

Leadership for Efficient, Resilient, Carbon Neutral Communities

Moderator

Liz Compitello – Delaware Valley Regional Planning Commission

Speakers

David Queeley – Codman Square Neighborhood Development Corporation

Shubhada Kambli – City of Hartford, CT

Leah Bamberger – City of Providence, RI



The Talbot-Norfolk Triangle Eco-Innovation District:

SUSTAINABILITY AND WORKFORCE DEVELOPMENT IN AN UNDERSERVED COMMUNITY

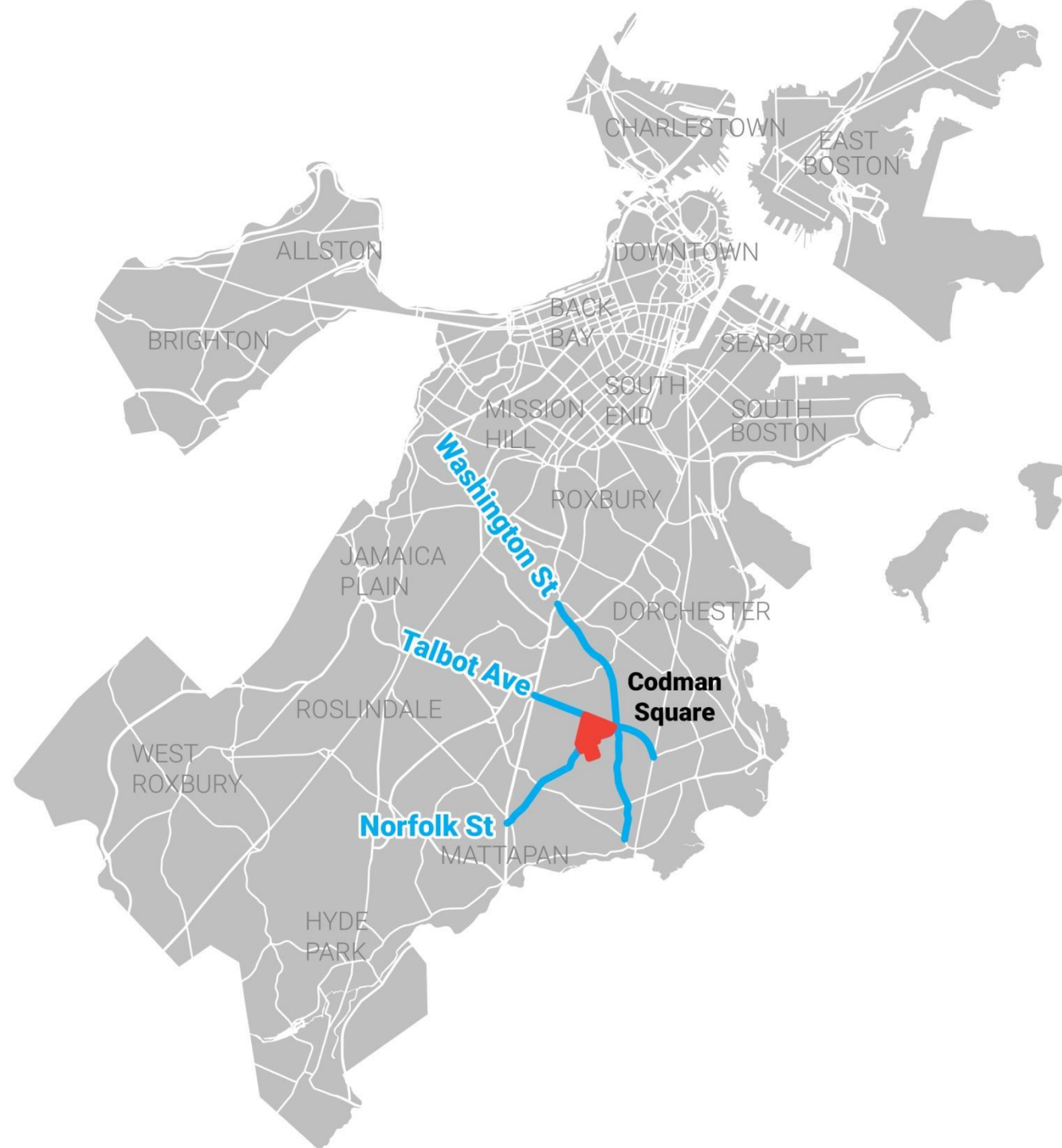
David Queeley, Director of Eco-Innovation
Codman Square Neighborhood Development Corporation

