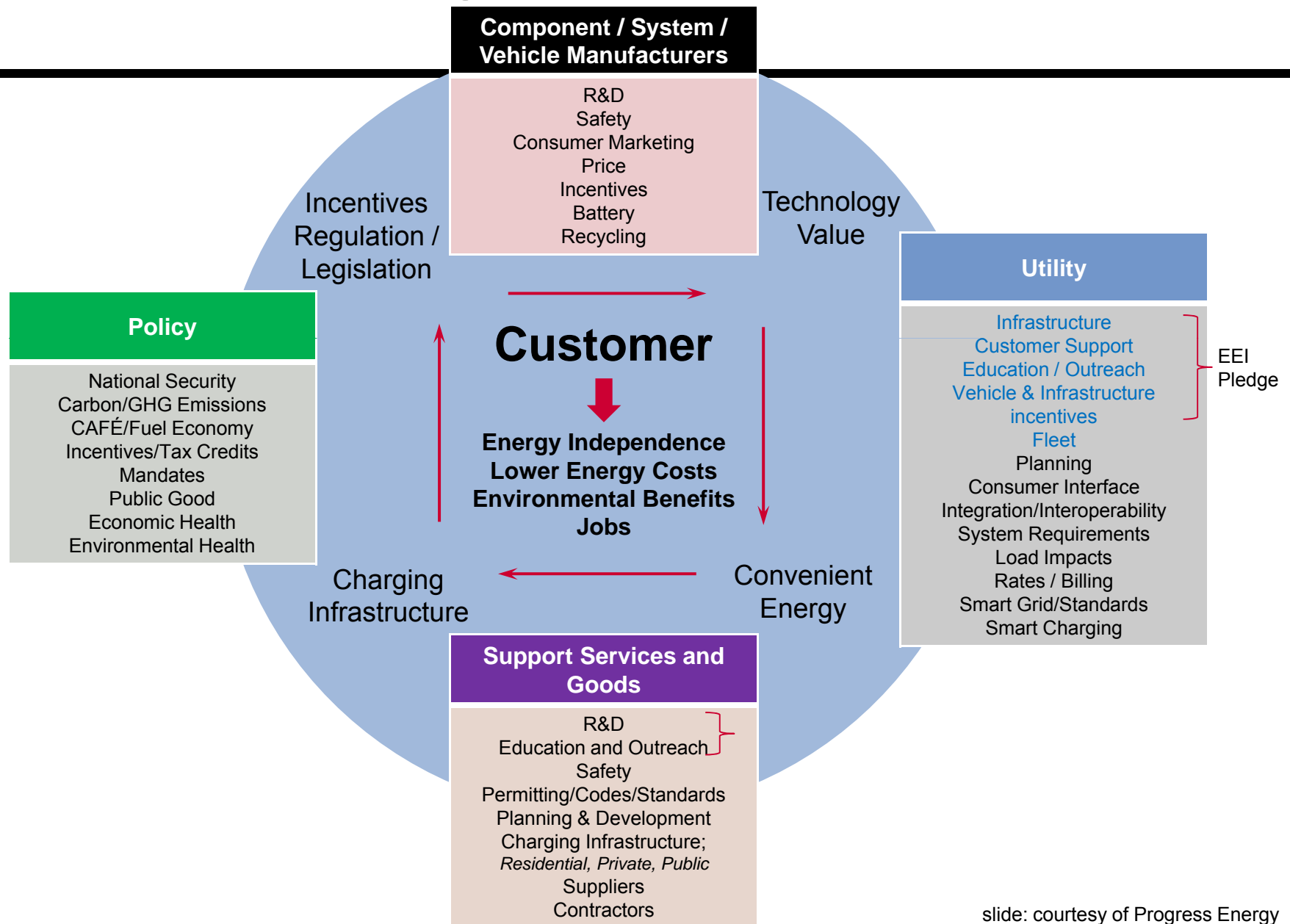
# It All Begins With The Value Proposition

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- Societal benefits from electric transportation
  - Cost savings
  - Environmental
  - Energy independence
  - Economic development and job creation



# Electric Transportation: Opportunities and Challenges



slide: courtesy of Progress Energy

# Public – Private Partnerships: The Power of Pulling Together



## Component / System / Vehicle Manufacturers



R&D  
Safety  
Consumer Marketing  
Price  
Incentives  
Battery  
Recycling

## Technology Value



Progress Energy



## Utility

Infrastructure  
Customer Support  
Education / Outreach  
Vehicle & Infrastructure  
incentives  
Fleet  
Planning  
Consumer Interface  
Integration/Interoperability  
System Requirements  
Load Impacts  
Rates / Billing  
Smart Grid/Standards  
Smart Charging

EEI  
Pledge



## Policy

National Security  
Carbon/GHG Emissions  
CAFÉ/Fuel Economy  
Incentives/Tax Credits  
Mandates  
Public Good  
Economic Health  
Environmental Health

