

ESTABLISHING A FLEET EFFICIENCY POLICY

9:30 – 10:45 AM

This session will review the State's current initiatives and resources in support of the electric vehicle (EV) market and explain how local governments can take advantage of these programs and resources to encourage greater EV adoption. In addition, a case study will focus on fleet sustainability initiatives in Ulster County. Highlighted Initiatives include the development of the County's Green Fleet Policy, evaluation of alternative fuels (biodiesel, propane, electric, etc.) for use by the fleet, as well as the recent installation of Electric Vehicle Charging Stations (EVSE) on County property and the new purchase of plug-in hybrid vehicles as part of Ulster County's fleet.

Presented by:

Adam Ruder, Program Manager, Clean Transportation, NYSERDA

Amanda LaValle, Project Coordinator Department of the Environment, Ulster County





NYSERDA

Communities and PEVs

Adam Ruder, NYSERDA

September 25, 2015

Electric Vehicle Basics

- Plug-in Electric Vehicle (PEV): any electric vehicle (EV) that plugs-in
 - Battery Electric Vehicles
 - Nissan Leaf
 - BMW i3
 - Ford Focus EV
 - Tesla Model S
 - Plug-in Hybrid Vehicles
 - Chevrolet Volt
 - Ford C-Max and Fusion Energi
 - Toyota Plug-in Prius
 - Honda Accord



EV Charging Stations



- AC Level 1 cord-and-plug connected (portable)
 - Single-phase 120 V, up to 16 A (1.9 kW)
 - Typically 8 to 16 hours for a complete charge
- AC Level 2 wired to individual branch circuit
 - Single-phase 208 V or 240 V, up to 80 A (19.2 kW)
 - Typically 4 to 6 hours for a complete charge
 - Similar to an electric clothes dryer or electric range/stove
- DC Fast Charge
 - 200-500 V DC, up to 80 A (40 kW)
 - Complete charge typically takes less than one hour
 - Similar to a commercial HVAC system

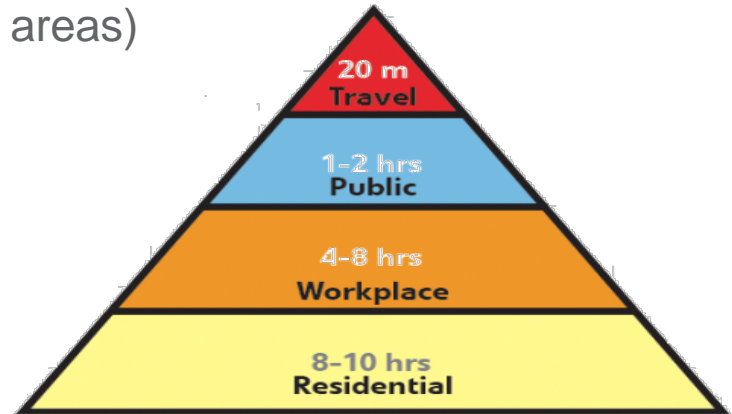


Charging a PEV

- Charging time depends on battery size, charger capability
 - Most charge at 3.3 kW or 6.6 kW
 - PHEVs take 1-3 hours to charge at AC Level 2, 4-8 hours at AC Level 1
 - BEVs take 4-6 hours to charge at AC Level 2, up to 18 hours at AC Level 1
- At residential electrical rates, most PEVs cost \$1 to \$3 to fully charge – equivalent cost per mile of a gasoline car that gets 100 MPG

The Right Charging Station?

- DC Fast Charging
 - Public Stations (15 minute dwell – rest areas)
 - SAE Combo vs. CHAdeMo
- AC Level 2
 - Residential
 - Workplace (BEVs)
 - Public Stations (1-2 hour dwell)
- AC Level 1
 - Residential overnight charging
 - Workplace (PHEVs, EREVs)



New York State's Approach to PEVs

ChargeNY

- In the 2013 State of the State Address, Gov. Cuomo outlined a plan to:
 - Install more than 2,500 new public and workplace charging stations statewide by 2018
 - Reform regulations at the State and local level to facilitate PEV charging
 - Educate consumers and policymakers about the benefits of PEVs
 - Demonstrate benefits of new PEV technologies

Progress To Date

- Over **13,000** EVs and PHEVs registered in NYS
- Approximately **1,200** Charging Stations in NYS
- Over a decade of **research on EVs and Charging Stations**
- Continued work on **breaking down regulatory barriers** with PSC and local governments

Programs In Place

- ChargeNY Website
- Charging Station Deployments
- PEV Fleet Deployments
- Cleaner Greener Communities
- Transportation and Climate Initiative's PEV Readiness Project

ChargeNY Website


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Electric Vehicles

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RESOURCES

[Partner with NYSERDA](#)
[Clean Energy Startups](#)

Electric Vehicles

Drive with clean power

Electric vehicles (EVs) save money and reduce air pollution. Compared to gasoline-powered cars, EVs are more energy efficient and cost about 50 to 70% less to operate per mile. Because New York's electricity includes clean sources, EVs reduce greenhouse gas emissions and pollutants that cause smog and acid rain. New York State is striving to be ready to accommodate more than 30,000 plug-in electric vehicles by 2018 and 1 million by 2025 through ChargeNY.

[Learn more about ChargeNY](#)

Electric vehicles live in New York State



New York State has resources to help residents answer their questions about electric vehicles, ranging from purchasing the right electric vehicle to finding the right place to install a charging station or setting local rules to encourage electric vehicle adoption in your area. The following pages can help you get started:

[EV Buyers & Dealers](#)
[Planners & Municipalities](#)
[Charging Station Installers & Inspectors](#)
[Fleet Operators](#)

nyserdera.ny.gov/chargeny


NYSERDA

ChargeNY Website

www.nyserdera.ny.gov/Cleantech-and-Innovation/Electric-Vehicles/Info/Planners-and-Municipalities



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Electric Vehicles

Basics

Information for...

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Planners & Municipalities

Charging Station Hosts

Fleet Operators

Charging Station Installers and
Inspectors

Support and Discounts

Planners & Municipalities

Although gasoline-powered vehicles will be around for many years, a shift in the transportation industry toward electrification will change how people drive and fuel vehicles. Electric vehicles (EVs) can be very beneficial to communities and their residents. Unlike gasoline-powered vehicles, EVs are quiet, emit no air pollution, and do not require imported fuel that must be transported with the risk of spills or leaks.

To enjoy these benefits and support residents who make the investment in cleaner cars, communities can promote the use of EVs by becoming EV-ready. Municipalities can prepare for EVs and the charging stations (also called electric vehicle supply equipment, or EVSE) that are used to charge them with the following best practices guides for amending local rules and regulations to be EV-friendly.

Learn the history

In 2011, the U.S. Department of Energy funded 16 [EV Community Readiness Projects](#) for public-private partnerships to collaborate on plans to deploy EVs. New York State was part of the [Northeast Electric](#)



NYSEDA

Charging Station Deployments

- Installed over 600 charging stations to date
 - Collecting usage data, published on ChargeNY website
- New York State Tax Credit
 - 50% up to \$5,000 per installation (for public and workplace charging) from January 1, 2013 to December 31, 2017
- Upcoming program to establish purchasing collaborative for charging stations
 - Including targeted additional incentives

PEV Fleet Deployments

- In the 2015 State of the State Address, Gov. Cuomo announced the Clean Fleets NY initiative, which will introduce EVs into state fleets starting in 2016
- NYSDEC, NYPA, and NYSERDA are collaborating with OGS on new models for public fleets to purchase or lease PEVs
- New models would be available to municipalities too

Cleaner Greener Communities

- Community-scale sustainability projects
- \$500,000 to \$3 million in NYSERDA funds per project, \$25 million total
- PEV Market Development is priority area in 2015
 - Community-based electric vehicle purchase incentives
 - Model PEV Communities or Regions

Cleaner Greener Communities

- Ongoing Programs
 - Category 1: PV and EV Permitting Incentives
 - \$2,500 or \$5,000 per municipality to update permitting and zoning ordinances
 - Category 2: Flexible Funding Pilots
 - Municipalities can request \$25,000 to \$250,000 in NYSERDA money
 - Must complete 4 of 6 steps before eligible for funding

CGC Category 2 Funding Eligibility Requirements

Local Governments Complete 4 out of 6 Steps (update in development):

- 1) Implement a Green Building Strategy
- 2) Adopt the New York State Unified Solar Permit
- 3) Support Alternative Fuel Transportation Supply Infrastructure
- 4) Adopt a Vehicle Fleet Efficiency Policy
- 5) Develop a Government Operations GHG Emissions Inventory and Establish a Government Operations Emissions Reduction Target
- 6) Enable Property Assessed Clean Energy (PACE) Financing
(Only if within the jurisdiction of the proposing local government)

STEP 3: Support Alternative Fuel Transportation Supply Infrastructure

Option 1:
Infrastructure
incentive

alternative fuel supply



Option 2:
Expedited permitting



Option 3:
Amend Building
Code or Zoning



STEP 4: Adopt a Vehicle Fleet Efficiency Policy

TWO OPTIONS:

- a) Adopt a fleet efficiency policy and replacement plan
- b) Incorporate vehicle efficiency into an environmentally preferable purchasing policy



CGC Eligible Project Types

- Right-size the local government fleet
- Replace traditional vehicles with advanced/alternative fuel vehicles
- Implement strategies that support bicycling and walking
- Implement strategies that increase public transit ridership and alternative transport modes
- Other innovative community-based projects

TCI PEV Readiness Program

- NYSERDA (on behalf of TCI) received \$1 million PEV Readiness Grant from DOE in 2011 to plan for the rollout of PEV infrastructure in the Northeast
- Worked with 11 states, 16 Clean Cities Coalitions
- Created siting and design guidelines and model permits, building codes, and ordinances for PEV infrastructure tailored to the region

TCI PEV Readiness Program

Key Documents for Munis to Know About

- Siting and design guidelines for charging stations
- Planning policy tool guide
- Charging station signage overview
- Permitting best practices

What Communities Can Do to Support PEVs

Why Should Munis Care?

- Building codes allow for, but don't encourage, charging stations
- Comprehensive plans probably don't mention PEVs or charging stations
- Most zoning and parking ordinances are silent on charging stations
- Allowable settings for charging stations may not be well considered

What Can Munis Do?

