



Department of  
Environmental  
Conservation



Climate Smart  
Communities

# Green Fleet Management for Municipalities:

Right-Sizing and Vehicle Efficiency Policies

*This webinar will begin shortly*

October 8, 2015

# Agenda

- I. **Introduction & Announcements** - Dazzle Ekblad, NYSDEC
- II. **Clean Fleets NY** - Pam Hadad-Hurst, NYSDEC
- III. **Right-sizing & Vehicle Efficiency Policies** - Ana Hagerup, Sustainability Planner; Kari Hewitt, Director of Sustainability, VHB
- IV. **Ulster County Fleet Sustainability Initiatives** - Amanda LaValle, Ulster County Dept. of the Environment
- V. **Q & A** - Dazzle Ekblad



Department of  
Environmental  
Conservation

# Clean Fleets NY: Zero Emission Vehicles in New York State

**Pam Hadad-Hurst**

Special Assistant to the Commissioner

October 8<sup>th</sup>, 2015

# What are ZEVs?

Zero-emission vehicles (ZEVs) have an electric powertrain that produces zero tailpipe emissions.

- Battery electric vehicles (BEVs) that run solely on electricity
- Plug-in hybrid electric vehicles (PHEVs) that use both electricity and gasoline
- Hydrogen fuel cell vehicles (FCVs), which generate electricity from hydrogen.

# Why ZEVs?

- Not every trip can be made by walking, biking, or taking transit
- Reduce air pollution where it is worst (cities)
- Reduce carbon emissions
- Dependent on the electricity source
  - NYS has one of the greenest electric supplies in the country
  - With RGGI, emissions for the electricity sector are capped and continue to decrease
- Reduce dependence on fossil fuels
- Save money on operational costs



# ZEV Policy and Goals in NYS

# ZEV Mandate

New York, eight other states and the District of Columbia have adopted a Zero Emission Vehicle mandate that was originated by the California Air Resources Board. The program is designed to achieve the state's long-term emission reduction goals by requiring manufacturers to sell specific numbers of the very cleanest cars available.

- Required percentage of sales increases through 2025
- Covers light duty vehicle manufacturers



# 8 State Memorandum of Understanding

- Signed by Gov. Cuomo in October 2013
- Goal of having 3.3 million ZEVs on the road by 2025
- Created working groups to promote collaboration across states to find what works



State Zero-Emission Vehicle Programs  
Memorandum of Understanding

## 8 State ZEV Action Plan

- Released May 2014
- Sets up targets in 11 action areas that will allow the states to achieve the 3.3 million vehicle goal, including:
  - Allowing any state employee to charge at work by 2020
  - 25% of light duty fleet purchases be ZEVs by 2025



# Clean Fleets NY

- In his 2015 Opportunity Agenda, Gov. Cuomo announced the start of Clean Fleets NY
- Initial goal: 50% of light duty sedan purchases at DEC, NYSERDA, and NYPA will be ZEVs in 2016
- Will explore cost effective ways to increase the number of ZEVs in our fleet
- Will be important towards meeting our 2025 ZEV MOU goals



# ChargeNY

- Program launched by Gov. Cuomo in 2013 and sets goals of:
  - 3,000 EVSE in NYS by 2018
  - 40,000 ZEVs on NYS roads by 2018
- Run jointly by NYSERDA and NYPA
- Provides grants to install EVSE at high visibility spots, such as airports and park and rides.



# Role of ZEVs in Sustainable Fleet Management



# ZEVS Are Only One Part of a Sustainable Fleet

- ZEVS are not a “silver bullet” solution
- Right now, only applicable for light duty sedan fleet needs
- Need to analyze total impacts of the fleet and determine how to reduce overall emissions



# Thank You

Pam Hadad-Hurst  
Special Assistant to the Commissioner  
625 Broadway, Albany, NY 12233  
[pamela.hadadhurst@dec.ny.gov](mailto:pamela.hadadhurst@dec.ny.gov)  
518-402-8549





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# **GREEN FLEET MANAGEMENT Tools and Resources**

Ana Hagerup and Kari Hewitt

 **vhb** *Engineering, Surveying and Landscape Architecture, P.C.*  
An Independent Contractor to NYSERDA



# CSC 10 PLEDGE ELEMENTS

**1**

EXAMPLE  
The Village of Dobbs Ferry established an **Energy Task Force** to achieve a 20% emissions reduction in greenhouse gases for local government operations.

Pledge to be a Climate Smart Community

**2**

Set goals, inventory emissions, plan for climate action

EXAMPLE  
The City of Kingston developed a **Climate Action Plan** to reduce greenhouse gas emissions for local government operations and the community.

**3**

Decrease community energy use

EXAMPLE  
Ulster County uses an **online energy management platform** to track energy consumption and benchmark local government buildings.



EXAMPLE  
The Town of Somers' School District was awarded a grant to install a 50 kW **solar photovoltaic system** on the Town's Middle School.

**4**

Increase community use of renewable energy

**5**

Realize benefits of recycling and other climate-smart solid waste management practices

EXAMPLE  
The Town of Cortlandt encourages the re-use of gently used items by hosting an annual **Community Swap Event** and Furniture Drive.

EXAMPLE  
The City of Yonkers adopted a **Green Buildings Ordinance** and a **Green Development Workbook & Checklist** to set standards for sustainable public and private development.

**6**

Reduce greenhouse gas emissions through use of climate-smart land-use tools



EXAMPLE  
The Town of North Salem piloted **smart water meters** to remotely collect usage information to track anomalies and reduce operational costs to the homeowner.

**7**

Enhance community resilience and prepare for the effects of climate change

**8**

Support development of a green innovation economy

EXAMPLE  
The Town of Bedford created the **Veg-Out Campaign** and website to promote sustainability in Westchester County's food supply by connecting residents with local growers.

EXAMPLE  
The Town of Clarkstown hosted an **Environmental Summit** to inform the community about climate-related issues and gather ideas for local action to create a sustainable community.

**9**

Inform and inspire the public

clarkstown  
environmental summit



EXAMPLE  
The Northern Westchester Energy Action Consortium (NWEAC) established the **Municipal Solar Buyers Group** across 13 communities to identify suitable sites on public property for photovoltaic installations.

**10**

Commit to an evolving process of climate action



Decrease  
Community  
Energy Use

# 3



Cleaner, Greener  
Communities Program



Climate Smart  
Communities  
Certified

## FLEET AND VEHICLE FUEL

- |      |  |
|------|--|
| 3.10 | Adopt a vehicle fleet efficiency policy                    |
| 3.11 | Right-size the local government fleet                      |
| 3.12 | Replace traditional vehicles with advanced vehicles        |
| 3.13 | Adopt an anti-idling policy for government vehicles        |
| 3.14 | Implement a car-sharing program for local government staff |





# Cleaner, Greener Communities Program

Phase II Implementation Grants

- Category 2, Flexible Funding Pilots (PON 3106)
- Open Enrollment through 2019
- Awards range from \$25,000 to \$250,000 per project with 25% cost share requirement

## Flexible Project Types:

- Convert streetlights or traffic signals to LEDs
- Develop comprehensive plan with sustainability elements
- Incorporate smart growth principles into land-use policies



## Eligibility Requires Completion of 4 out of 6 Steps:



- 1) Implement a Green Building Strategy
- 2) Adopt the New York State Unified Solar Permit
- 3) Support Alternative Fuel Transportation Supply Infrastructure (See CGC Category 1 Resources)
- 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)