## Customer

Energy Independence  
Lower Energy Costs  
Environmental Benefits  
Jobs

## Charging Infrastructure

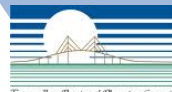
## Convenient Energy

## Support Services and Goods

R&D  
Education and Outreach  
Safety  
Permitting/Codes/Standards  
Planning & Development  
Charging Infrastructure;  
Residential, Private, Public  
Suppliers  
Contractors



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL



# Metro Orlando's EV Progression

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- Outreach with auto manufacturers
- Stakeholder formation
- Permit Streamlining
- National attention leads to national investment



# Auto Manufacturer Outreach

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- 2009 began outreach to OEMs
- Signed MOU with Nissan to demonstrate demand in FL
- Led to the creation of Get Ready Central Florida







# Get Ready Central Florida

- Rocky Mountain Institute



<http://projectgetready.com/>

# GRCF: Subcommittees

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**MARKETING & EDUCATION:** Develop relationships with Media, Submit Articles & Press Releases, Post Videos / Articles On Website, Generate Interest To Fleet Managers, Business & Rental Car Companies About Electric Transportation

**INFRASTRUCTURE:** Support Development of Charging Infrastructure, Refining local Codes, Hosting Workshops for Electricians, Building Inspectors & Fleet Managers to expedite installation of Charging Stations

**VEHICLES:** Support the deployment of electric vehicles in Central Florida through education & outreach to Fleet Managers, Businesses, Rental Car Fleets & the Public. Focus on vehicle standards, vehicle to grid communication protocols & product lifestyle disposal planning.





# GRCF: Permitting



The screenshot shows the homepage of the 'Get Ready Central Florida' website. The background is a solid green color. At the top left, the text 'GET READY' is in large white letters, and 'CENTRAL FLORIDA' is in orange letters below it. To the right of this text is a white smart car with a green stripe. Below the car is a green plug icon with a lightning bolt. A green line resembling a city skyline connects the text area to the plug icon. In the top right corner, there are social media icons for Facebook and Twitter, and a button that says 'Back to Portal PowerUpGreenEnergy.com'. On the left side, there is a vertical navigation menu with colored circles next to the following links: Home (red), Who We Are (yellow), What We're Doing (orange), Charging Stations Map (yellow), Electric Vehicles FAQ (light green), Resources (teal), Learn More (red), News (orange), and Contact Us (yellow). The main content area is titled 'HOME' and contains two paragraphs of text. The first paragraph describes the coalition and its goals. The second paragraph mentions networking with other 'Get Ready' cities. To the right of the text is the 'Get Ready Central Florida' logo, which features a stylized 'G' made of four colored circles (red, yellow, orange, green) and the words 'Get Ready' in a large, outlined font, with 'Central Florida' in a smaller font below it. At the bottom of the main content area, there is a YouTube icon and the text 'Visit our YouTube channel'. The footer of the website displays 'PlugAndGoNow.com'. The browser's address bar at the bottom shows 'Internet' and '100%' zoom.

**GET READY**  
**CENTRAL FLORIDA**

Back to Portal  
PowerUpGreenEnergy.com

Home

Who We Are

What We're Doing

Charging Stations Map

Electric Vehicles FAQ

Resources

Learn More

News

Contact Us

## HOME

Get Ready Central Florida (GRCF) is a coalition of state and local governments, utility providers, businesses, and electric vehicle enthusiasts committed to preparing Central Florida for the early release of highway-ready, plug-in electric vehicles. Through research, education, and implementation, GRCF will prepare Central Florida for electric vehicle transportation and the charging infrastructure to sustain it.

GRCF is also networking with other "Get Ready" cities nationwide through the Rocky Mountain Institute. By sharing ideas and discussing obstacles with other "Get Ready" coalitions we can expedite our progress.