- City-wide or regional plans to identify prime locations for charging stations
- Building code, permitting, or zoning and parking ordinance amendments to promote PEVs
- Site design guidance for public and private parking facilities
- Signage standardization

Citywide & Regional Planning Under Way

- NYC has extensive plans for PEVs and has new initiative to update building codes to install up to 10,000 charging stations in NYC by 2020
- Albany crafted a city-wide PEV plan that identifies key spots around city for charging stations
- Ongoing PEV charging studies in 5 MPOs and Tompkins County

Comprehensive Planning

- If you want to pursue PEV-friendly local ordinances, you should strongly consider including PEVs and charging stations in your comprehensive plan

Building & Electrical Code Options

- Building codes can be used to
 - Require a set amount of wiring for charging stations in specific types of buildings
 - Vancouver requires 20% of parking spaces in multi-family homes to be wired for charging stations, requires space in electrical room for electrical expansion to service 100% PEVs
 - Require accessibility of charging stations
 - Sunnyvale, CA requires at least one charging station per installation be wheelchair-accessible
- Electrical codes can be used to
 - Reserve space for PEV circuits
 - Streamline permitting and inspections
 - Oregon sets rules for what permits and inspections are required for charging stations

Zoning Options

- Zoning ordinance best practices include:
 - Define what types of charging stations are allowable and appropriate in each land use type
 - Request developers install charging stations or wiring with new developments or significant renovations
 - Establish design criteria for charging station installations
 - Provide density bonuses for charging station installations
- Different levels of requirements/requests may be appropriate for different communities

Parking Options

- Parking ordinances can help municipalities to:
 - Enable towing or fines for parking in PEV-only spaces
 - Require minimum amounts of charging stations for large lots
 - Hawaii requires all parking lots over 100 spaces to have at least one charging station near the building entrance

Permitting Options

- A wide range of permitting policies have been implemented, including:
 - Online permitting and/or standardized forms specific to charging stations
 - Low-cost charging station permits
 - Labeling charging stations as minor work
 - Same-day inspections
 - Inclusion of electric service worksheet to confirm that electric service is sufficient
- Permitting guide available from NYSERDA

Permitting – Costs Can Vary

Residential Lessons Learned

- Permit timeliness has not been a problem
- Majority are over-the-counter
- Permit fees vary significantly- \$7.50 to \$500.00

Region	Count of Permits	Average Permit Fee	Minimum Permit Fee	Maximum Permit Fee
Arizona	66	\$96.11	\$26.25	\$280.80
Los Angeles	109	\$83.99	\$45.70	\$218.76
San Diego	496	\$213.30	\$12.00	\$409.23
San Francisco	401	\$147.57	\$29.00	\$500.00
Tennessee	322	\$47.15	\$7.50	\$108.00
Oregon	316	\$40.98	\$12.84	\$355.04
Washington	497	\$78.27	\$27.70	\$317.25

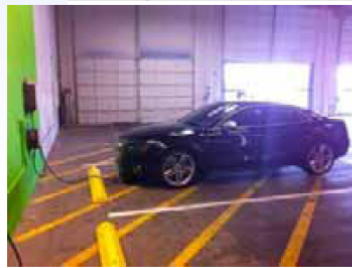
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Permitting – Costs Can Vary

Commercial Lessons Learned

- Commercial permits range \$14 to \$821

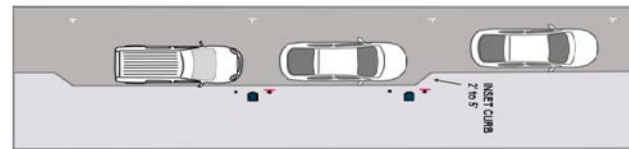
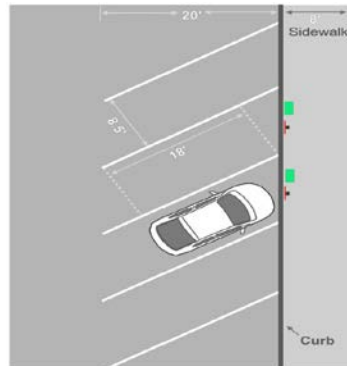
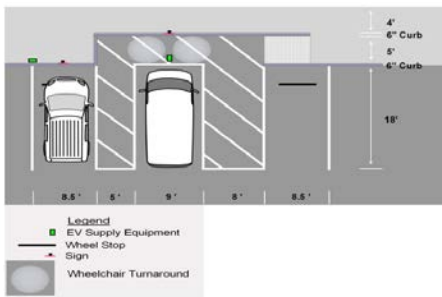
Region	Count of Permits	Average Permit Fee	Minimum Permit Fee	Maximum Permit Fee
Arizona	72	\$228	\$35	\$542
Los Angeles	17	\$195	\$67	\$650
San Diego	17	\$361	\$44	\$821
Texas	47	\$150	\$37	\$775
Tennessee	159	\$71	\$19	\$216
Oregon	102	\$112	\$14	\$291
Washington	33	\$189	\$57	\$590



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Siting & Design Options

- Inclusion of siting and design standards in zoning ordinances or traffic manuals can help avoid costly, unsafe charging stations installations
- Best practice guides are available at www.northeastevs.org and www.sustainabletransportationstrategies.com

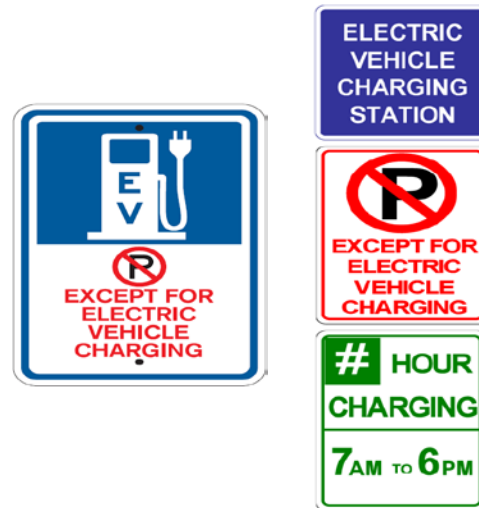


Siting & Design Factors to Consider

- Cost of Installation
 - Length of cable run from electrical panel
 - Pavement
- Convenience for PEV drivers
- ADA Compliance
- Impacts on Pedestrians and Traffic Flow
- Protection from Traffic and Plows
- Optics of Potentially Empty Parking Spaces

Signage Options

- MUTCD-approved signage is now available
- Wayfinding signs – similar to gas stations, but may need more in parking lots
- Signage should be distinct from other uses
- Signage design guide available from NYSERDA



How to Implement

- Tools can be phased in or made optional at first before becoming mandatory
 - Consider pilot phases for new rules
- Rules should be enforceable and not cause undue local burdens
- As with other similar processes, consult with local stakeholders

Ways to Work with NYS on PEVs

- Adopt PEV best practices
- Cleaner, Greener Communities
 - Multiple opportunities available right now
- Future Charging Station Incentives
 - Purchasing collaborative
 - Incentives for municipalities

For More Information

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nyserda.ny.gov/chargeny



GREENER BY DESIGN:
ULSTER COUNTY FLEET SUSTAINABILITY
& EV CHARGING INITIATIVE

Amanda LaValle, Coordinator
UC Department of the Environment
September 25, 2015
Climate Smart Conference

Outline of Presentation

- Greener by Design: Carbon Footprint Reduction Program
- Fleet Sustainability Initiatives
 - Evaluation of alternative fuel proposals
 - Biodiesel, Electric Vehicles
- Green Fleet Policy
- Electric Vehicle Charging Station Project

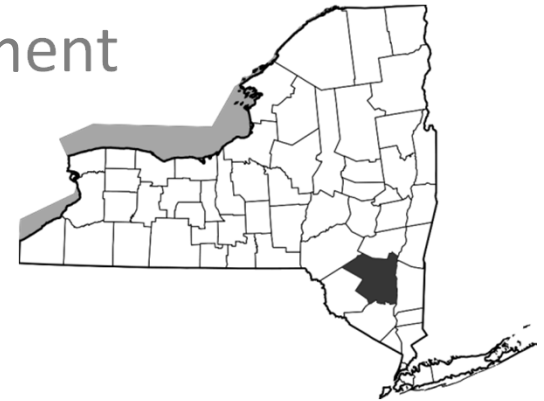
Ulster County Introduction

2007- Established UC Department of the Environment

2008- Ulster County Energy Policy

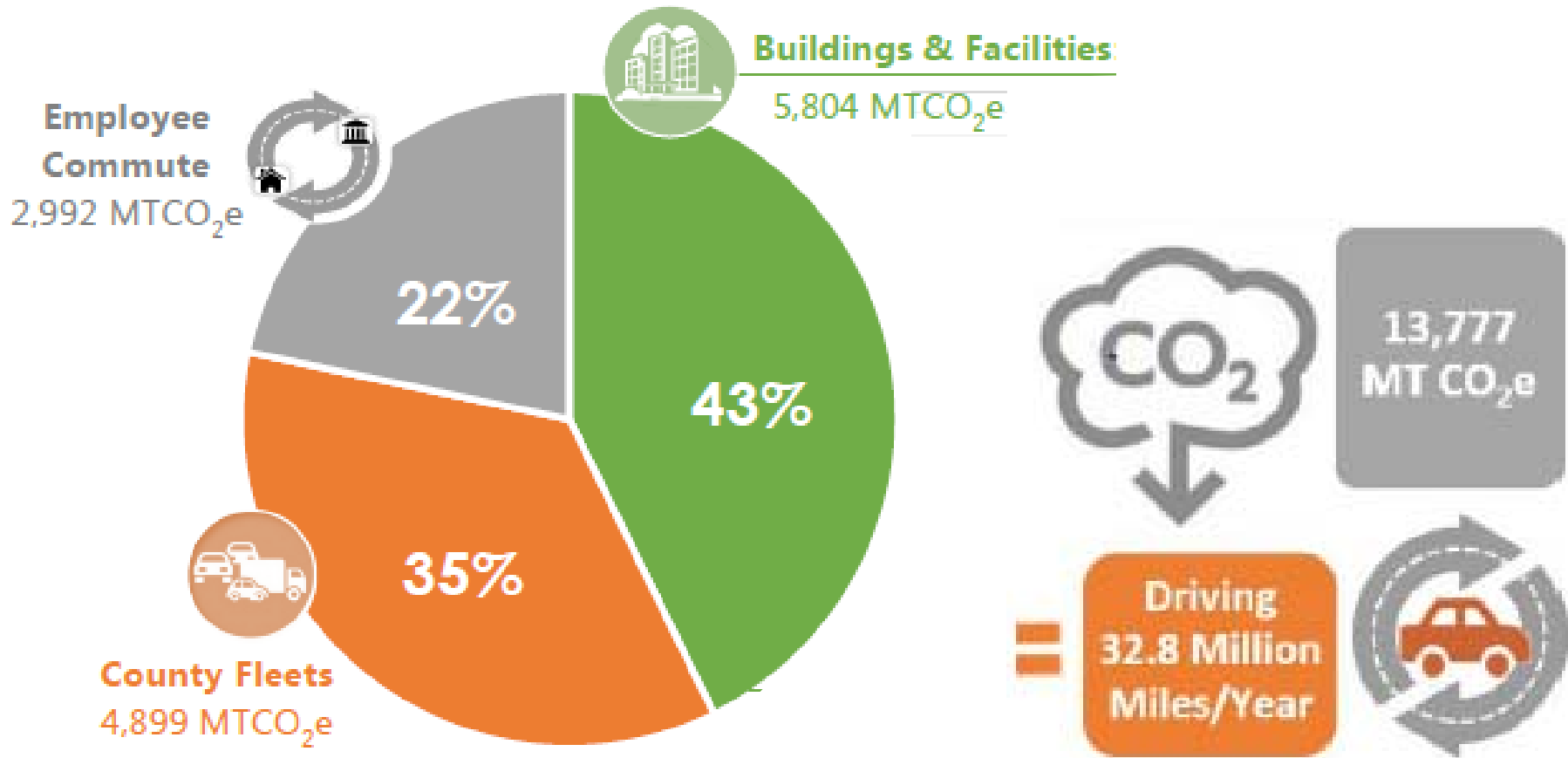
2009- Transition to Charter Form of Government