## GOALS:

- Improve vehicle fleet fuel efficiency
- Reduce fuel costs and GHG emissions

## TWO OPTIONS:

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



# Green Fleet Management Steps



1. Delegate a fleet manager or working group
2. Inventory the local government fleet
3. Assess vehicle condition and characteristics
4. Evaluate vehicles by purpose and use
5. Develop a green fleets policy and replacement schedule
6. Develop a fleet operations manual



## STEP 1: Delegate a Fleet Manager or Working Group



- Centralize fleet management
- Designate a Task Force or *Vehicle Utilization Review Board* (VURB)
  - Allows for consensus of right-sizing decisions that are fact-based and apolitical
  - Establish criteria for vehicle elimination, retention, or transfer to a shared motor pool
- Appoint a fleet manager
  - May create arbitrary pressure
- Require annually review of fleet inventory and management report



## STEP 2: Inventory Local Government Fleets

- Fleet Manager or Task Force can Report and Answer:
  - How many vehicles? What types?
  - How many departments and/or individuals operate vehicles?
  - Owned, leased, or car-share program?
- Vehicle Inventory Template
  - Makes it easier to organize and compare vehicle information when making right-sizing decisions
  - Drop-down menus are quick and consistent



License Plate #	Vehicle Make	Vehicle Model	Mileage	Year
M45721	FORD	FOCUS	50 - 69 K	2009

- ✓ Vehicle Make/Model
- ✓ Year Manufactured
- ✓ Mileage & Average MPG
- ✓ Vehicle Type/Size
- ✓ Fuel Type
- ✓ Department & Function
- ✓ GHG Emissions per year



# STEP 3: Assess Vehicle Condition & Characteristics

- Establish Fleet Priorities and Goals
  - Improve Fuel Efficiency and Reduce GHG Emissions
  - Reduce Vehicle Miles Traveled (VMT)
  - Decrease Maintenance Costs
- Determine Right-sizing Criteria
  - Level of GHG Emissions
  - Cost of Fuel
  - Maintenance Costs
- Compare and Analyze Vehicles
  - Vehicle Characteristics Checklist
  - DOE: [www.FuelEconomy.gov](http://www.FuelEconomy.gov)
  - DOE: [www.afdc.energy.gov/tools](http://www.afdc.energy.gov/tools)



**Alternative Fuels Data Center**

FUELS & VEHICLES   CONSERVE FUEL   LOCATE STATIONS   LAWS & INCENTIVES   Maps & Data   Case Studies

EEER > AFDC > Tools

### Tools

The Alternative Fuels Data Center offers a large collection of helpful tools. These calculators, interactive maps, and transportation decision makers in their efforts to reduce petroleum use.

- Calculators**
  - Vehicle Cost Calculator**: Compare cost of ownership and emissions for most vehicle models. 
  - Petroleum Reduction Planning Tool**: Create a plan for your fleet to reduce petroleum consumption and emissions.
- Interactive Maps**
  - Alternative Fueling Station Locator**: Locate alternative fueling stations and get maps and driving directions. 
  - TransAtlas**: Analyze vehicle densities and locations of fueling stations and production facilities.

**www.fueleconomy.gov**  
the official U.S. government source for fuel economy information



# STEP 3: Assess Vehicle Condition & Characteristics

MENU FILE EDIT BOOKMARKS HISTORY VIEW OPTIONS HELP

Task 3 Task 1 Task 2 Vehicle Inventory Template

Vehicle Characteristics Checklist Score	Department Responsible	Vehicle Make	Vehicle Function	Type/Size	Max. Passenger or Cargo Capacity	Special Equipment Notes:	Mileage	Year	Storage Location	Fuel Type	Average MPG (Combined City & HWY)	Average GHG Emissions	Estimated Cost of Maintenance Annually
24	HWY	FORD EXP	SUV		5 PASS	NONE	121,000	1998	DPW	GAS			
	HWY	MACK	HEAVY DUMP		10 TO 12 CU/YRD	NONE	70,000	1998	DPW	DIESEL			
25	HWY	MERCURY	SUV		5 PASS	NONE	58,815	2007	DPW	GAS			
32	HWY	FORD 4DSD	SUV		5 PASS	NONE	55,800	2009	DPW	GAS			
29	HWY	CHEV PICK	PICK UP		2 PASS 1 TON	NONE	47,680	2009	DPW	GAS			
29	HWY	CHEV DUMP	PICK UP		2 CU/YRD DUMP	NONE	29,478	2007	DPW	GAS			
	HWY	INTER DUMP	MED DUMP		6 TO 8 CU YRDS	LIFT GATE	23,465	2001	DPW	DIESEL			
	HWY	INTR DUMP	HEAVY DUMP		10 TO 12 CU YRD	SANDER/PLOW	21,950	1999	DPW	DIESEL			
	HWY	INTR C&C	MED DUMP		4 TO 6 CU/YRDS	Dumpster lifting d	18,260	1993	DPW	DIESEL			
	HWY	MACK DUMP	HEAVY DUMP		6 TO 8 CU YRDS	SANDER/PLOW	16,840	1994	DPW	DIESEL			
33	HWY	CHEV DUMP	PICK UP		2 CU/YRD DUMP	NONE	7,590	2007	DPW	GAS			
	HWY	INTERNA DUMP	HEAVY DUMP		6 TO 8 CU YRDS	SANDER/PLOW	13,354	2007	DPW	DIESEL			
	HWY	FORD DUMP	MED DUMP		4 TO 6 CU YRD	NONE	12,227	1999	DPW	DIESEL			
34	HWY	CHEV DUMP	PICK UP		2 CU/YRD DUMP	NONE	16,809	2009	DPW	GAS			
36	HWY	CHEV PICK UP	PICK UP		1 TON	NONE	7,666	2012	DPW	GAS			
	HWY	CHEVR PICK UP	LIGHT DUMP		2 CU/YRD DUMP	NONE	7,590	2011	DPW	GAS			
	HWY	CHEV PICK UP	LIGHT DUMP		2 CU/YRD DUMP	NONE	7,590	2012	DPW	GAS			
	HWY	INTER DUMP	HEAVY DUMP		6 TO 8 CU YRDS	SANDER/PLOW	7,152	2003	DPW	DIESEL			
	HWY	INTERN DUMP	HEAVY DUMP		6 TO 8 CU YRDS	SANDER/PLOW	3,908	2009	DPW	DIESEL			
	HWY	Elgine Sweeper	SWEPPER			NONE	2,865	2013	DPW	DIESEL			





## STEP 4: Evaluate Vehicles by Purpose and Use

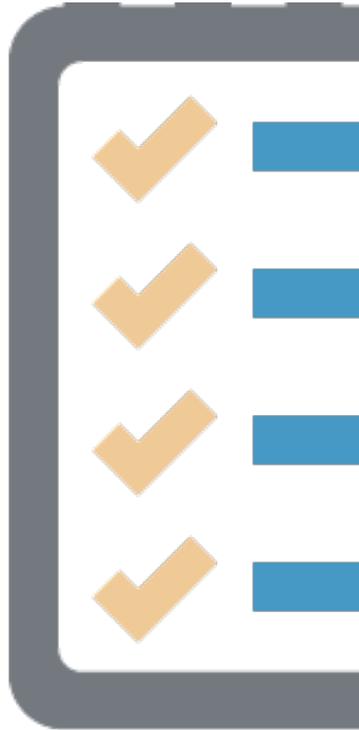
- Collect information from departments or individual drivers
- Use the Vehicle Purpose Survey
- Reach Consensus for Vehicle Elimination, Retention, or Transfer to a Shared Motor Pool
- Best Practices:
  - Low-occupancy passenger transportation vehicles should be small, fuel efficient sedans
  - Back-up cars and/or light-duty trucks should be replaced every 8 to 12 years
  - Emergency vehicles are mission critical regardless of utilization rate (miles driven per year)