Visit our YouTube channel

**Get Ready**  
Central Florida

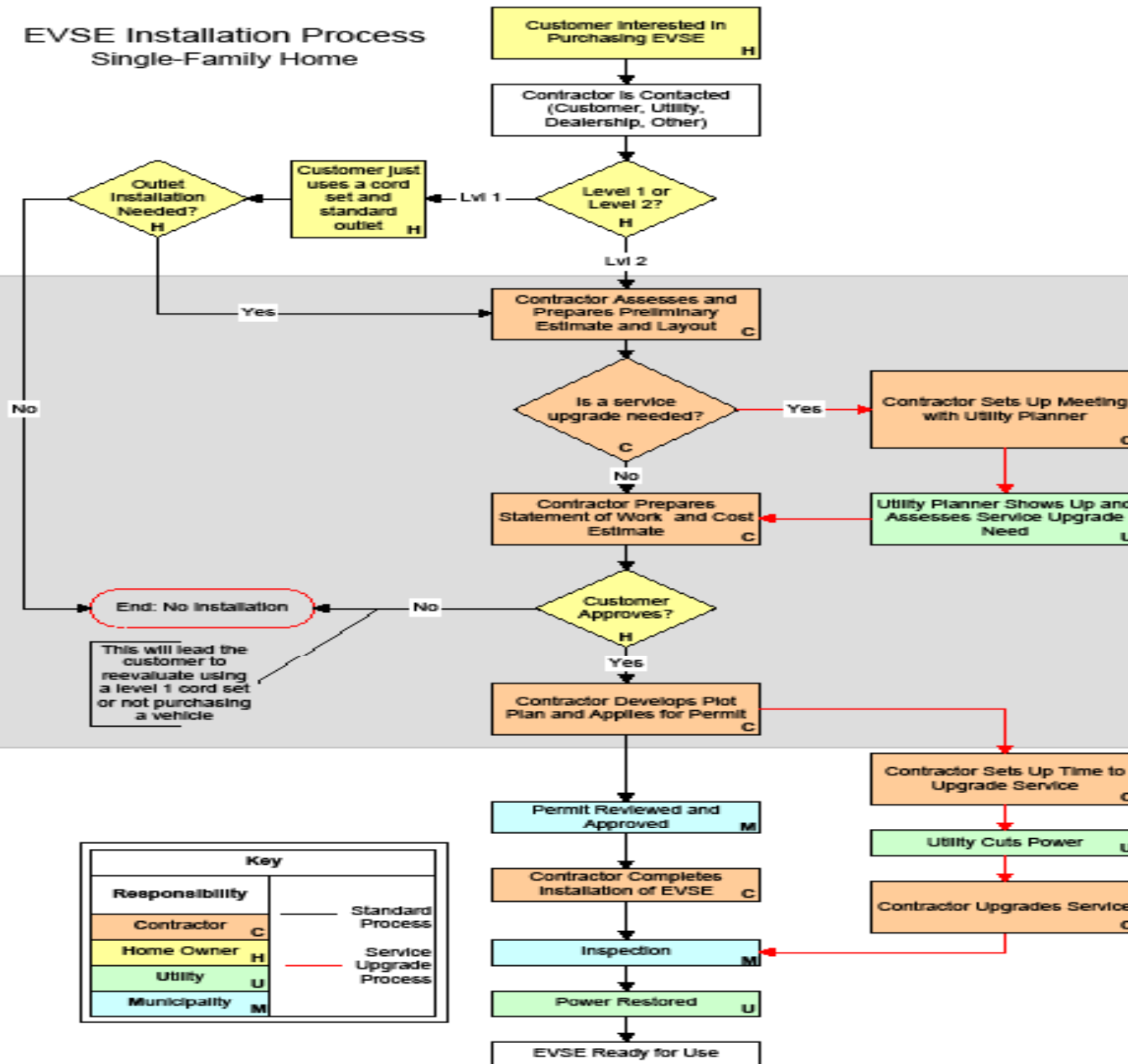
PlugAndGoNow.com

# GRCF: Permitting

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- Test installation prior to education
- Education with code officials to identify needs/ concerns
- Development of checklist
- Success:
  - Residential: over-the-counter
  - Commercial: 1-3 day review