2011- Climate Smart Community

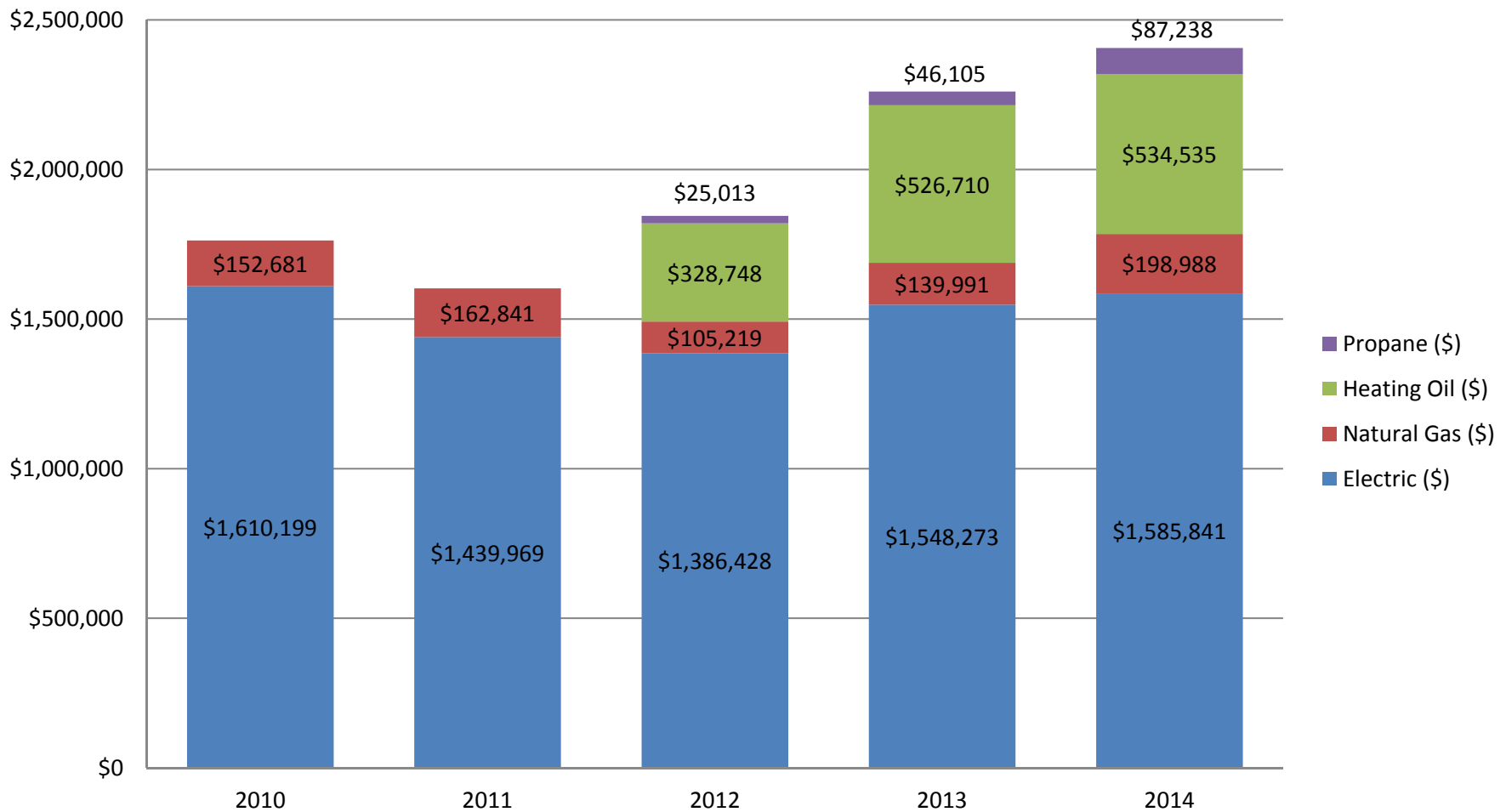


- 183,000 Residents
- 1271 Employees in County Work Force
- ~\$330 million annual County budget

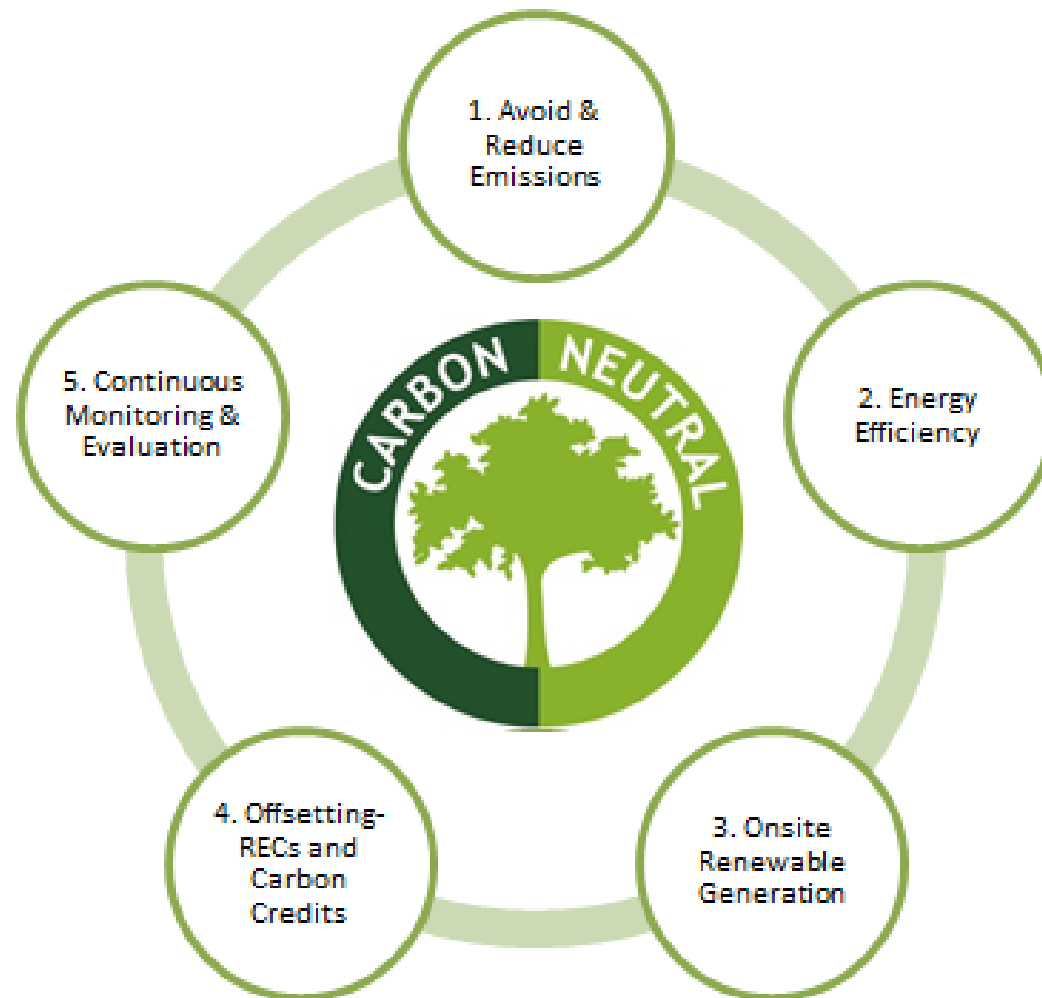
Ulster County Government Operations Greenhouse Gas Inventory (2012)



Ulster County Energy Costs



Ulster County Carbon Footprint Reduction Program



**SUSTAINABLE
ULSTER COUNTY**

COUNTY EXECUTIVE MICHAEL P. HEIN

Ulster County Carbon Footprint Reduction Program

1. Avoid & Reduce

- Right size operations, operational efficiency

2. Energy Efficiency

- Employ energy conserving technology (LED lighting), water bottle filling stations

3. On site renewables

- County owned solar installation and large scale PPA arrangements

4. Offset

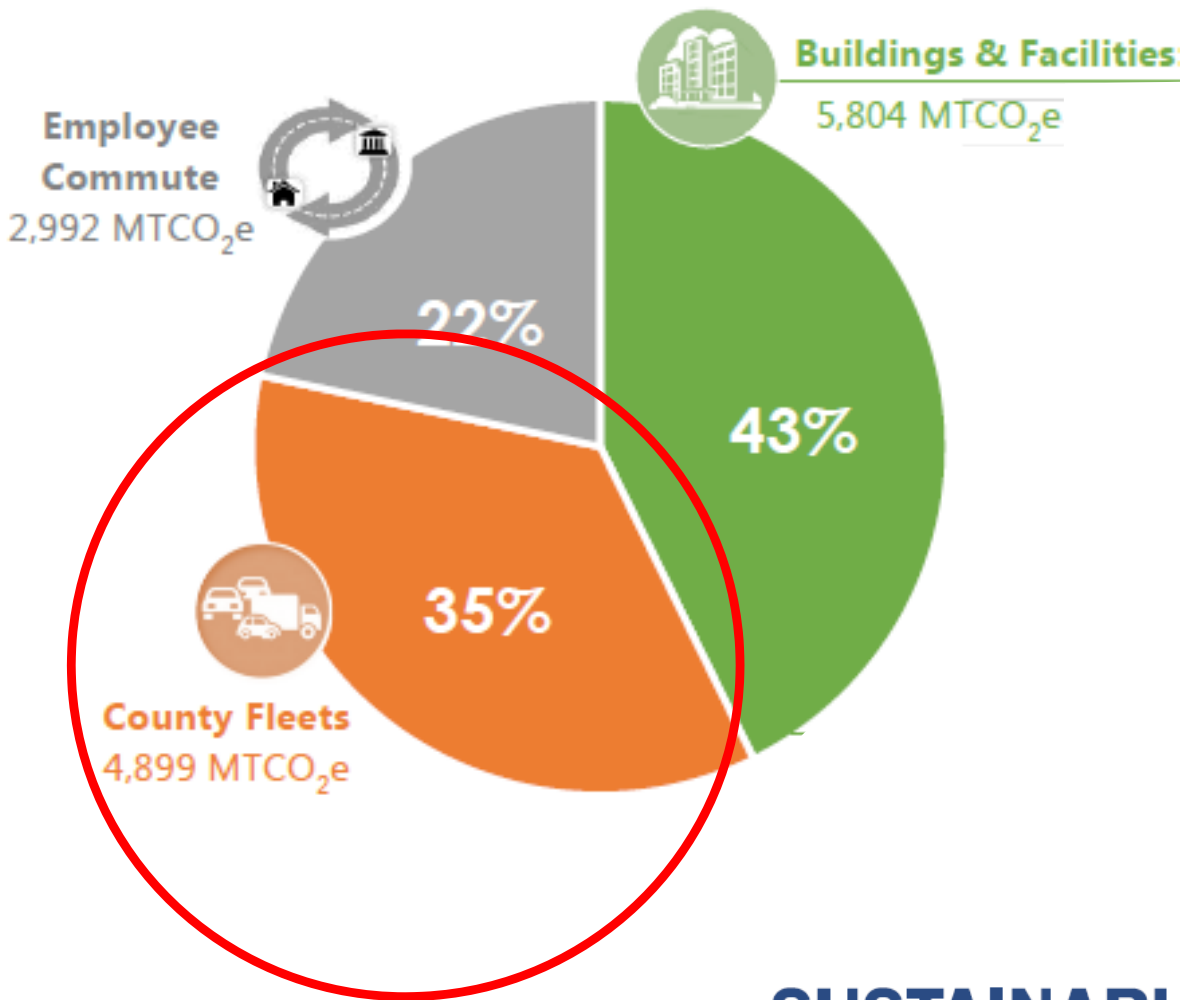
- Renewable Energy Credits (RECs)
- Carbon credits

5. Monitor & Evaluate

- Building by building utility tracking
- Tracking of unleaded and diesel use



Fleet Initiatives



- In 2012, the fleet consumed 201,000 gal of gasoline and 306,000 gal of diesel
- In 2014 consumed 238,000 gal of gas (\$850,000) and 283,000 gal diesel (\$885,000)