NEEP Conference

October 2, 2018

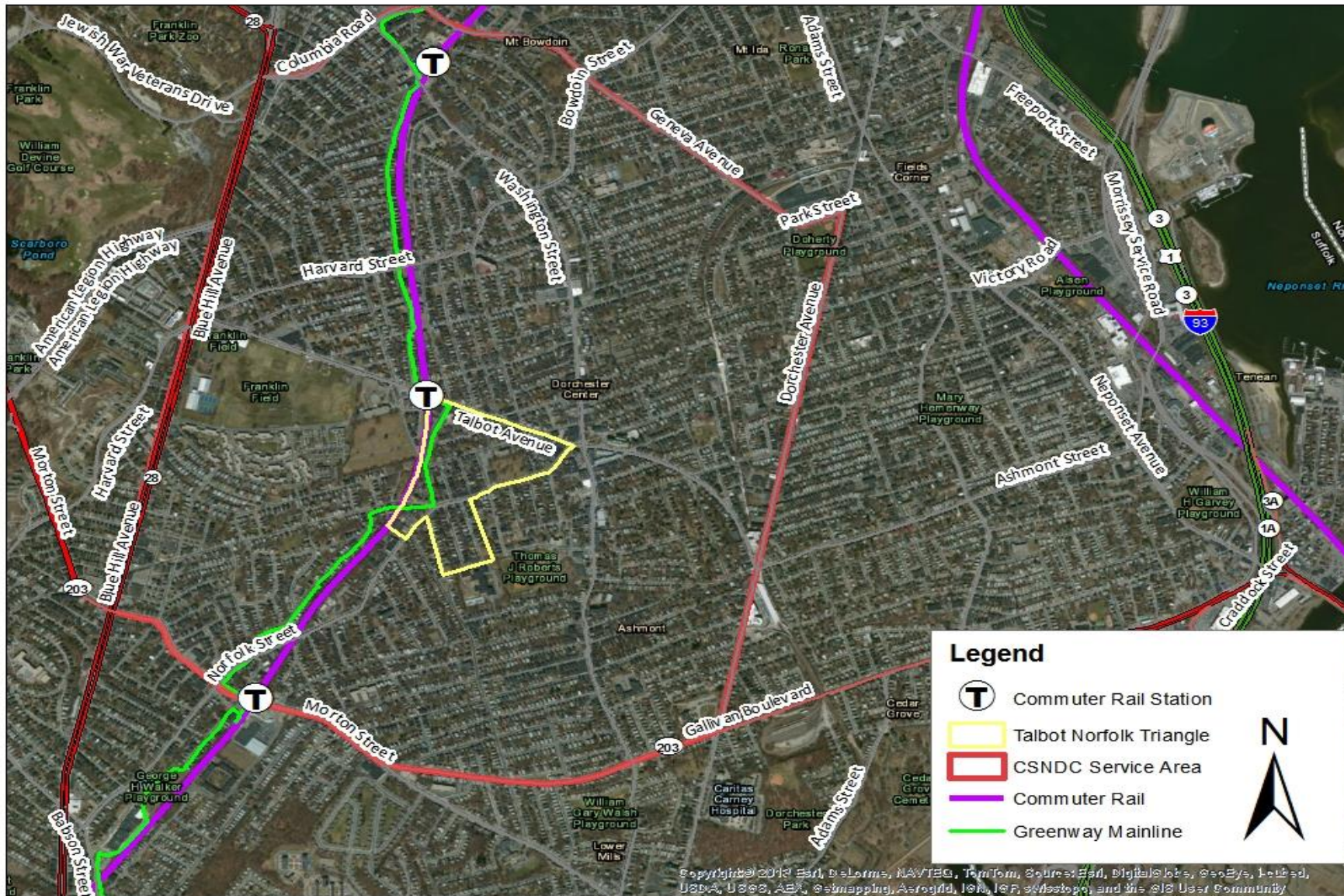
**“Residents are the foundation
for strong communities. If
you don’t have great residents
willing to participate, you
don’t have community”**

James Darby
Neighborhood Activist
Aspinwall Road





CSNDC Service Area



The Eco Innovation District By the Numbers...