## EVSE Installation Process Single-Family Home

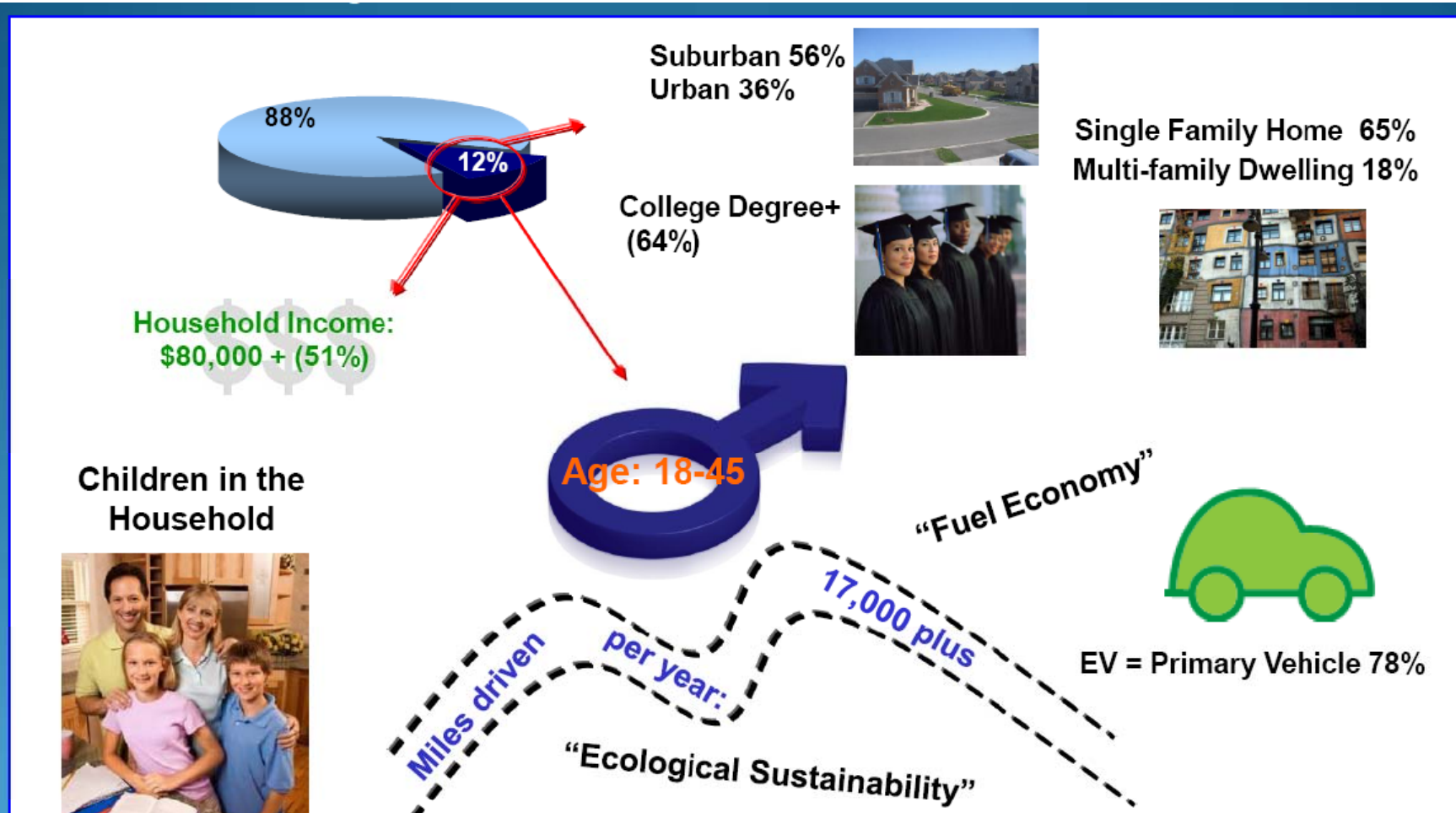


Phase 1: 1-3 Days

Phase 2: 1-3 Days

Phase 3: 1-3 Days

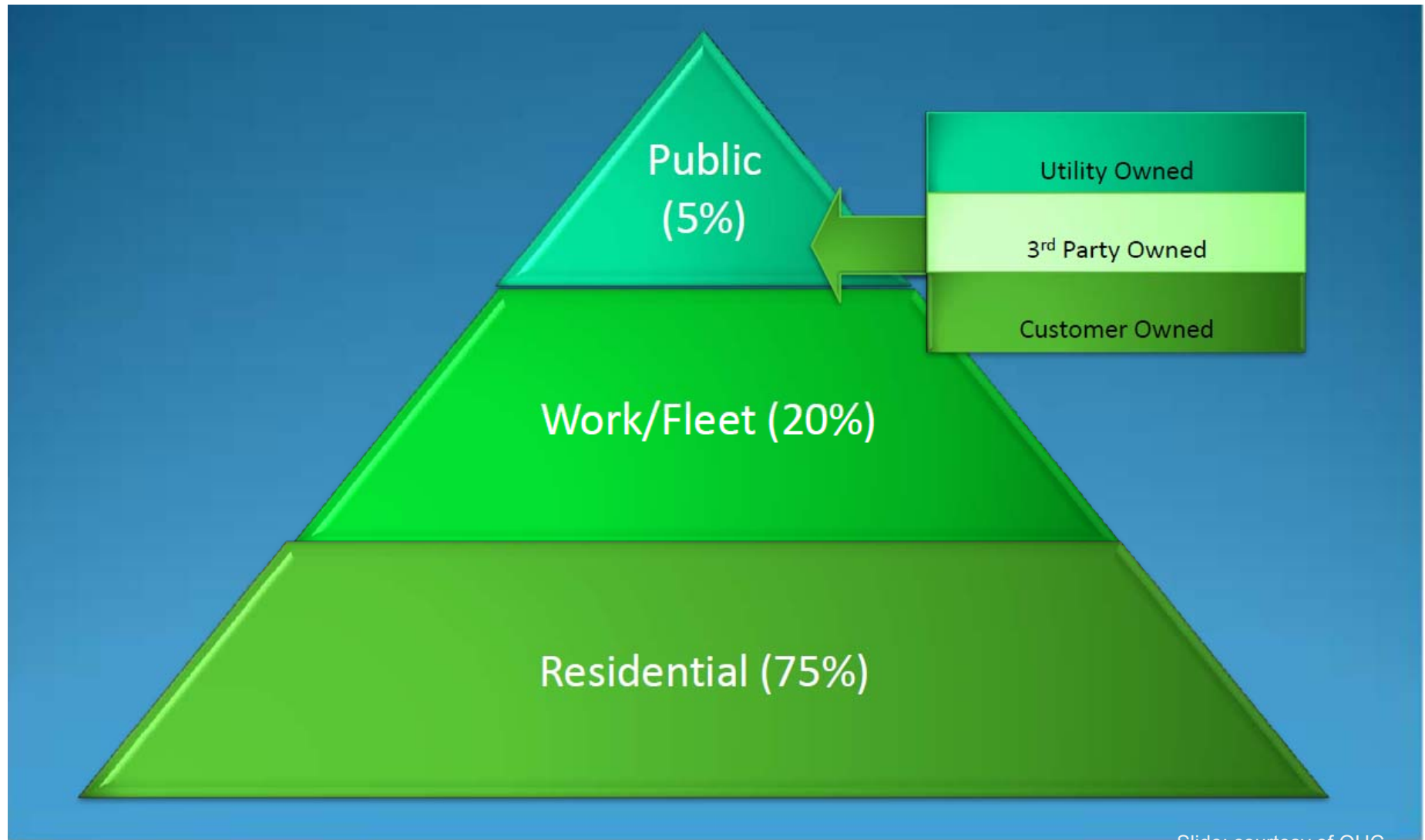
# Infrastructure: Early Adopter Planning