Ulster County Fleet

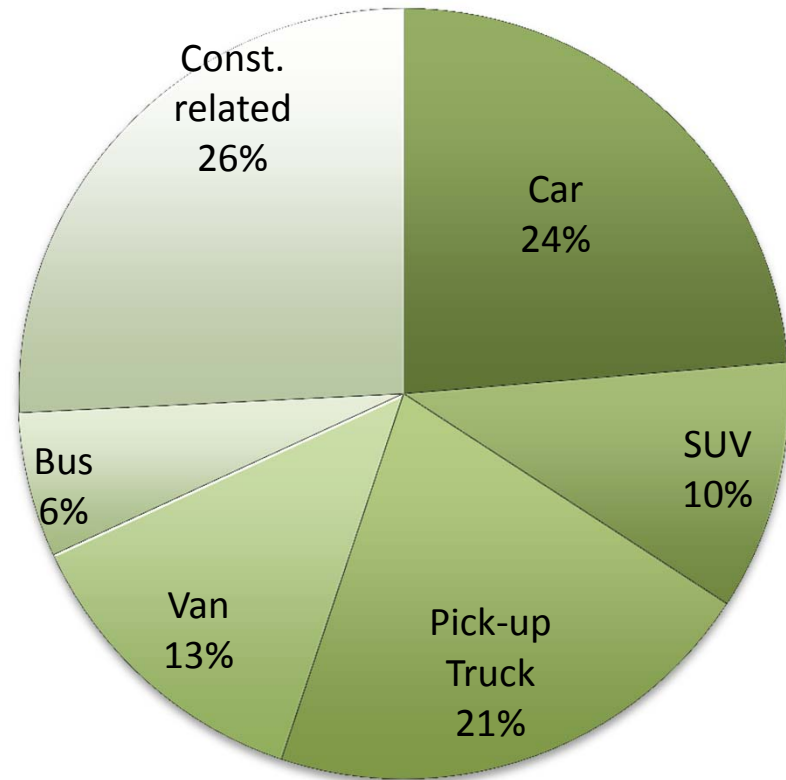
Fleet performs a wide variety of functions including

- Road Maintenance (paving, plowing)
- UCAT bus service
- Social Services, visits to elderly
- Transport of veterans to medical appointments
- Sheriff Road Patrol

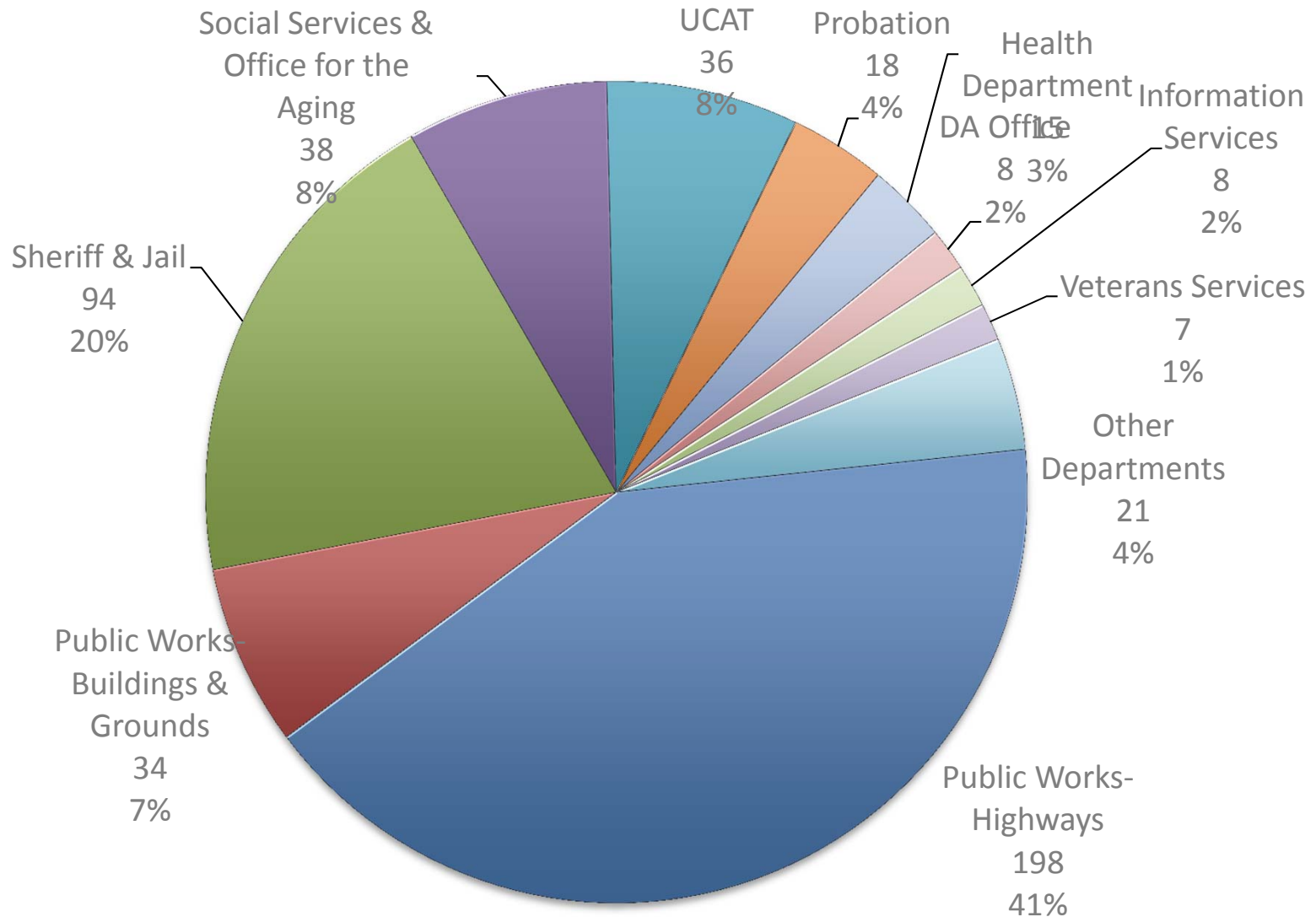


Ulster County Fleet

- Total of approximately 477 vehicles
 - 26% Construction Equipment and Machinery
 - 6% Buses
 - 13% Vans
 - 21% Pick-up Trucks
 - 10% SUVs
 - 24% Cars



Ulster County Fleet- By Department



N.Y. County Official Calls Propane Autogas Plan a 'Step Backwards'

February 25, 2015

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 File photo

Ulster County (N.Y.) Executive Mike Hein vetoed a resolution to spend \$25,000 to convert five transport vans from unleaded gasoline to propane autogas. The resolution had been passed by the county legislature.

Fleet Initiatives- Analysis

- Analysis and subsequent Veto by the County Executive of Propane Proposal focused on many factors
 - Cost of propane retrofits vs new efficient vehicle
 - GHG savings
 - Cost/benefit under different fuel cost scenarios
 - Operational advantages or challenges to the retrofits
 - Other technologies which could provide greater cost savings and GHG avoidance benefits.
- Alternative
 - Purchase of four plug-in hybrid sedans and conversion of UCAT to Biodiesel (B5) would result in 20x the GHG emissions reduction of the propane conversion.

Analysis and proposed alternatives documented in Veto Memo (2/20/2015)

Fleet Initiatives- Analysis

- Focus on tracking and monitoring fuel consumption
- Perform analysis of cost and GHG emissions reductions under multiple scenarios
- Employ technologies that will provide greater benefits (employees, community) where possible

Ulster County Green Fleet Policy



- Collaborative effort between UC Executive (Public Works Fleet Manager and Environment) and Legislature
- Formalized efficiency and conservation efforts
- Made sure reporting and tracking was implementable
- Set aspirational but achievable goals

Ulster County Green Fleet Policy

- Key Elements
 - Inventory (and characterization of vehicle use)
 - By vehicle, total fuel, average mpg, miles driven, vehicle function, estimated emission per mile
 - Monitoring of fuel consumption
 - Right-sizing & strategic deployment of more efficient and sustainable fuel vehicles
 - Review and Monitoring

Ulster County Green Fleet Policy

- Green Vehicle Definition:

Any vehicle that employs technology that reduces fuel consumption or emission and shall include, but is not limited to, vehicles that have electric drive trains (EVs), hybrid-electric, and hybrid vehicles that use both a rechargeable energy storage system and combustible fuel (HVs)

- Goals

- 5% of the fleet will be Green Vehicles by 2020
- After 2020, 20% of new passenger vehicle purchases will be Green Vehicles

- Will use a team approach; must report annually

- *Conservation, Efficiency, Renewables*

Electric Vehicle Charging Stations

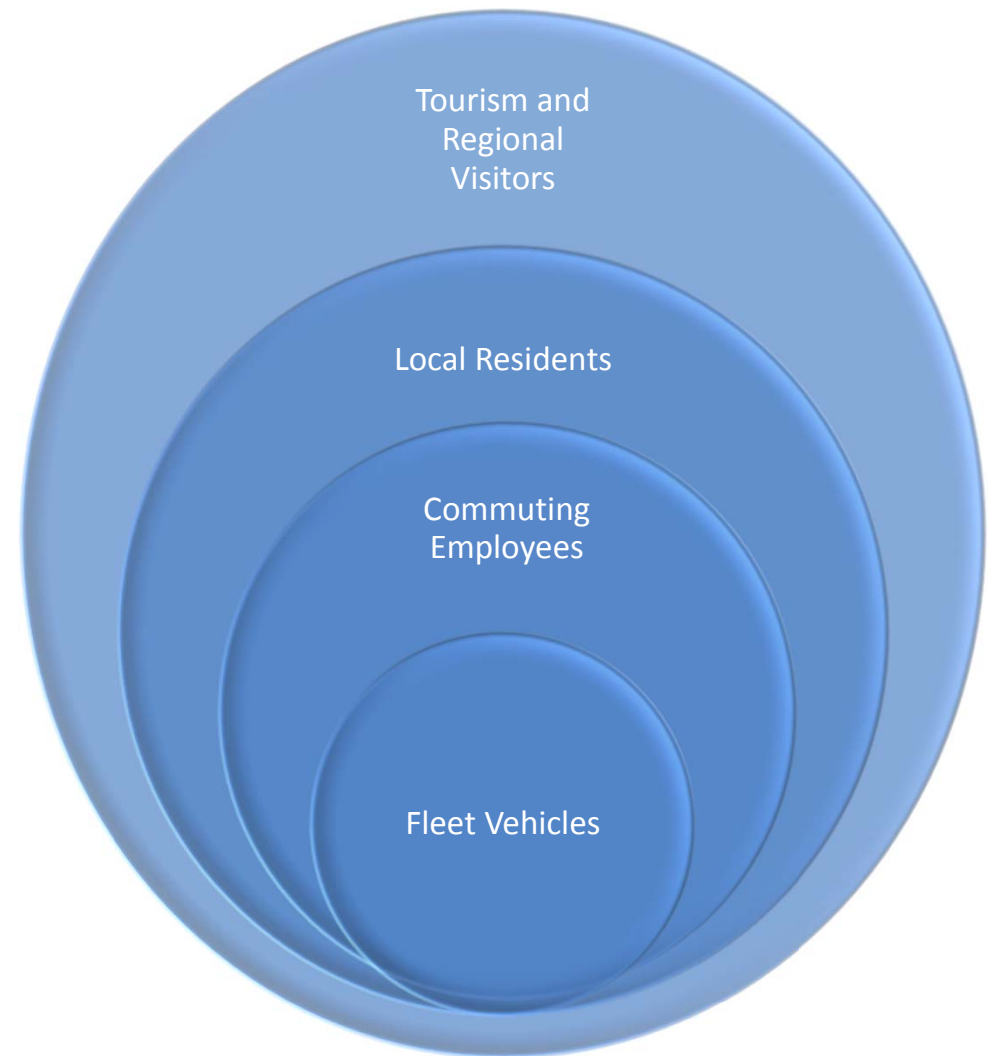


Build it and they will come...