### Examples of Vehicle Purpose Information

- Department Mission
- Ratio of Personnel to Vehicles
- Historical/expected miles of use per vehicle
- Historical/expected hours of use per vehicle
- Frequency of trips per vehicle
- Vehicle function
- Operating terrain
- Climate conditions
- Vehicle condition, age, and retention cycle
- Vehicle down time
- Needed cargo and/or passenger capacity
- Required employee response times
- Storage Location

## STEP 5: Establish a Fleet Efficiency Policy



- ✓ Use the Baseline Inventory, Vehicle Assessment Checklist and Purpose Surveys to Develop a Green Fleet Policy
- ✓ Document Right-Sizing Criteria Developed through Inventory Evaluation Process
  - Retirement, Reassignment, or Repurpose
- ✓ Account for Department Needs to Determine Alternative Options for Optimal Use
- ✓ Adopt Clearly Defined Policy to Ensure Fleet is Correctly Sized and Mission Appropriate
- ✓ Communicate Policies and Procedures and Conduct Staff Trainings



# STEP 5: Establish a Fleet Efficiency Policy

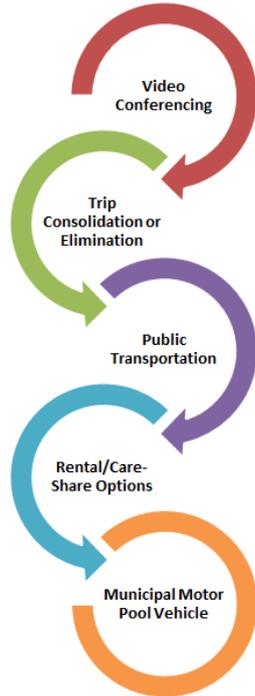


- Green Fleets Guide Includes:
  - Model Ordinance
  - Vehicle Purchase Request Form
  - Example of Cost-Benefits Analysis
- Identify Priorities and Goals of Policy Adoption
  - Cost Savings and GHG Emission Reductions
- Provide Definitions for Vehicle Types
  - Determine Exemptions
  - *Green* = Hybrid, Electric, Alternative Fuel Vehicles
- Establish Emission Standards For Each Vehicle Class
- Require an Annual Update of Fleet Inventory
- Appoint a Green Fleet Review Committee
- Monitor to Ensure Policy is Meeting Desired Objectives
- Consider Including an Anti-Idling Policy



# STEP 6: Develop a Fleet Operations Manual

## Employee Travel Hierarchy



- Ensure Compliance with Goals Outlined in Green Fleets Policy
- Create a Green Fleets Review Committee
- Annually Evaluate Progress in Meeting the Objectives of the Green Fleets Policy
- Propose Necessary Modifications to Enhance Progress in Achieving Goals
- Document Protocol for Tracking Mileage and Fuel Usage
- Establish an Employee Travel Hierarchy
- Educate Staff and Provide Trainings

# Download Resources: [www.MidHudsonCSC.org](http://www.MidHudsonCSC.org)



Tarrytown Right-Sizing  
Local Government  
Fleet Toolkit



Vehicle  
Inventory  
Template



Vehicle  
Assessment  
Checklist



Dobbs Ferry  
Green Fleet Guide



Vehicle Purpose  
Survey



 **New York  
Information**

Find information about alternative fuels  
and advanced vehicles in New York.

A graphic with a light gray background. On the left is a small icon of a computer monitor displaying a map of New York. To the right of the icon, the text "New York Information" is written in bold. Below this, a smaller line of text reads "Find information about alternative fuels and advanced vehicles in New York."

**U.S. DEPARTMENT OF  
ENERGY**

**www.fueleconomy.gov**  
the official U.S. government source for fuel economy information

**Alternative Fuels Data Center**

FUELS & VEHICLES    CONSERVE FUEL    LOCATE STATIONS    LAWS & INCENTIVES

A graphic for the U.S. Department of Energy's Alternative Fuels Data Center. It features the U.S. Department of Energy logo in a dark blue box. To the right, the website "www.fueleconomy.gov" is displayed in white on a dark blue background, with the tagline "the official U.S. government source for fuel economy information" below it. Below this, the text "Alternative Fuels Data Center" is written in white on a green background. At the bottom, four categories are listed in white on a green background: "FUELS & VEHICLES", "CONSERVE FUEL", "LOCATE STATIONS", and "LAWS & INCENTIVES".



# Climate Smart Communities

# THANK YOU



Kari Hewitt, Director of Sustainability  
Ana Hagerup, Sustainability Planner  
[ClimateSmart@vhb.com](mailto:ClimateSmart@vhb.com)





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

Amanda LaValle, Coordinator  
UC Department of the Environment  
October 8, 2015

NYS DEC Climate Smart Communities Webinar

# 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

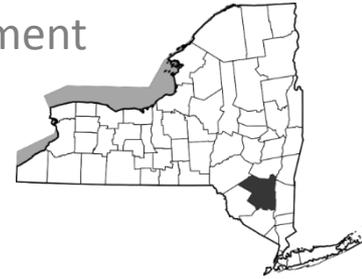
# Ulster County Introduction

2007- Established UC Department of the Environment

2008- Ulster County Energy Policy

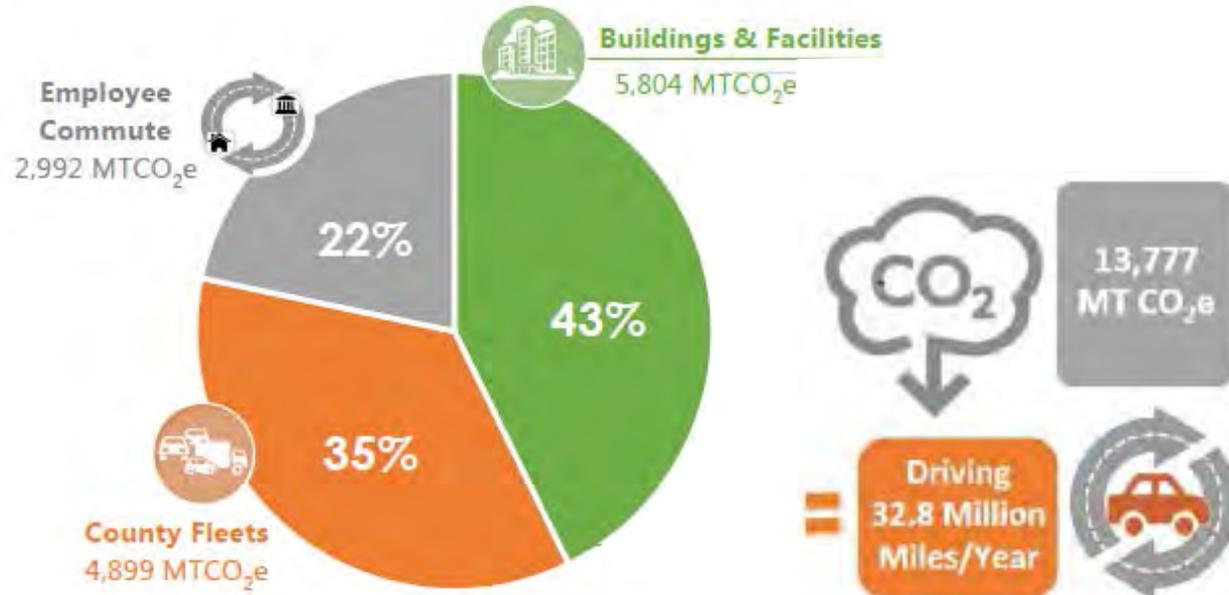
2009- Transition to Charter Form of Government