Slide: courtesy of OUC  
Source: Frost and Sullivan

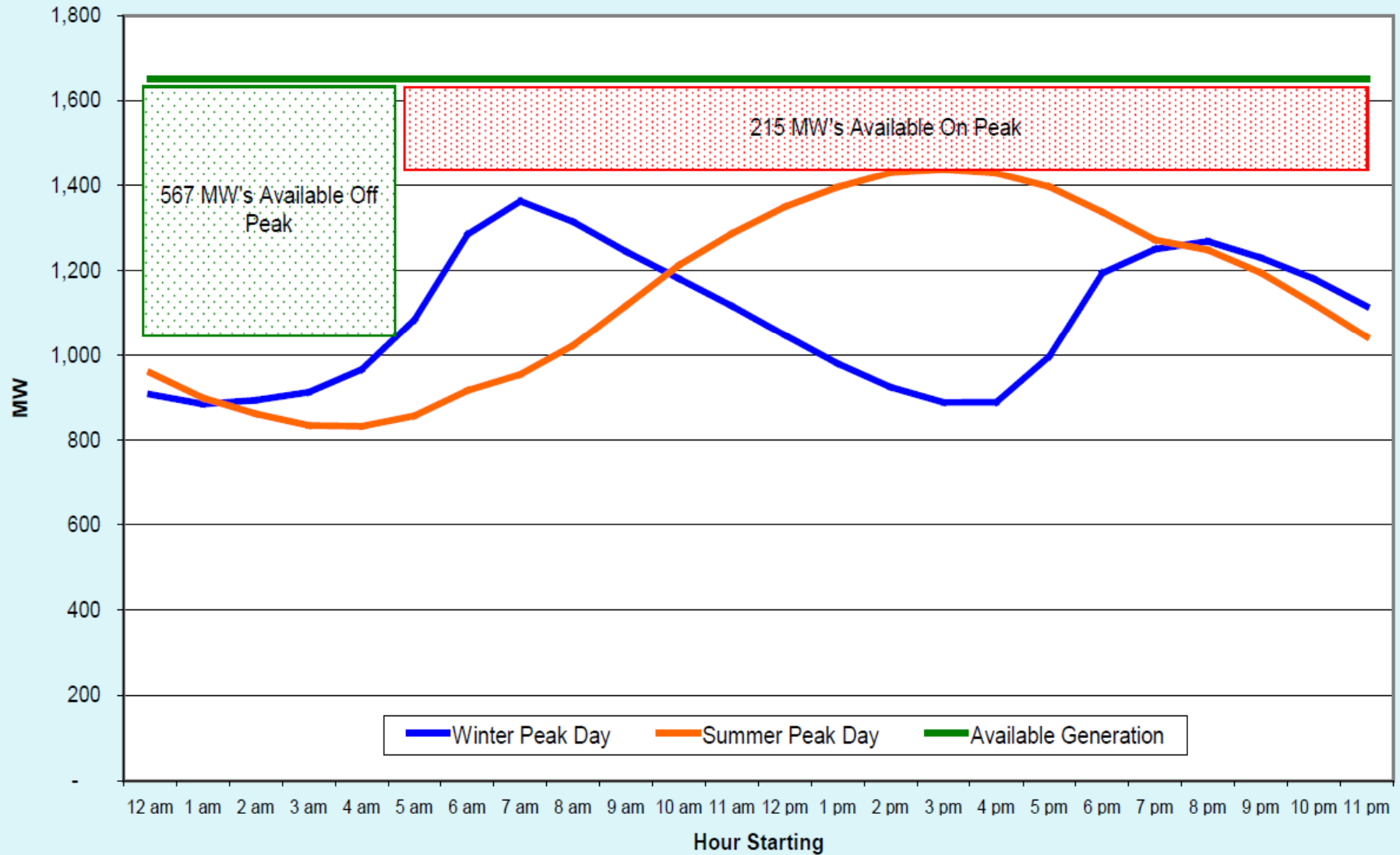
# Infrastructure: EVSE Business Model

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Slide courtesy of OUC