- Opportunity to use ChargeNY funding for the Charging Stations
- Decided to go ahead and implement, using local knowledge, rather than to do additional planning to determine sites

Electric Vehicle Charging Stations

- One project with multiple layers of potential benefit, reaches far beyond the UC Fleet
- Takes advantage of the location of many county buildings as logical charging station sites
- Provide environmental and economic benefit
- Demonstrates the equipment and technology to the public



Station Siting and Installation



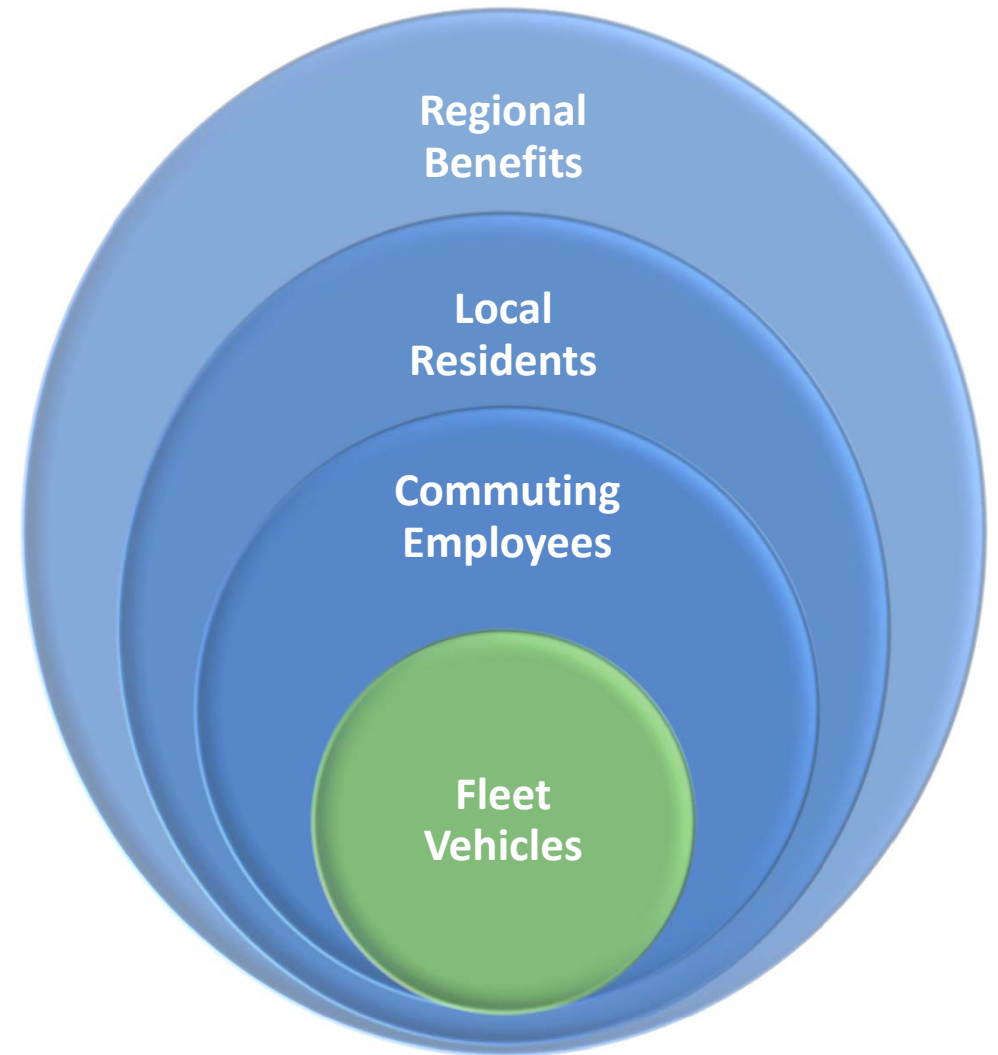
- Worked with charging station vendor and Ulster Co Dept of Public Works to identify best sites
- UC DPW did the site work, electrical panel work required for installation

- Each station has two ports; Cable can reach beyond proximate two spaces next to the charger. Flexibility to designate more spaces in the future.



Ulster County Fleet

- Currently have approximately 115 cars in our fleet. Most are used for short trips (inspections, site visits) and are conducive to plug-in hybrids
- 2015 UC purchasing four plug-in hybrid sedans. Will deploy them in department where we can identify both advantageous driving patterns and willing “champions”



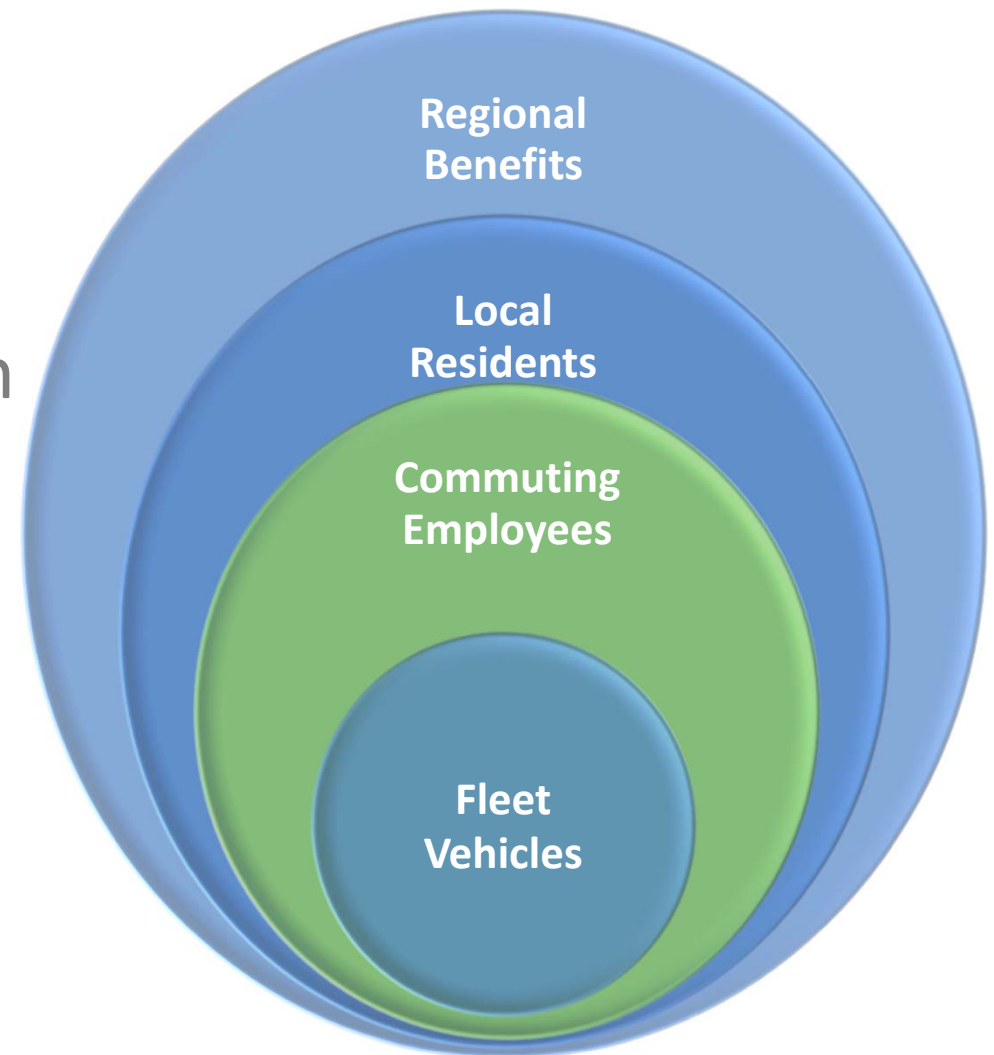
Ulster County Fleet

- Charging Stations at all our main buildings will provide necessary infrastructure as well as flexibility to try vehicles with various county departments.
- Increasing availability of cost-competitive plug-in hybrids and battery electric vehicles will hopefully result in more options for fleet in near future.
- Green Fleet Policy sets goal of 5% of overall fleet must be a green vehicle by 2020. Thereafter 20% of new purchases (passenger) must be green vehicles.



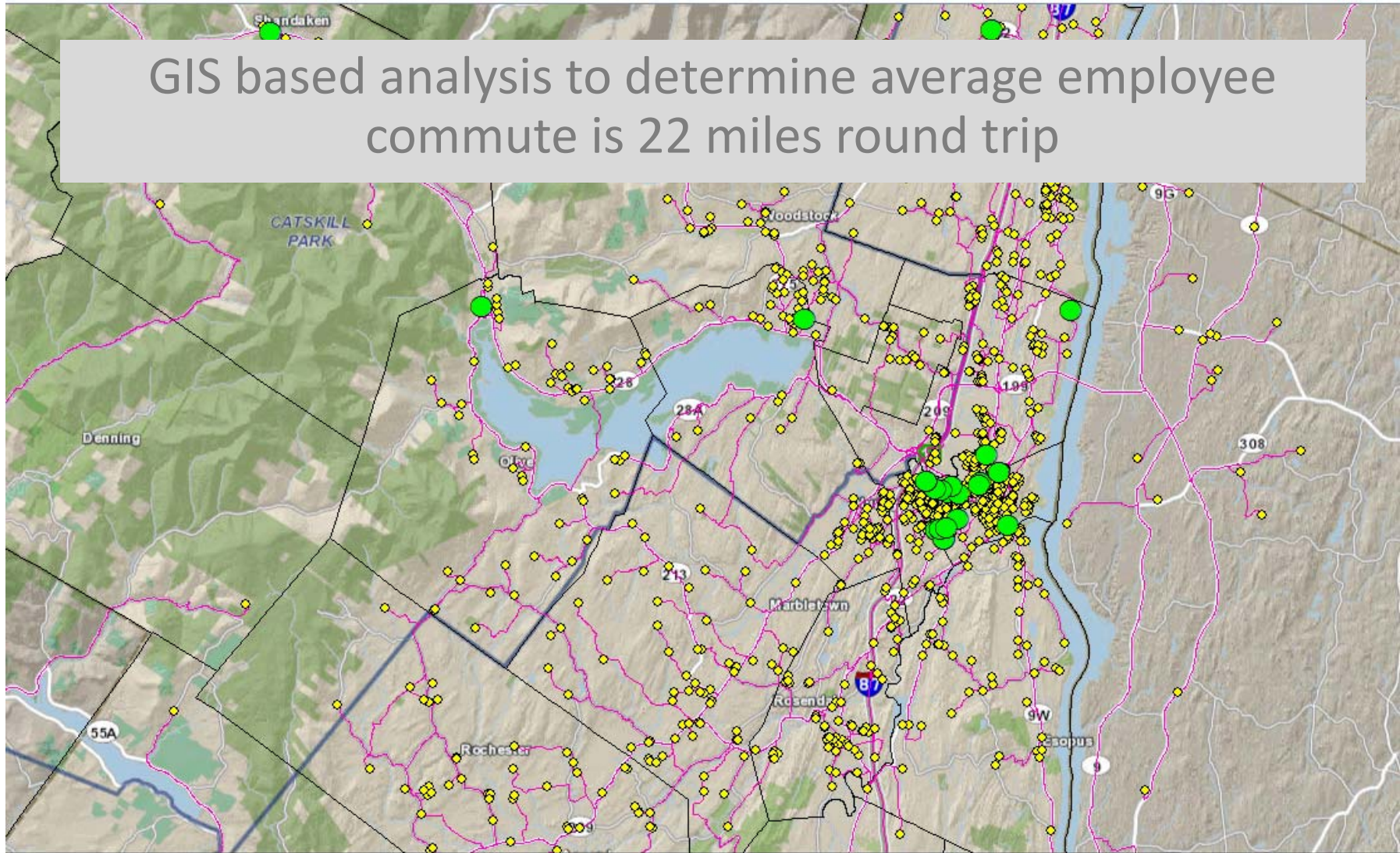
Commuting Employees

- Employee commutes are 22% of our total GHG emission (2012)
- 94% of employees work in a location with access to EVSE
- Employee recruiting and retention tool
- Environmental benefits extend beyond their commute to work



Commuting Employees

GIS based analysis to determine average employee commute is 22 miles round trip



Commuting Employees

- Outreach highlights various ways to reduce environmental impact of commuting (e.g. UCAT bus, RideShare, EV Charging)

3 Ways To Make Your Employee Commute Greener

Did you know? Ulster County employees commute approximately 22 miles round trip every day. In an effort to lesson Ulster County's carbon footprint, we need your help! Here are some ways that you can reduce your commuter footprint, while saving gas and money:



ULSTER COUNTY AREA TRANSIT (UCAT)

Ulster County Area Transit (UCAT) bus rides are only **30 cents per ride for all County employees!** Just show your County employee ID badge to the bus driver and enjoy this efficient, inexpensive and environmentally-kind commute.