2011- Climate Smart Community



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

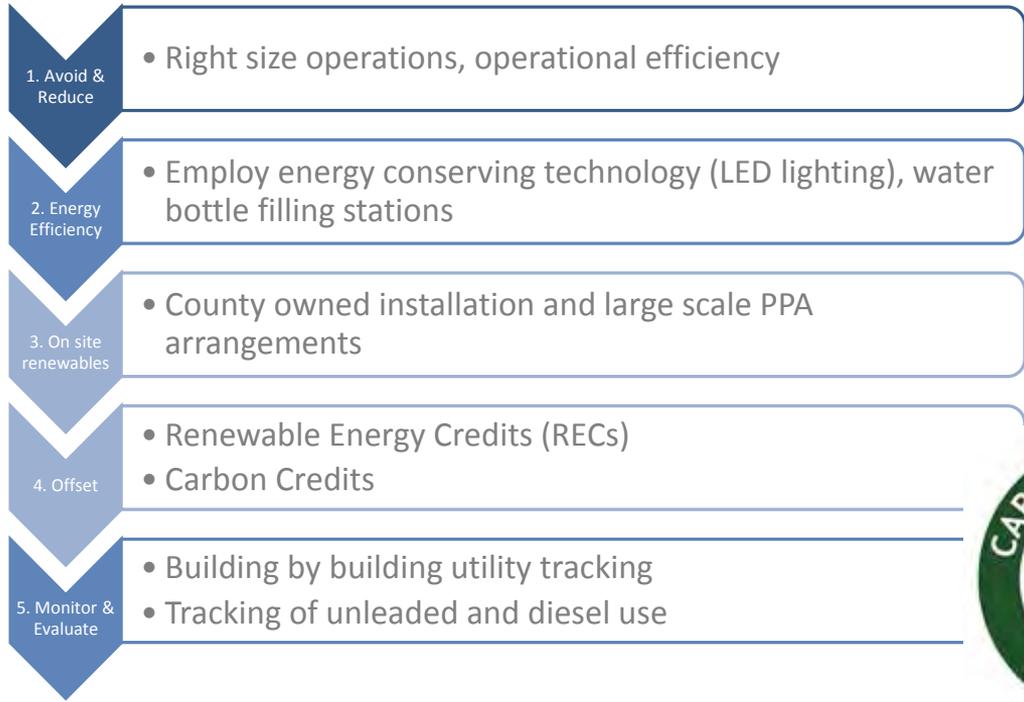
# Ulster County Government Operations Greenhouse Gas Inventory (2012)



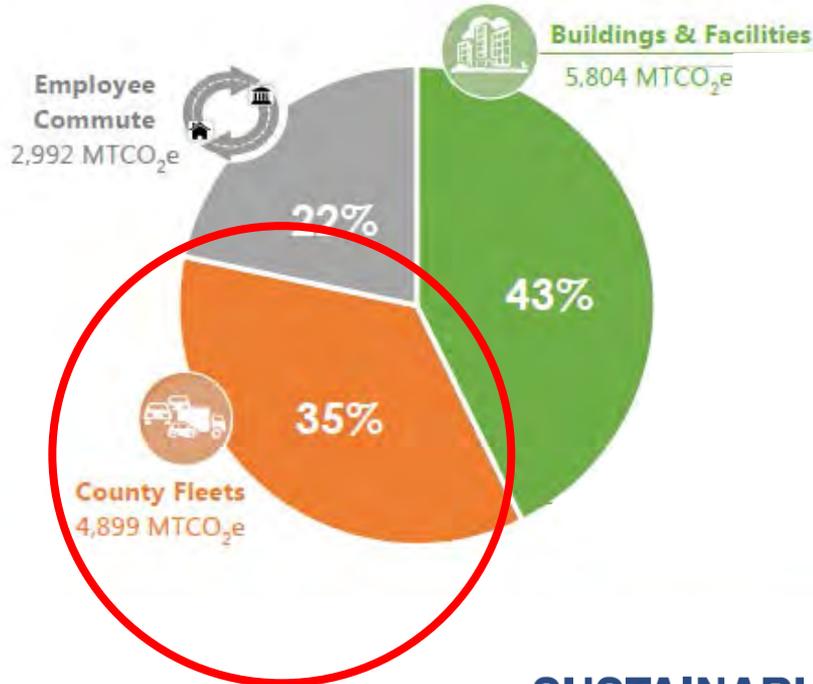
# Ulster County Carbon Footprint Reduction Program