## Generation Available for EV Charging Fiscal Year 2010 - 2011

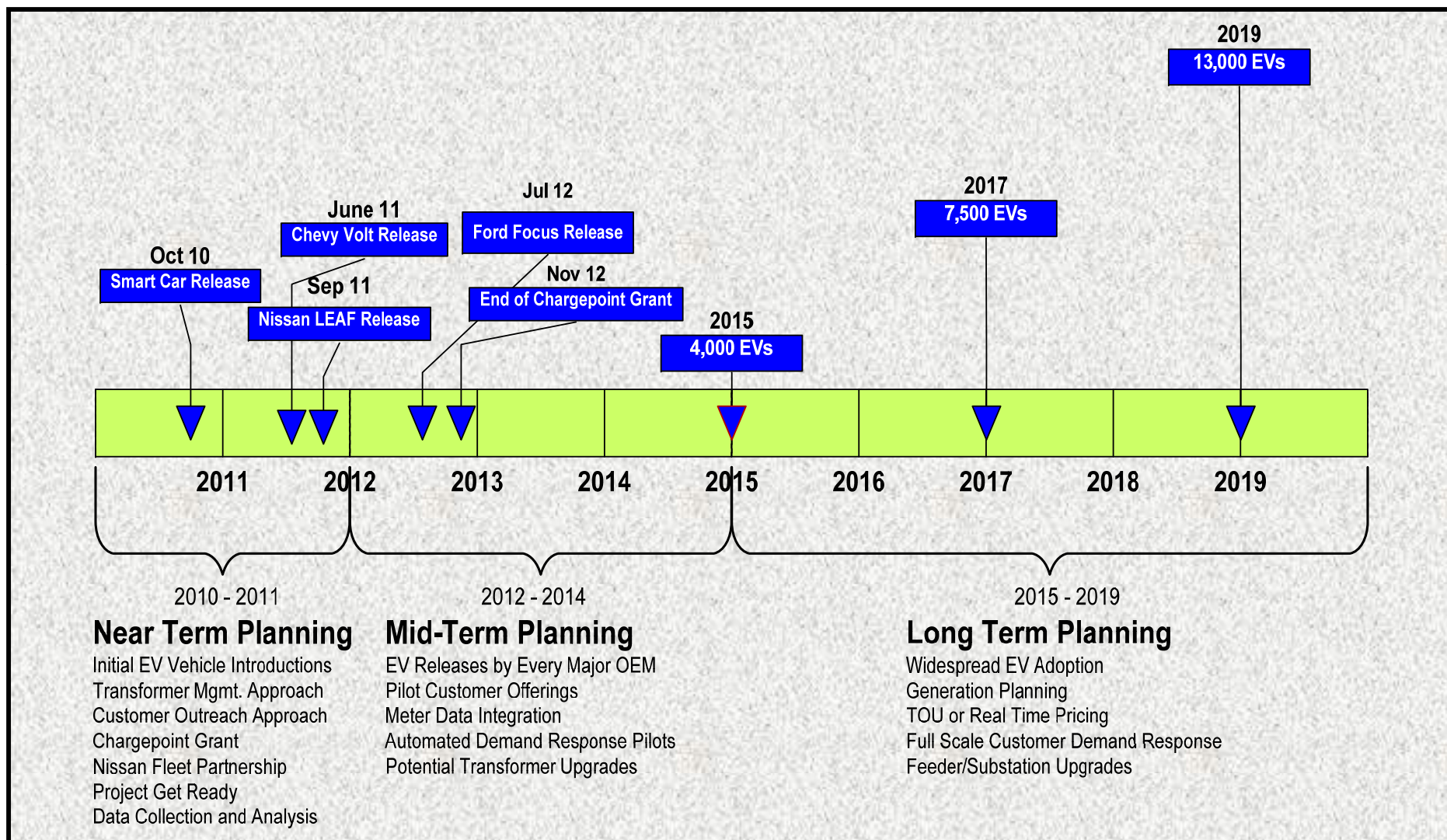


SOURCE: OUC's Fiscal Year 2011 - 2020 Sales Forecast with addition of Forecasted Bartow Load  
OUC's 2010 10-Year Site Plan Table 6-2