All of the UCAT buses run on clean **biodeisel**. All UCAT buses are equipped with bike racks.

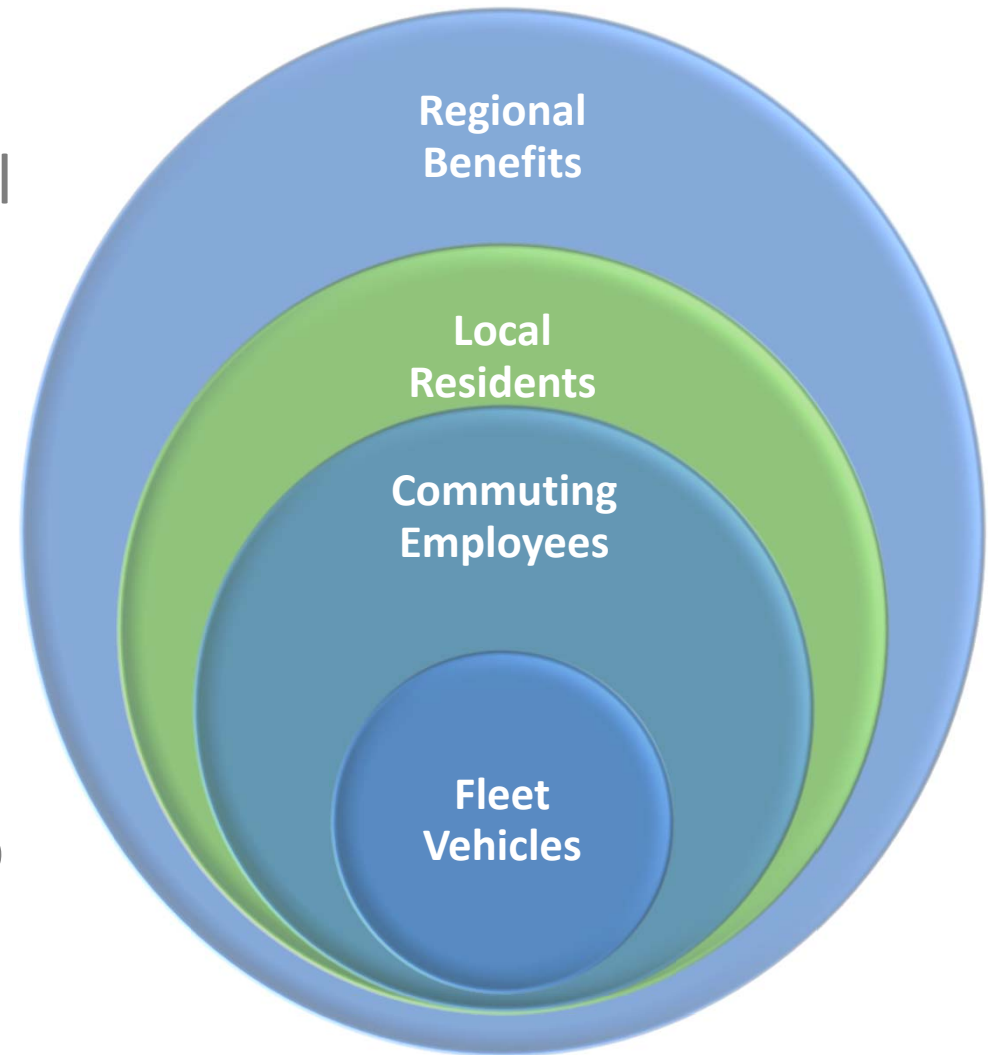
Please call (845) 340-3333 for further information. Or you can download the 'UCAT' APP, which will give you the bus schedule *and* show you exactly where your bus is in transit. Search for 'UCAT' on the App Store or Google Play to download this APP.

SUSTAINABLE
ULSTER COUNTY

COUNTY EXECUTIVE MICHAEL P. HEIN

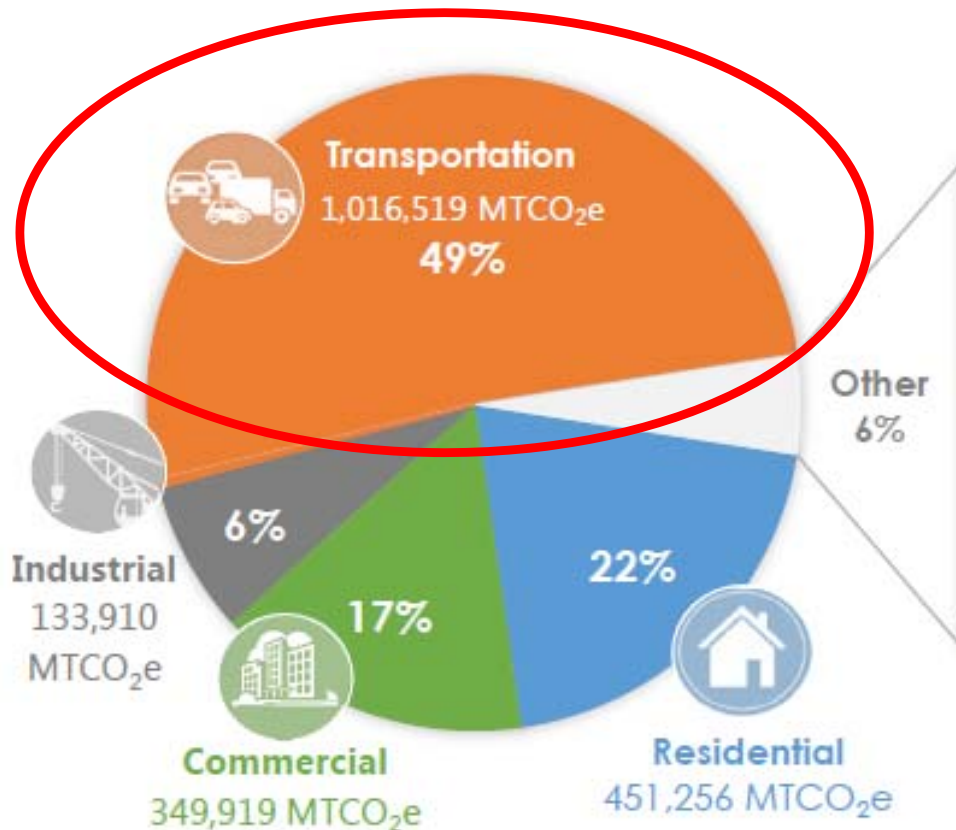
Local Residents

- Provides local public health and environmental benefits
- Promote greater deployment of EVs; more charging stations leads to more EV drivers
- Highlights and demonstrates EV technology and environmental leadership of the County to public



Local Residents

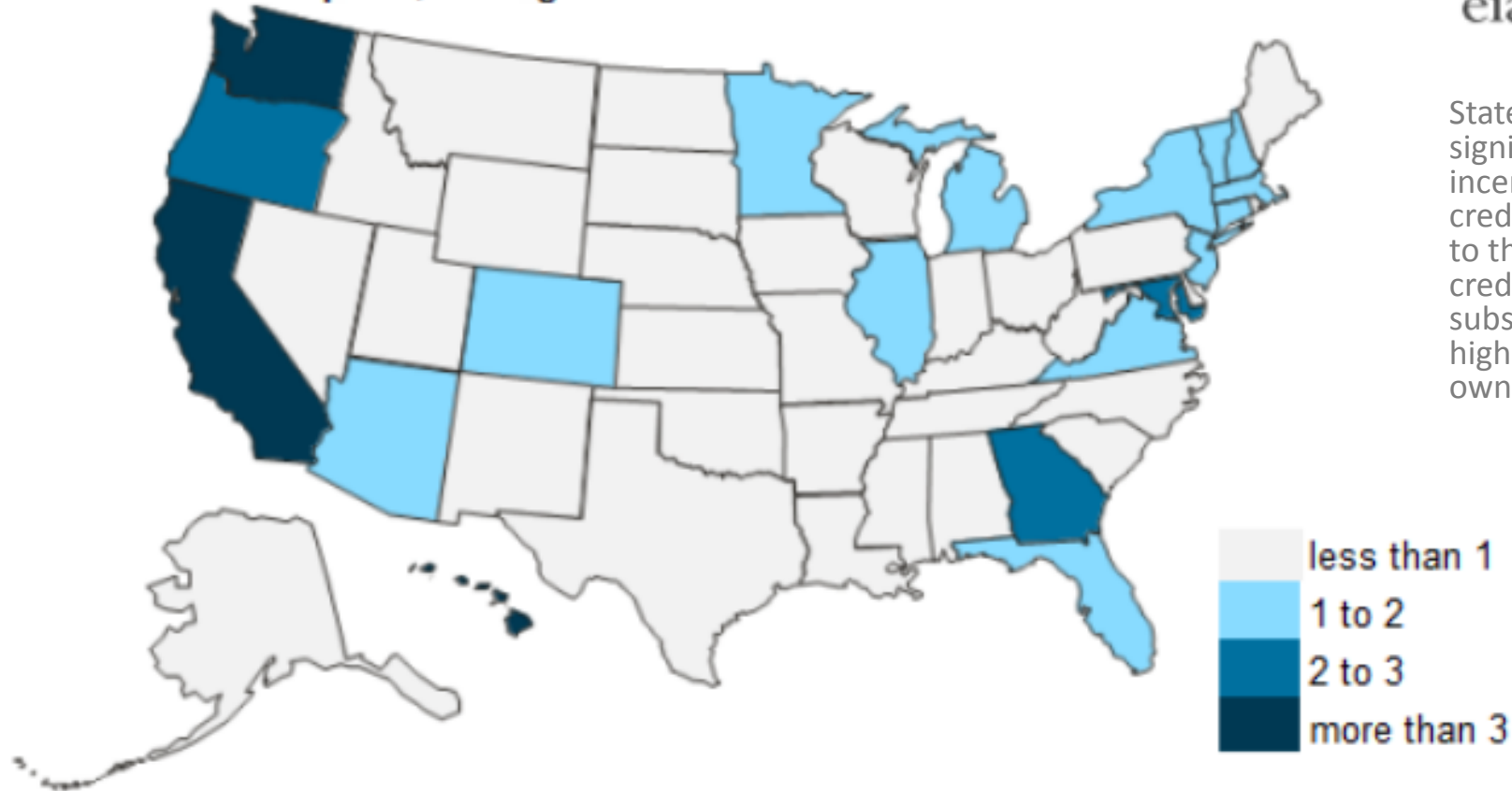
Ulster County-wide GHG Emissions by Sector (2010)



Due to our more rural settlement pattern and land-use, the transportation sector is a significant generator of carbon emission in Ulster County. Greater use and deployment of EVs in the area are one way to address this issue.