# Ulster County Carbon Footprint Reduction Program



# 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)

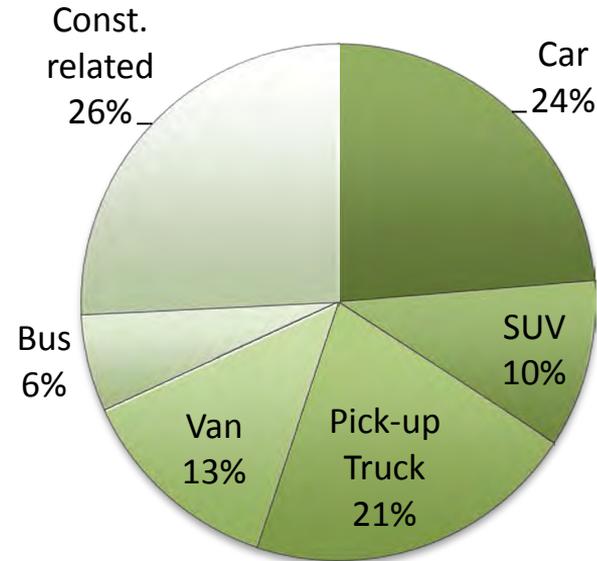
# Ulster County Fleet

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

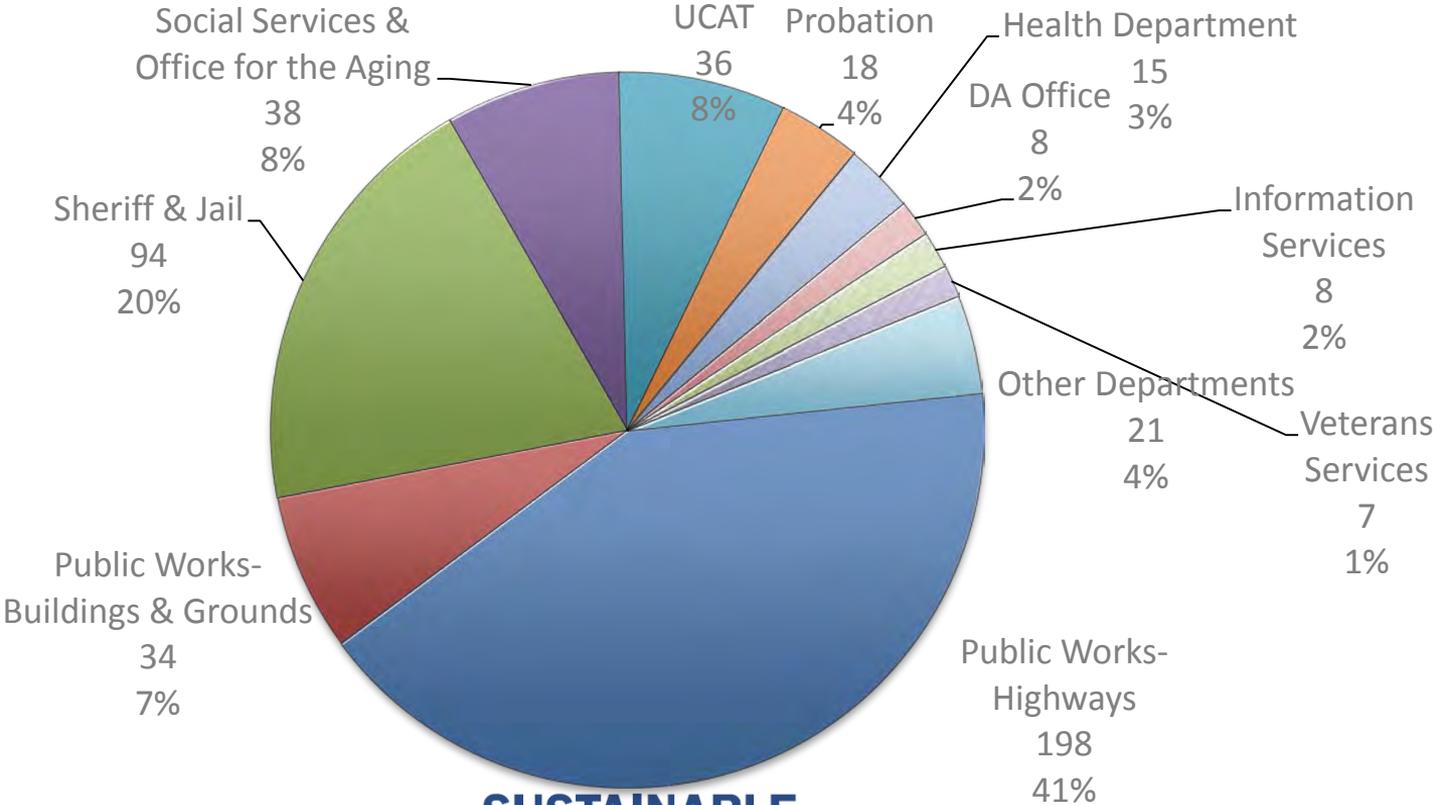


# Ulster County Fleet

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



# Ulster County Fleet



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

February 25, 2015

 Like 0  Tweet 0  G+ 0  Share 0  Share 1  Print



 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 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.

# 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



<http://ulstercountyny.gov/legislature/2015/9-resolution-no-296>

- 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
- Ecodriving- Employee Education
- Will use a team approach; must report annually
- *Conservation, Efficiency, Renewables*

# Electric Vehicle Charging Stations

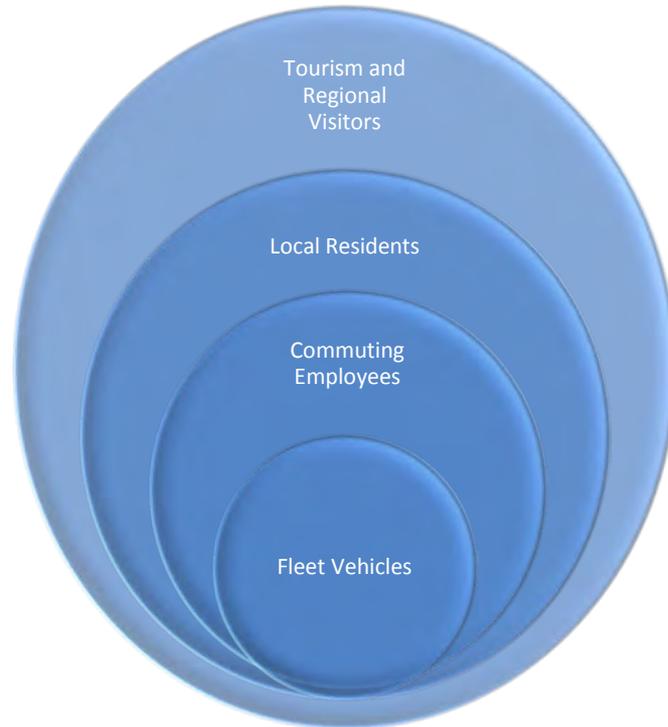


*Build it and they  
will come...*

- 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 EVSE sites.
- Provide environmental and economic benefit
- Demonstrates the equipment and technology to the public.



# Station Siting and Installation



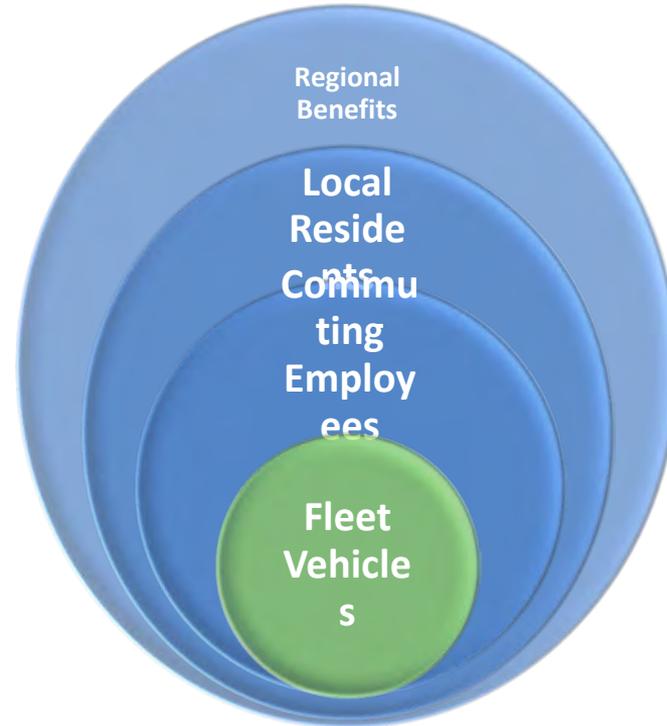
- Installed charging stations at 9 sites.
- Worked with vendor and Ulster Co DPW to identify best sites.
- UC DPW did the site work, electrical panel work required for installation.