Slide: courtesy of OUC



# Infrastructure: Utility EV Roadmap



# Infrastructure: Near Term Focus

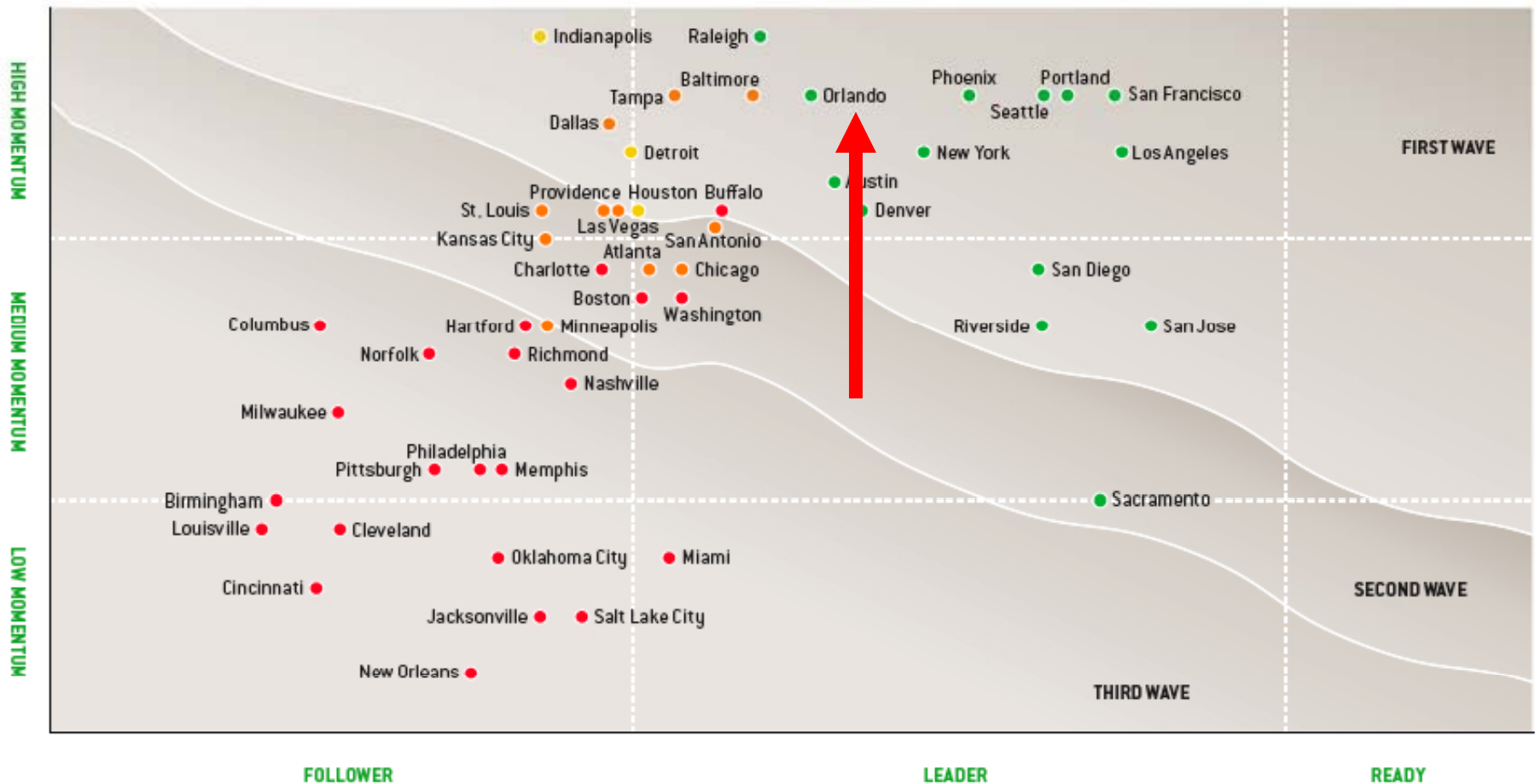
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1. Collect actionable information
2. Determine an appropriate approach to distribution planning and management
3. Monitor regulatory trends and impacts for future planning



# Metro Orlando Classified As A “LEADER” In EV Readiness



● Leader
 ● Aggressive follower
 ● Fast Follower
 ● Followe



# Charge Point America Grant Summary

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- Will install around 200 public stations
  - Public charging sites
  - Key commercial charging sites
- Grant pays for equipment and OUC or site owner pays for installation and maintenance
- OUC provides up to \$1,300 for customer-owned units
- Customer easement agreement for OUC-owned sites
- Pre-selected installers
- All units installed by 10/31/2011





[Get Directions](#) **My Maps**[Collaborate](#)[Edit](#)

### ESVE OUC /Chargepoint America Confirmed Locations

Map includes all the sites that submitted and  
application to participate in the program