Adoption of EVs-National Ownership

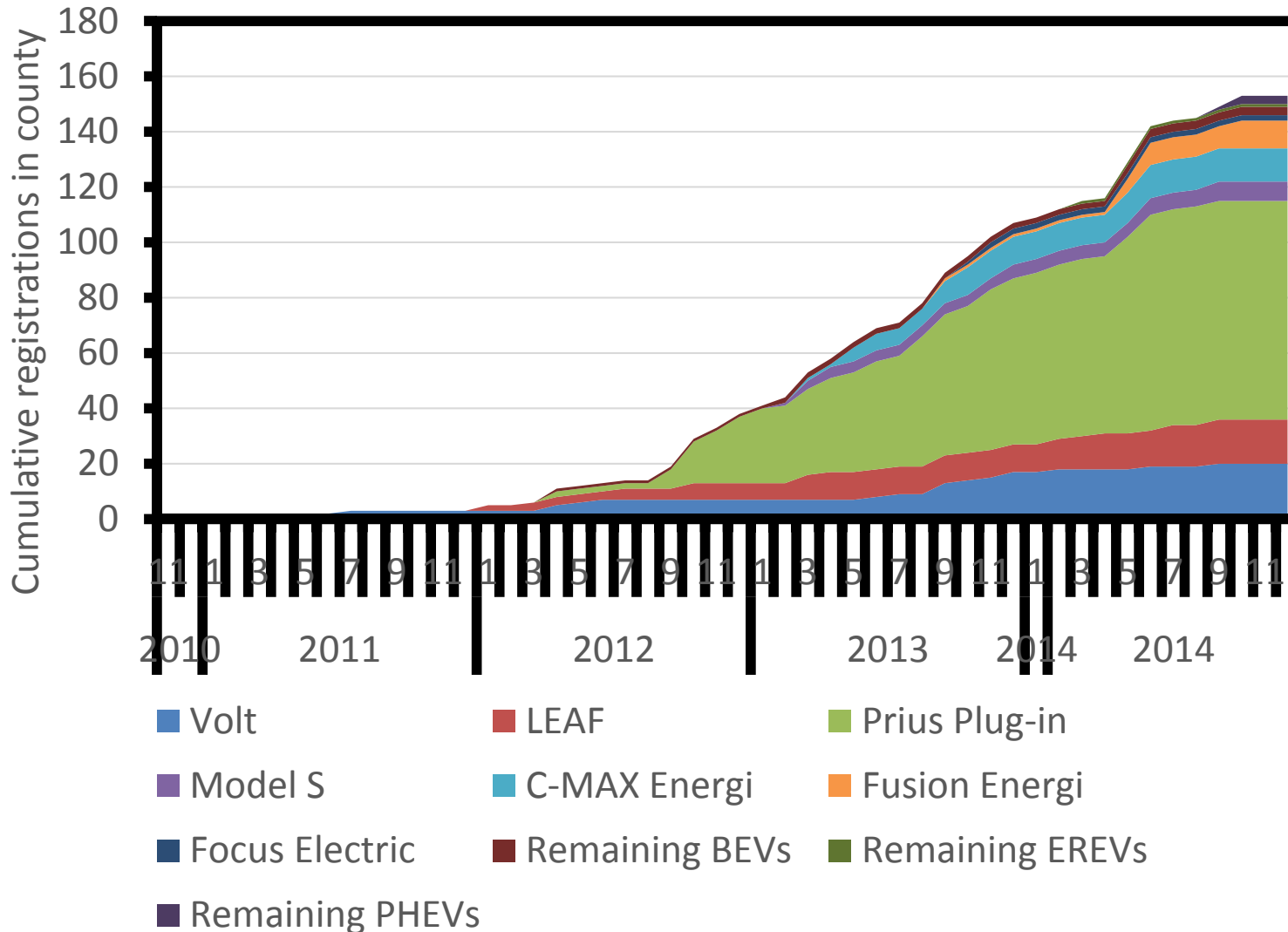
Electric vehicles per 1,000 registered vehicles



States with significant state incentives and tax credits, in addition to the Federal tax credits, see substantially higher rates of EV ownership.

Source: U.S. Energy Information Administration, based on Federal Highway Administration data and R.L. Polk & Company

Adoption of EVs-Ulster County Ownership



- 153 EVs in Ulster County (2014)
- 1019 Hybrids (purchased in same time period)
- 129,583 registered vehicles in County (2015)
- Rates are consistent with NYS average

Data and graph from NYPA

Ulster County has installed 9 electric car-charging stations, and they can be used for free



Daily Freeman

By **Patricia Doxsey**, Daily Freeman

POSTED: 08/09/15, 12:56 PM EDT | UPDATED: 4 WEEKS, 1 DAY AGO

38 COMMENTS

KINGSTON >> With a gas station on almost every corner, finding a place to get a fill up is no problem for most motorists.

For those driving electric cars, however, finding a place to recharge the battery after a day of traveling can be more difficult.

Ulster County is looking to change that.

VIDEO: ULSTER COUNTY OFFERS ELECTRIC CAR CHARGING STATIONS.



Ulster County Executive Mike Hein and Amanda LaValle, coordinator of the Ulster County Department of Environmental Conservation, stand in front of an electric vehicle charging station in the Ulster County Building parking lot on Main Street in Kingston.

Tania Barricklo— Daily Freeman

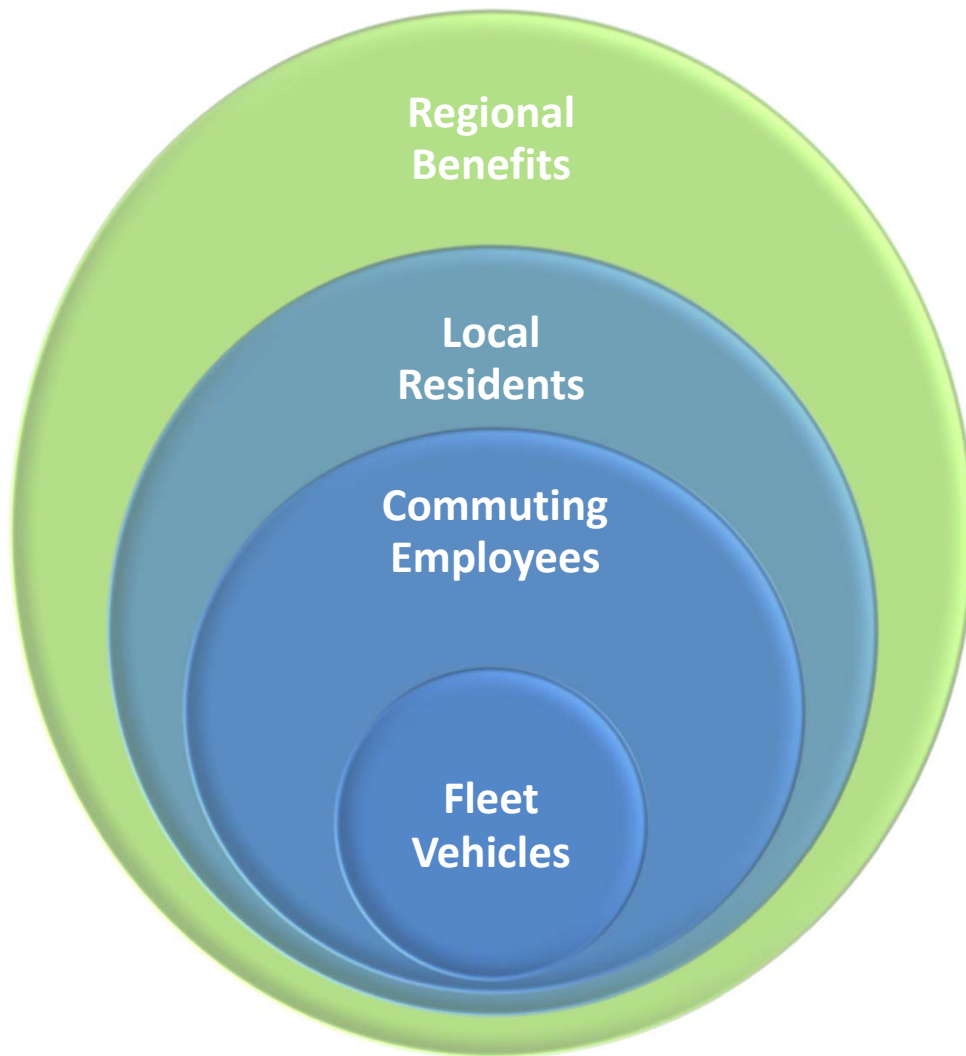
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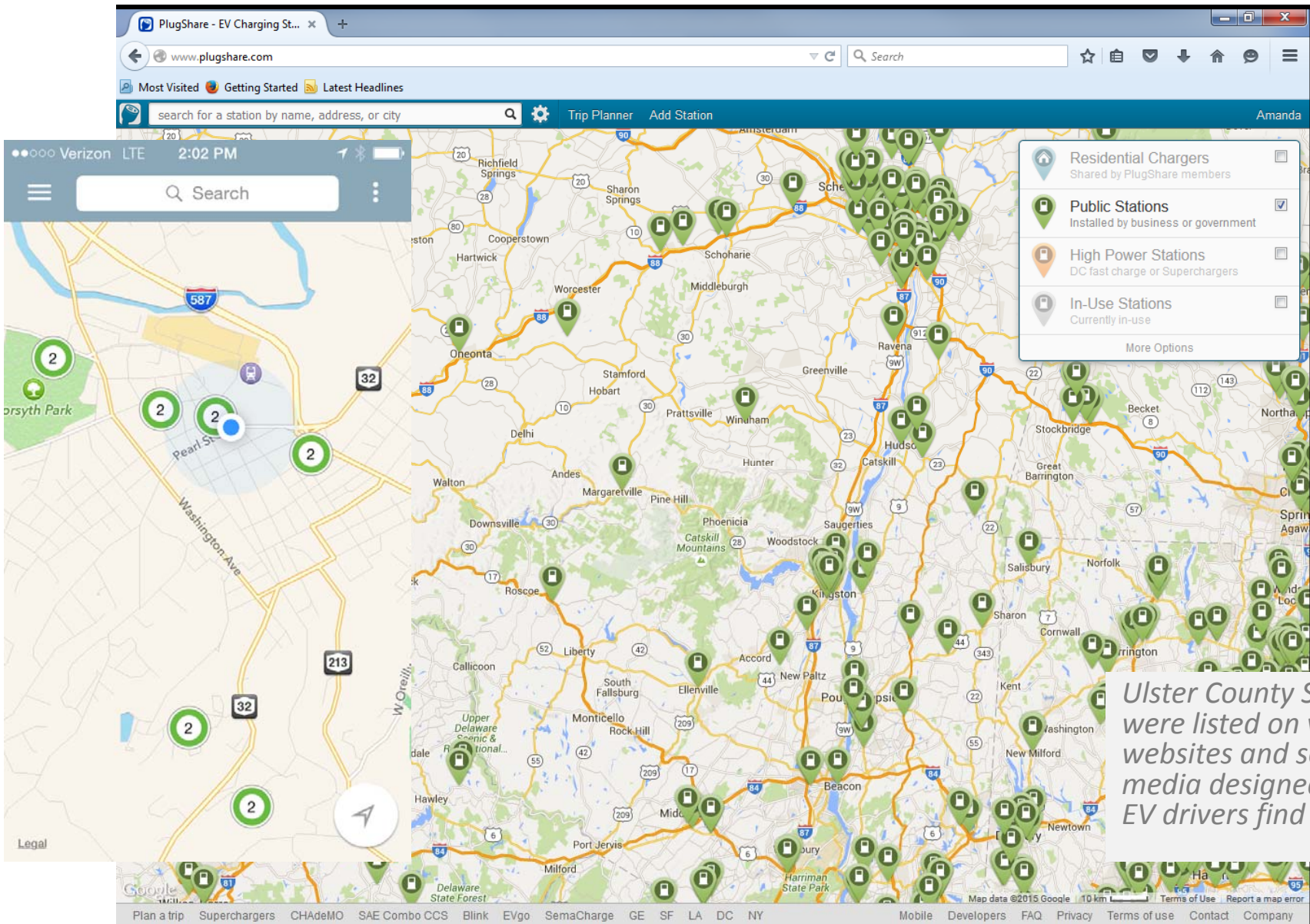
Local media was the first step to getting the word out in the area

Tourism/Regional Benefits



- Electric Vehicle Community- Growing and they are looking for places to plug-in
- They don't sit in their cars while charging. Dining, shopping, attractions...