- 46 acres, 252 homes, 13 blocks,
- 1,500+ residents, in approximately 525 families
- 33% of residents live under the poverty line (\$23,850 for a family of four); *33% more live just at the poverty line*
- The unemployment rate for young men of color is nearly 50%
- 400+ children and youth under the age of 18
- 30 small businesses are located in TNT
- 80% of residents are renters, 20% home-owners
- 78% identify as African-American, 8% other race, 5% White,
- 5% are two or more races, 2% American Indian, 2% Asian
- 20% report as Hispanic/Latino ethnicity

Eco Innovation District Goals

- ▶ Create a more vibrant, environmentally aware and sustainability-focused community
- ▶ Improve cost savings, health, quality of life for TNT area residents, while helping them to remain in place
- ▶ Demonstrate neighborhood-scale sustainability in an existing neighborhood
- ▶ Measure climate change related impacts of neighborhood scale change
- ▶ Pilot new ways of cooperation and partnership as a demonstration for other neighborhoods in Boston and beyond



Provide additional “Eyes on the Street” through front doors, windows and decks facing the street

Establish distinct street edge with mixed use development of architectural significance



On-street parking to serve ground level retail and commercial uses

Traffic calming through textured sidewalks

Active ground level uses fronting tree lined sidewalks

Focus Areas

❖ Transit-Oriented Development

- ❑ Create new rental, ownership and business opp's near transit station
- ❑ ID opportunities to create complete streets project near transit
- ❑ ID and set aside community open space that meets community needs
- ❑ **Develop energy efficient (LEED and other standards) sustainable and architecturally interesting designs for the above**

❖ Energy Retrofits

- ❑ Work with residents (renters and owners) to do home energy assessments and home weatherization
 - Reach out to 100% of TNT residents re: assessments in Year 1
 - 15% of eligible TNT residents complete weatherization in Year 1; to 35% in Year 2; 2016 goal was 50%
 - **Engage more local businesses in NSTAR Small Business Energy Efficiency Program and then have businesses do solar through partnership with Resonant Energy**
 - Measure impact of outreach campaign and resources leveraged

Focus Areas, cont'd

➤ Local Energy Generation

- ❑ ID locations that can be used to generate solar
- ❑ **Create a pilot or demo project that supports the EID and neighborhood**

➤ Green Infrastructure

- ❑ Focus on walkability, bikeability, street level and other quality of life amenities, including:
 - ❑ Create a Green Infrastructure pilot to highlight benefits
 - ❑ **Tree planting in resident yards and on CSNDC properties; measure impact via iTree**
 - ❑ **Green infrastructure integrated into the streetscape, CSNDC properties, and in resident yards, along with related long term job opportunities**
 - ❑ Pursue LEED-ND and EcoDistricts certifications
 - ❑ **Traffic calming for improved and safer walking and biking**
 - ❑ Branding via signage and destination creation

Slow Streets Traffic Calming Elements



Slow Streets Gateway Treatment



Source: New York City Neighborhood Slow Zones







Green Infrastructure Pilot on Bus Stops









TNC Urban Horticulture Training













Why Green Infrastructure??



Goal Alignment and Opportunity

► City Needs

- ❑ Reduce flooding, related property damage and costs through an increased number of GI projects
- ❑ Create opportunities for qualified contractors and workers to install and maintain GI projects throughout the city

► Neighborhood Needs

- ❑ Reduce flooding, and related property damage and costs
- ❑ Reduce urban heat island effect
- ❑ Ongoing jobs with good pay and ladder of success in new types of employment (ie, Green Economy)

Opportunity Pathway

► City Required to Install GI as Part of EPA Mandate:

□ Includes:

- ❖ Boston Water and Sewer Authority
- ❖ Boston Parks Department
- ❖ Boston Transportation Department
- ❖ Public Works Department



Opportunity Pathway

- ▶ National Green Infrastructure Certification Program (NGICP) is being offered in cities around the US (ANSI certification pending)
- ▶ As of September, there were only approximately 360 people in US certified; primarily in cities: Pittsburgh, DC, San Francisco, San Leandro, Milwaukee, Cleveland, Gainesville, New Orleans, Tuscon, Cincinnati, etc.
- ▶ Boston offered its first training this summer; 10 attended
- ▶ BWSC and other partners plan to offer 3-4 trainings/year
- ▶ BWSC and other city agencies will start to require the NGICP certification in next 6-9 months

Opportunity Pathway

- ▶ Contractors, WBE/MBE's, and individuals get NGCIP certified
 - ❖ 35 hour training
 - ❖ 130 hour training
- ▶ Partnership with TNC's North American Cities program allows CSNDC to cover the cost of the training (\$500) and exam (\$200) for at least 10 people that pay \$100
- ▶ Highlight job opportunities on CSNDC Fairmount Jobs N/W, website, social media

Opportunity Pathway

- ▶ Can CSNDC or another entity/individual create a GI jobs clearing house to fill what will be a growing need over next 30 years?
- ▶ If so, what other services can we provide?
 - Billing?
 - Contracts?
 - Supplemental health care through a GI or related Guild?
 - Connection to unions?