RED= Customer to own

GREEN= Customer to host

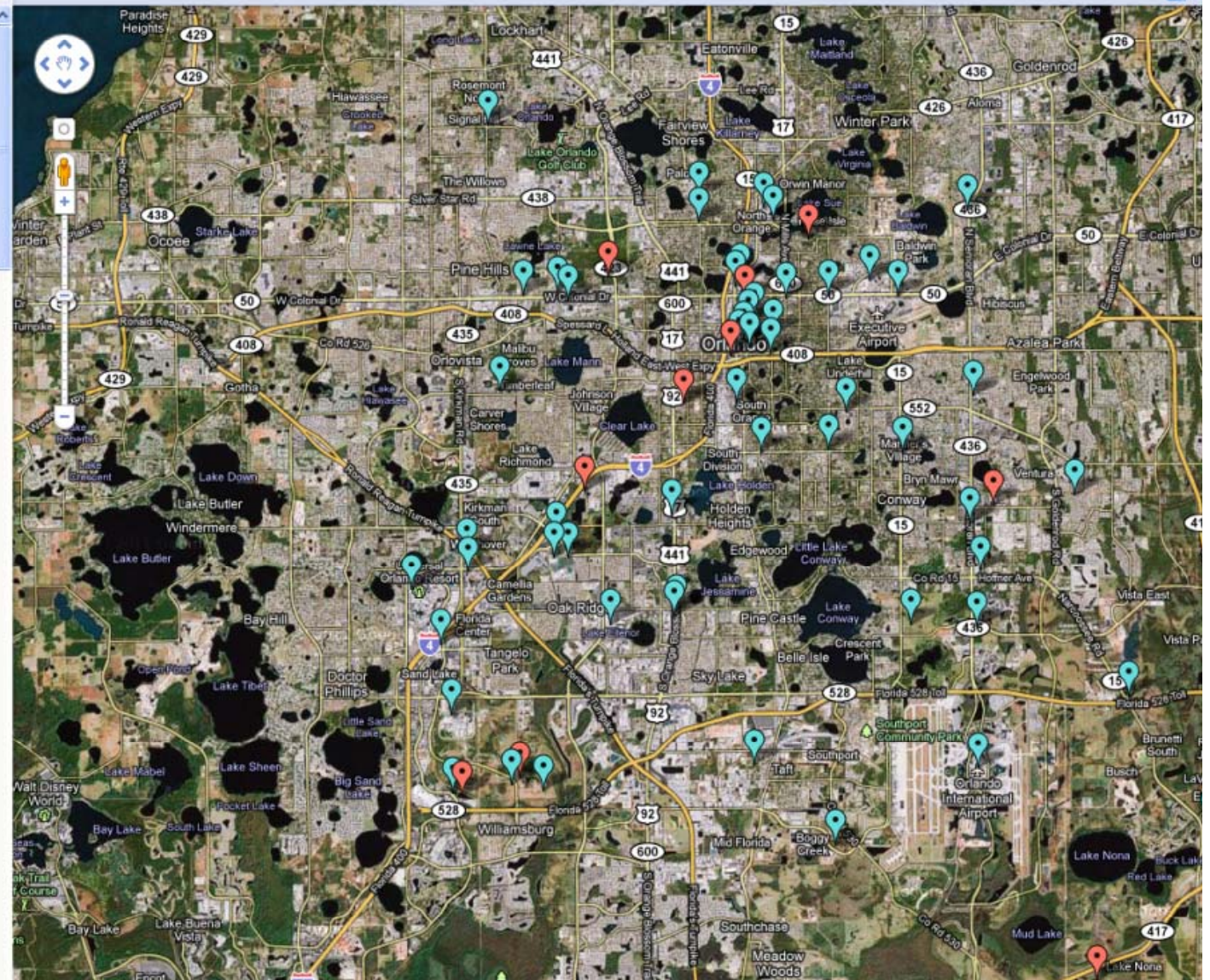
1,317 views - Public

Created on Dec 7, 2010 - Updated Apr 26

By - Open Collaboration

[Rate this map](#) - [Write a comment](#)

-  [\(2\) Avalon Park Association Management](#)  
3680 Avalon Park E Blvd Orlando, FL 32828
-  [\(1\) GAI Engineers](#)  
618 E. South Street Orlando, FL 32801
-  [\(2\) Best Buy - Millenia Mall](#)  
4155 Millenia Blvd
-  [\(1\) Domino's Pizza](#)  
5944 S. Orange Blossom Trail
-  [\(1\) Dandelion Communita Cafe - Organic Vegetarian  
Teahouse](#)  
618 N Thornton Ave
-  [\(2\) Florida Hospital Orlando](#)  
601 E Rollins St (Energy Operations Building)
-  [\(9\) GOAA](#)  
1 Airport BLVD Orlando, FL 32827
-  [\(2\) Harmony Development Company LLC](#)  
3500 Harmony Square Drive West
-  [\(1\) Harris Civil Engineers, LLC](#)  
1200 Hillcrest Street
-  [\(1\) Leu Gardens- Own](#)  
1730 N Forest Ave. Jon Ippel
-  [\(1\) Liberty Property Trust](#)  
2487 Tradeport Dr, Orlando, FL 32824
-  [\(12\) The Mall at Millenia](#)  
4200 Conroy Road
-  [\(1\) Orange County Administration BLDG](#)  
201 S. Rosalind Ave





# Charge Point America Kick-off



## ChargePoint America Kickoff at Orlando City Hall

CityofOrlando 220 videos



**BUDDY DYER**  
Mayor, City of Orlando



647 views

Uploaded by CityofOrlando on Jul 2, 2010

Chargepoint America kicked off their nationwide electronic charging station

1 likes, 1 dislikes

Show more

All Comments

Adding comments has been disabled for this video.





# Public Charging in Orlando

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- Downtown Parking Garages
- Community Centers
- Libraries
- Universities
- Theme Parks & Hotels
- Malls, Retail Stores & Restaurants
- Parking Garages
- Fleet Management



# City Fleet Investments

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- 3 Nissan Leafs (on order)
- 2 Chevy Volts (on order)
- 2 hydraulic hybrid garbage trucks (order pending)
- 5 Ford Escape hybrids
- 270 flex fuel vehicles
- 1 million gallon/year biodiesel plant (vendor selected)



# Lastly: The Economics

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## Operating

- Toyota Corolla: 29 mi/gal = \$0.121 per mile (gas)
- Toyota Prius: 50 mi/gal = \$0.070 per mile (gas)
- Nissan Leaf: 4.2 mi/kwh = \$0.024 per mile (grid)
- Nissan Leaf: 4.2 mi/kwh = \$0.043 per mile (solar)

## Capital

- Hybrid premium: \$5,000 / 98,000 mi ROI
- EV premium: \$18,000 / 186,000 mi ROI
- EV premium (2015): \$8,400 / 86,000 mi ROI

## Assumptions

- \$3.50/gallon
- No EV tax credit