Regional EV Charging Stations



Ulster County Stations were listed on various websites and social media designed to help EV drivers find stations.

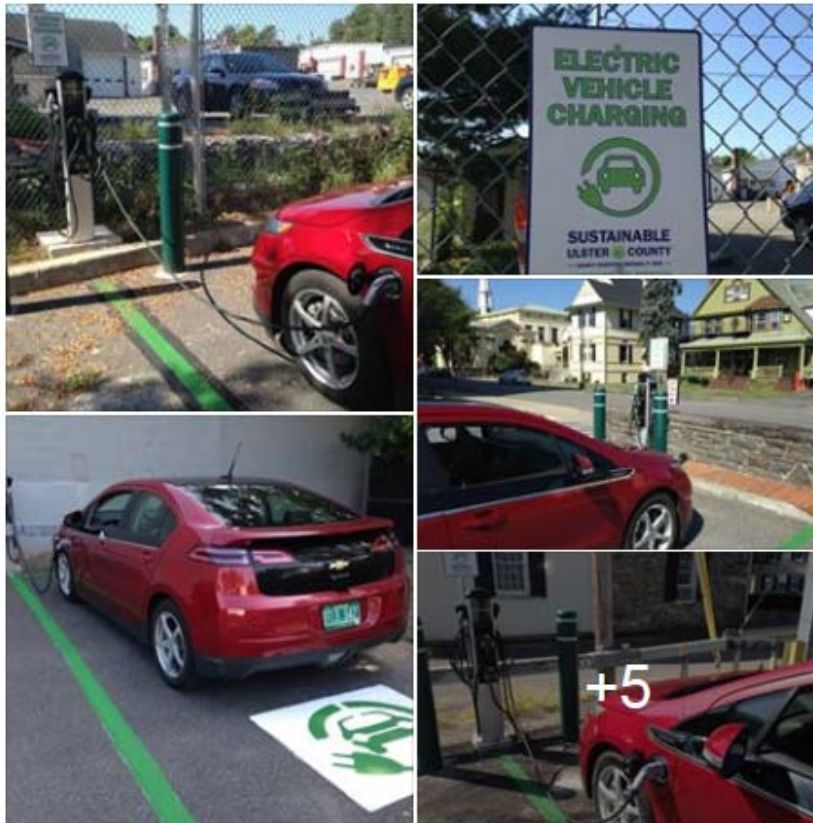
63% of Public Charging Stations are Offered for Free -Charged Magazine



Mike Kamm

September 6 at 10:28pm · Edited

I located and plugged into all 8 new Ulster County chargers in Kingston today. I have to applaude Ulster County for going big and peppering Kingston with high quality, user friendly, ChargePoint chargers. My favorite one was located at 1 Development Ct. It was walking distance to various fast food places and also King's Valley diner.



Like Comment

You and 8 others like this.

Seen by 35



Chris Neff Nice Mike. The ones just off Crown St I saw were ICE'd - it was during the Farmers Market. I took a pic and shot it to the town council people so they are aware. I did not see any EV ONLY signs - just EV charging signs. The ones at the municipal building on Main are prob less prone to ICEing until they work this all out. Either way Kingston is really doing awesome here



Joined

Files

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sharing some Ulster



charging

ing a place to get a



Amanda LaValle Genson

September 3 at 10:57am · Kingston, NY

Some EV Charging Station news from Ulster County. Stations are on the ChargePoint network and are also listed on Plugshare. We are excited about this project and hope you come to visit us in Ulster County!



Ulster County has installed 9 electric car-charging stations, and they can be used for free

KINGSTON >> With a gas station on almost every corner, finding a place to get a fill up is no problem for most motorists.

DAILYFREEMAN.COM

Like Comment Share

You and 12 others like this.

Seen by 51

View 3 more comments



Chris Neff Look who I met today 😊 Amanda LaValle Genson and Ken - that is my i3 - These chargers rock, really nice town area along Wall St. The Farmers market was hopping



September 6 at 9:38pm · Edited · Like



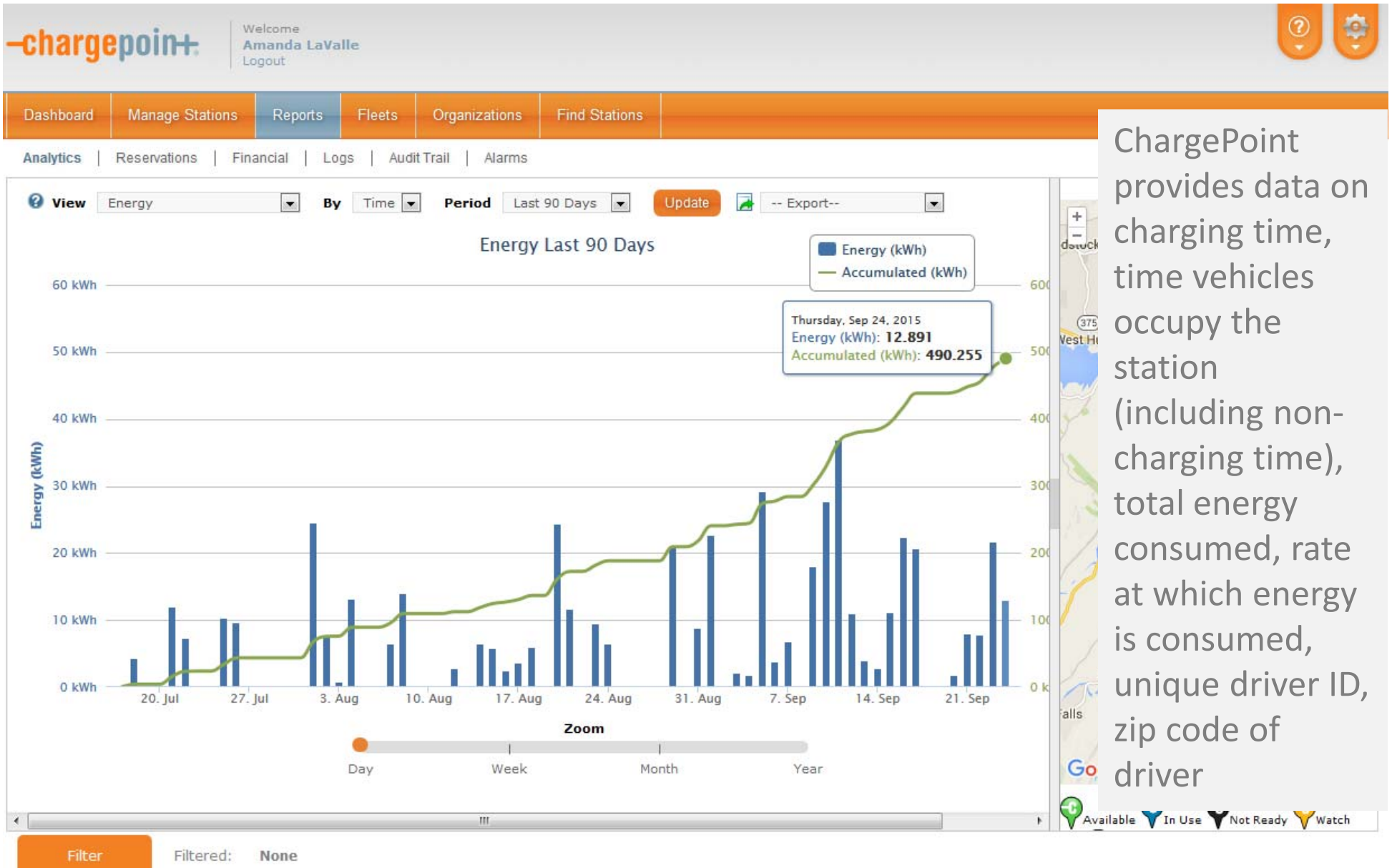
Amanda LaValle Genson Thanks again for coming to check out the project. Uptown Kingston is a happening place on Saturdays. Glad you got to see the Kingston Farmer's Market in full swing!

Yesterday at 6:38am · Edited · Like · 2

Green Economy

- “When I drive through that area heading north in my EV (BMW i3) that is just about where I'm looking for a quick boost...I'm also with my family and I guarantee they won't want to sit in the car for an hr, **they will want to eat and shop.** These two factors alone make Kingston a destination for me instead of just a sign we pass along the Thru-way. We are looking forward to visiting soon - being free has really little to do with it.”
- “... By installing these stations at minimal cost Ulster County is looks to the future in **providing a service desired by forward-thinking, often younger talented people,** that will want to live in Ulster County. It also provides an incentive for residents to buy electric cars...Thank you Ulster County for showing the world that we are looking forward and languishing with our heads stuck in the not stuck in the 20th Century oil sands.”
- “Instead of driving right past Kingston as I have done for the past 30 years, **I pulled off at exit 19 and stopped for lunch** at King's Diner [that I previously never knew existed] yesterday. You can thank the Development Ct. charger installation. Yes, these chargers do attract passers-through to stop and spend money in town, instead of passing it by.”
- “This is definitely a major step in the right direction for Ulster County, who before this was a black hole on the EV charging infrastructure map. **I look forward to charging, shopping and eating in the area on my way to and from Albany.**”

Tracking Use



Charging Station Stats

- Since July (7/19-9/24/15), UC has hosted 100 sessions, delivering 490 kwh of electricity
- Total cost to County is \$63.70 or \$0.637 per session
- County buys Renewable Energy Credits (green power) for all our electricity = zero emissions electricity
- Users from Buffalo, Westchester, Rockland, Connecticut, Vermont and New Jersey (photos below)



Costs and Benefits

- Traditional Paradigm
 - Cost of Stations vs Fee to Charge. Often charging stations are seen as too costly (to install) to support a few fleet vehicles and not a reliable revenue generator in a public setting (any fees for charging do not offset the cost of installing the equipment). Therefore municipalities have not investing in installing them.
- Our View
 - Stations are completely logical when you consider the multiple layers of potential users and benefits. Cost of Stations (install & maintenance) vs. fuel savings for County vehicles, employee availability, sales tax revenue, tourism draw, tourism economic multipliers, environmental benefits for county government, environmental benefits for region.

Emerging Project

- Lack of public familiarity with electric vehicles and charging. Often public erroneously equates charging battery with filling a gas tank.
- Ulster County is committed to offering free charging for now, we will reevaluate as the project matures and usage changes.
- Outreach material and resources- seems to be a lack of data and resources that hit on what we are finding to be key project aspects or guide municipalities to pursue similar projects.

Summary

- Fleet is a major cost as well as source of GHG emission
- Fleet operation cuts across county government departments, must use a team approach to management
- Focus on projects that can effectively demonstrate sustainable technology, foster environmental stewardship and action beyond county government operations

SUSTAINABLE ULSTER COUNTY

— COUNTY EXECUTIVE MICHAEL P. HEIN —

GREENER BY DESIGN