- 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”



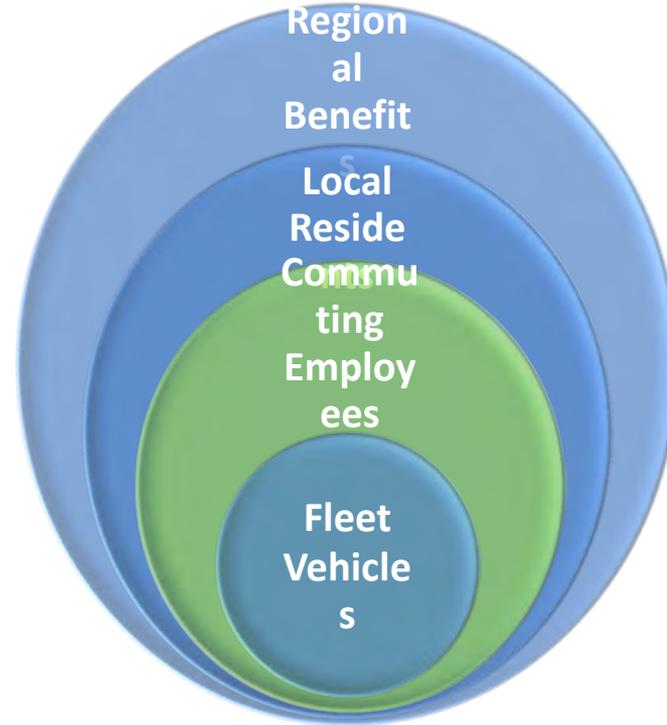
# Ulster County Fleet

- Charging Stations at all our main buildings, will provide necessary infrastructure as well as flexibility to try vehicles with other departments.
- Increasing availability of cost-competitive plug-in hybrids and BEVs.
- 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.



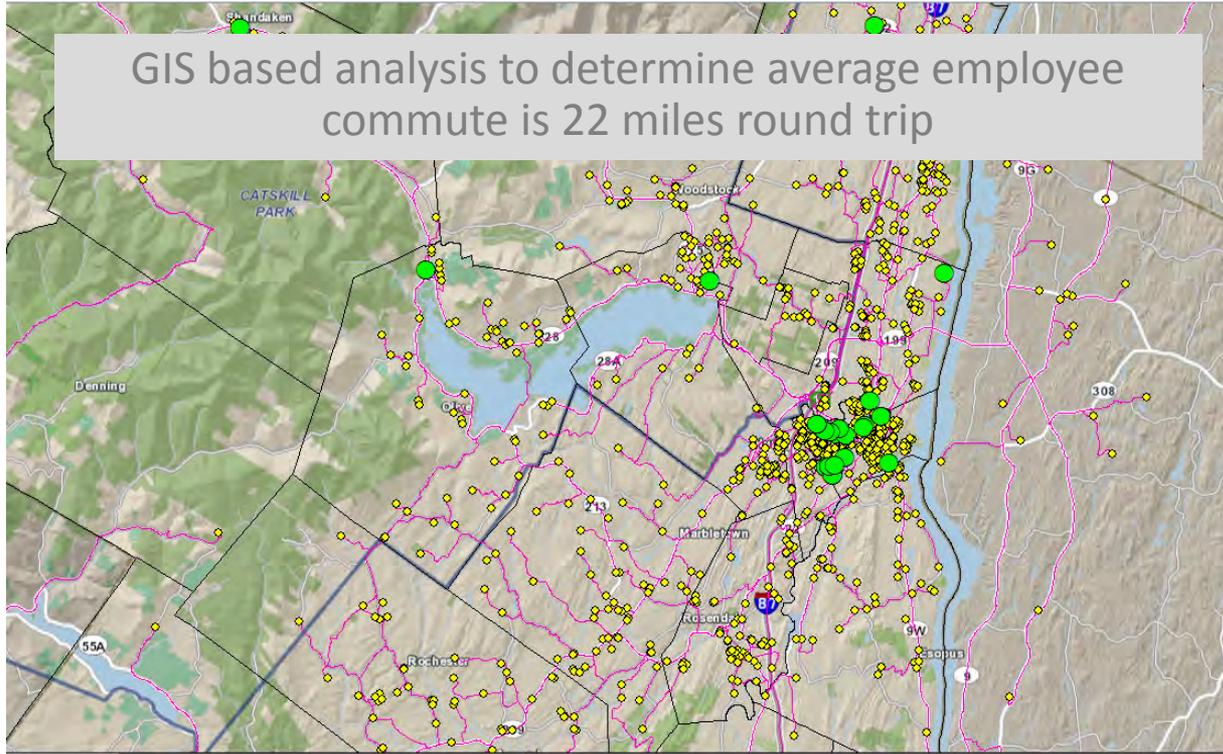
# Commuting Employees

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



# 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)

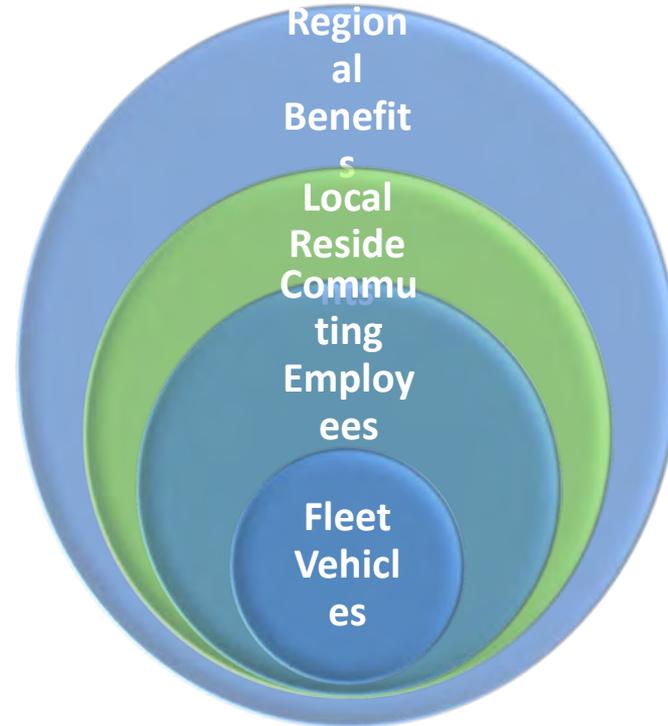
Ulster County Area Transit (UCAT) bus rides are only **30 cents per ride for all County employees!** Just show your County employee ID badge to the bus driver and enjoy this efficient, inexpensive and environmentally-kind commute.

All of the UCAT buses run on clean **biodeisel**. All UCAT buses are equiped 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.

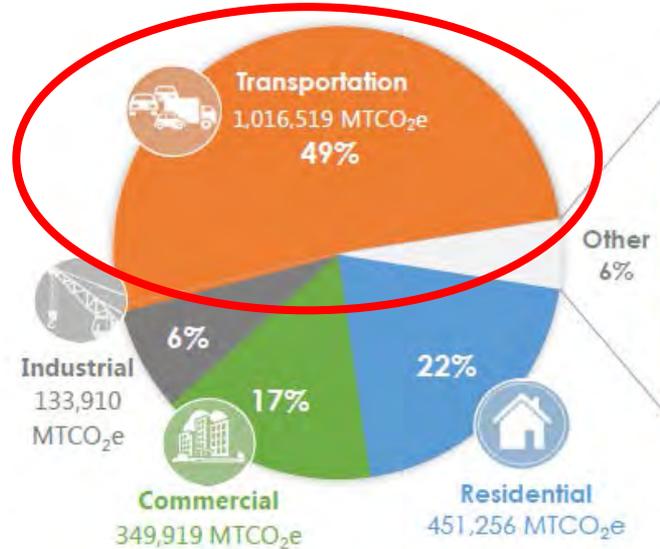
# Local Residents

- Provides local public health and environmental benefits
- More charging stations leads to more EV drivers
- Highlights and demonstrates technology to public



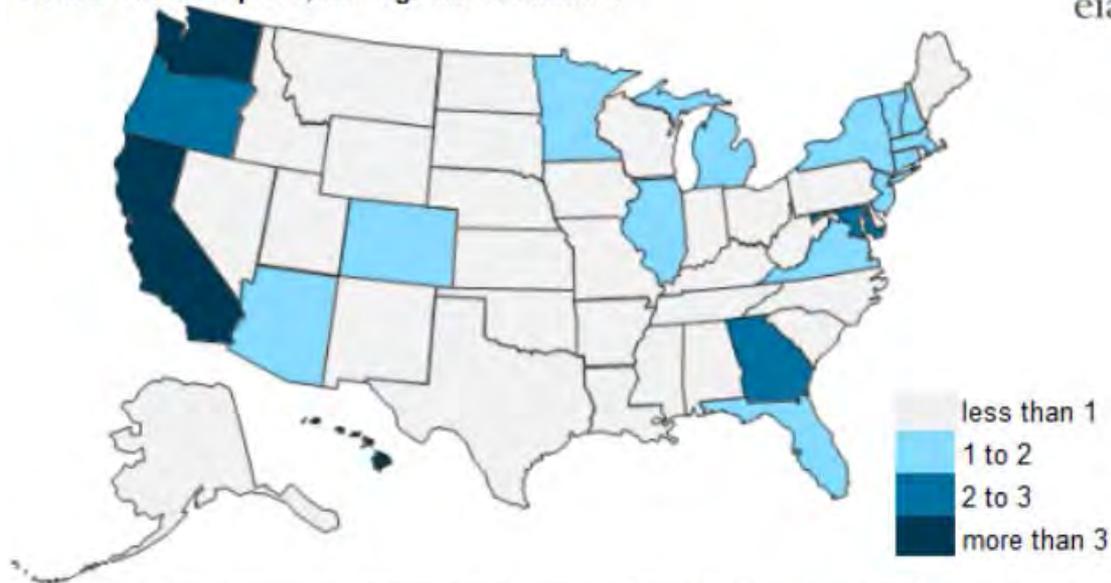
# Local Residents

Ulster County-wide GHG Emissions by Sector (2010)



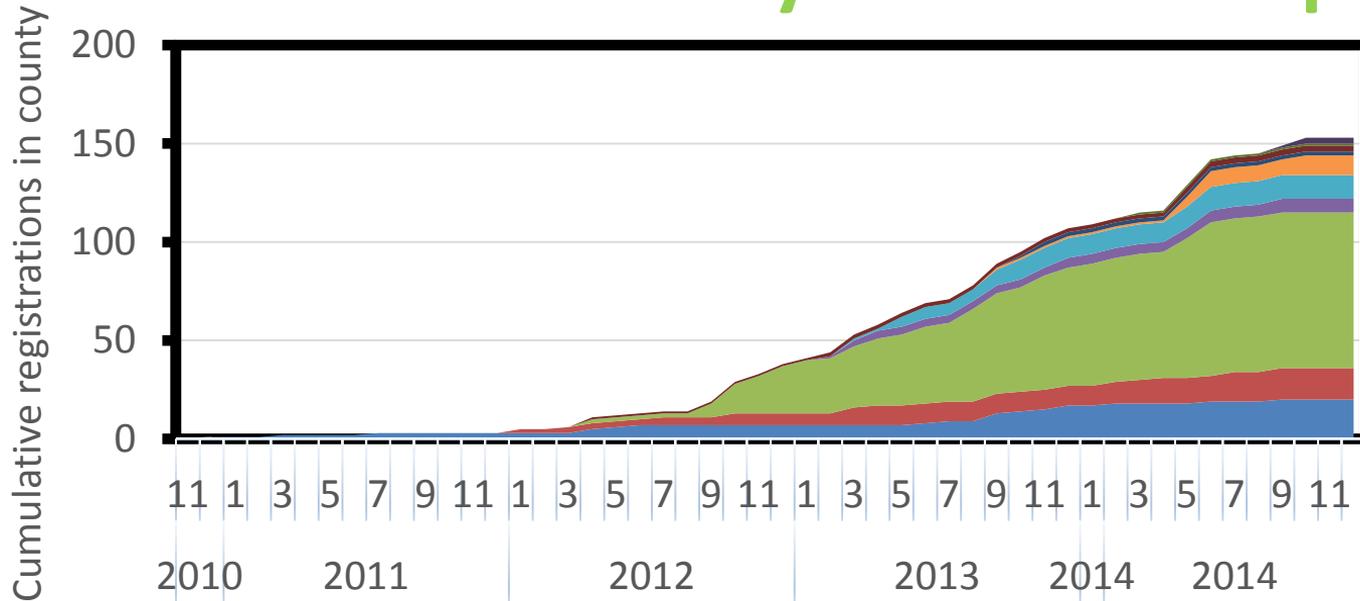
# National EV Ownership

Electric vehicles per 1,000 registered vehicles



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

# Ulster County EV Ownership



- 153 EVs in Ulster County (2014)
- 1019 Hybrids (purchased in same time period)
- 129,583 registered vehicles in County

■ Volt  
■ Model S  
■ Focus Electric  
■ Remaining PHEVs

■ LEAF  
■ C-MAX Energi  
■ Remaining BEVs

■ Prius Plug-in  
■ Fusion Energi  
■ Remaining EREVs



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# 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 Barricko—Daily Freeman

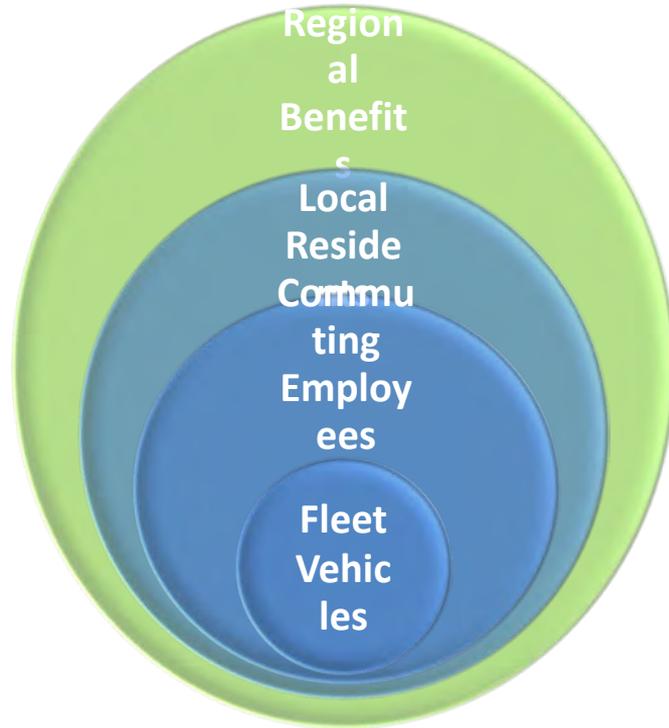


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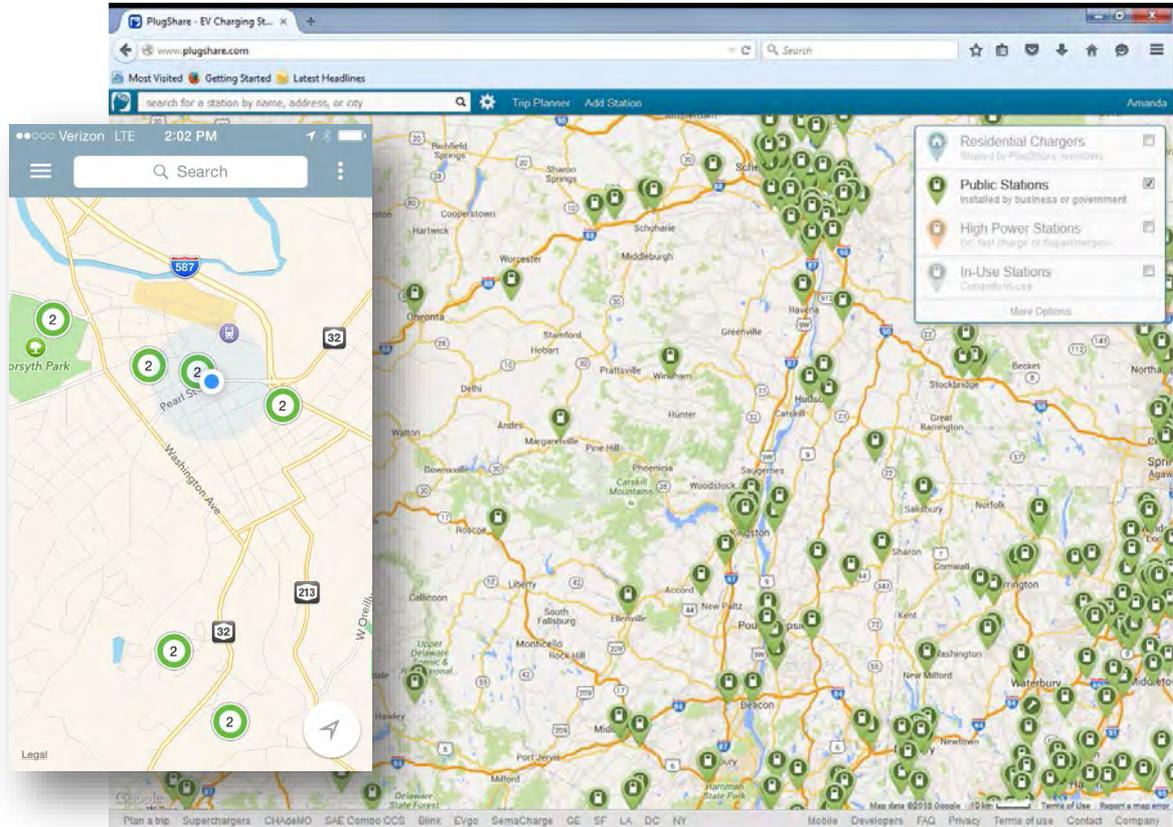
Marketplace ▾ Tools ▾

# 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



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 appaude 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



Files

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**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



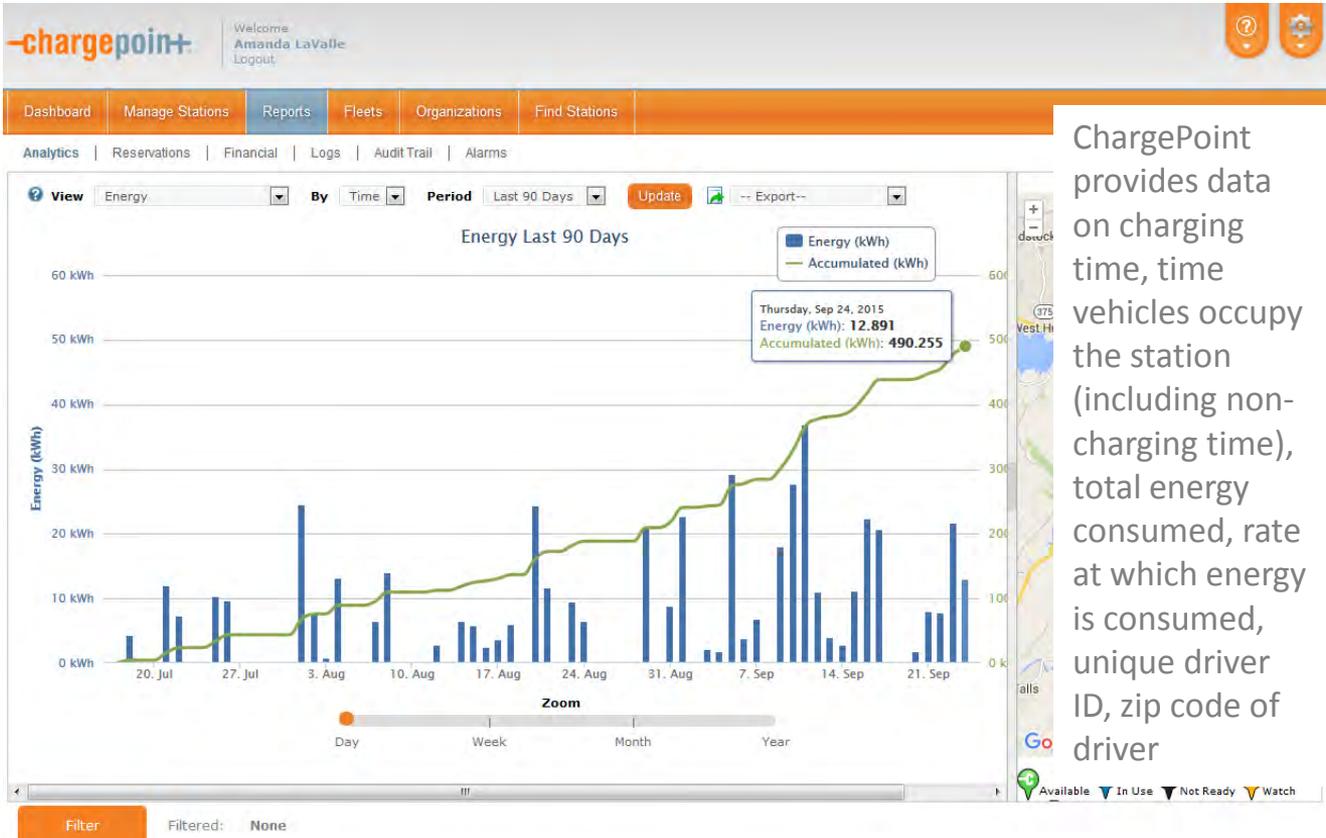
Amanda LaValle Genson Thanks again for coming to check out the project. Uptown Kingston is a happening place on Saturdays. Glad you got to see the Kingston Farmer's Market in full swing!

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



ChargePoint provides data on charging time, time vehicles occupy the station (including non-charging time), total energy consumed, rate at which energy is consumed, unique driver ID, zip code of driver

# Charging Station Stats

- Since July 17 (7/17-10/7), UC has hosted 140 sessions, delivering 768 kwh of electricity. Avoiding 96.5 gallons of gas, 323kg of carbon emissions
- Total cost to County is \$99.84 or on average \$0.713 per session
- County buys Renewable Energy Credits (green power) for all our electricity = zero emissions electricity
- Users from Buffalo, Batavia, Westchester, Rockland, Connecticut, Vermont, Pennsylvania, New Jersey and California (photos below)



# Costs and Benefits

- Traditional Paradigm
  - Cost of Stations vs Fee to Charge....
- Our View
  - 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**

# Climate Smart Communities Webinar

*Thanks for joining us!*

Website for webinar slides and recordings:

<http://www.dec.ny.gov/energy/84359.html>

Contact Email:

Dazzle Ekblad

[dazzle.ekblad@dec.ny.gov](mailto:dazzle.ekblad@dec.ny.gov)