Partnerships....

A key component of an ongoing process....

Talbot Norfolk Neighbors United The Boston Project Ministries Codman Square Farmer's Market

Barr Foundation LISC-Boston NRDC Mayor's Office Enterprise Community Partners

Codman Square Health Center Codman Square Neighborhood Council

Millenium 10 Mayor's Office Department of Neighborhood Development Eversource

NGRID MA Clean Energy Center The Nature Conservancy

Codman Academy 2nd Church Eco Districts USGBC Boston Parks Department

BU Sustainable Neighborhoods Lab Tufts University

UMASS Boston Sustainable Solutions Lab Resonant Energy

Trust for Public Land Boston Water & Sewer Commission Boston Transportation Department



SUSTAINPVD

Mayor Jorge O. Elorza

Leah Bamberger, Director of Sustainability



Waste



Energy



Food



Water



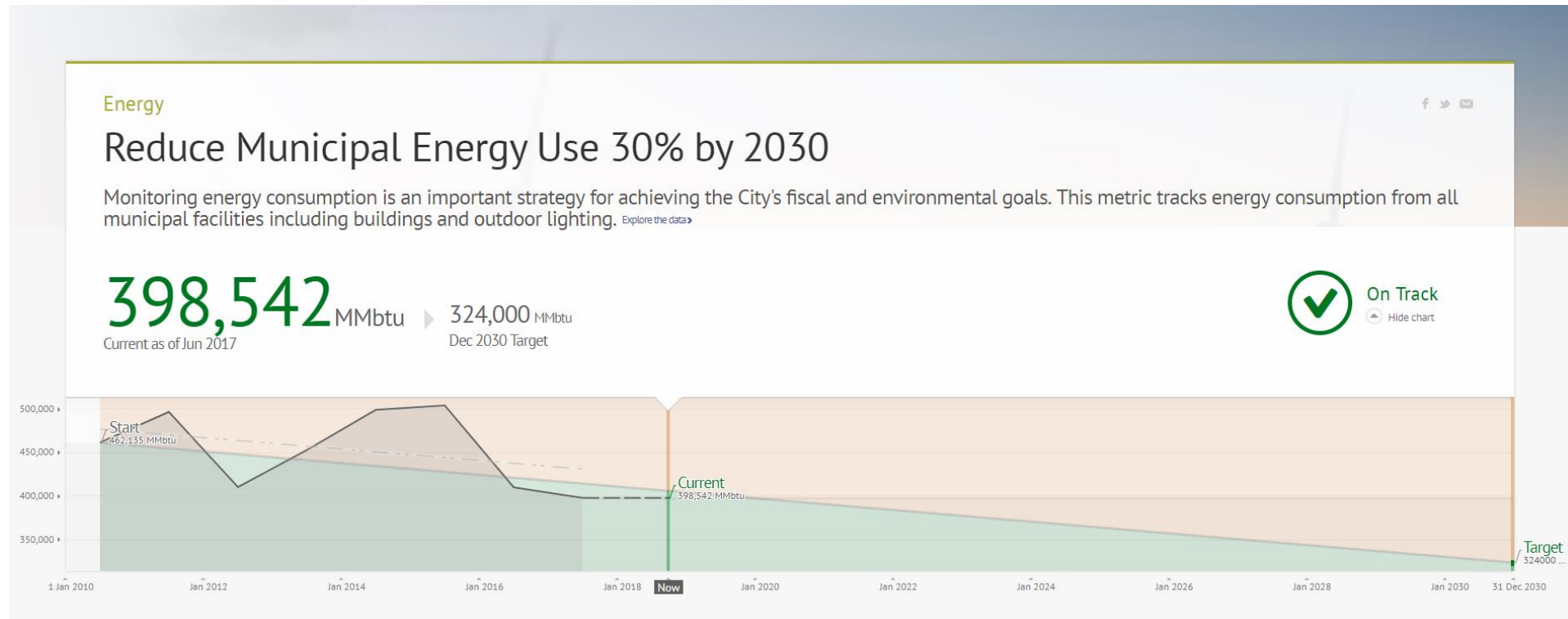
Transportation



Land Use &
Development



The City is on track to achieving its energy reduction goal



Track our progress via our Sustainability Dashboard at SustainPVD.org

We've been benchmarking our buildings since 2010

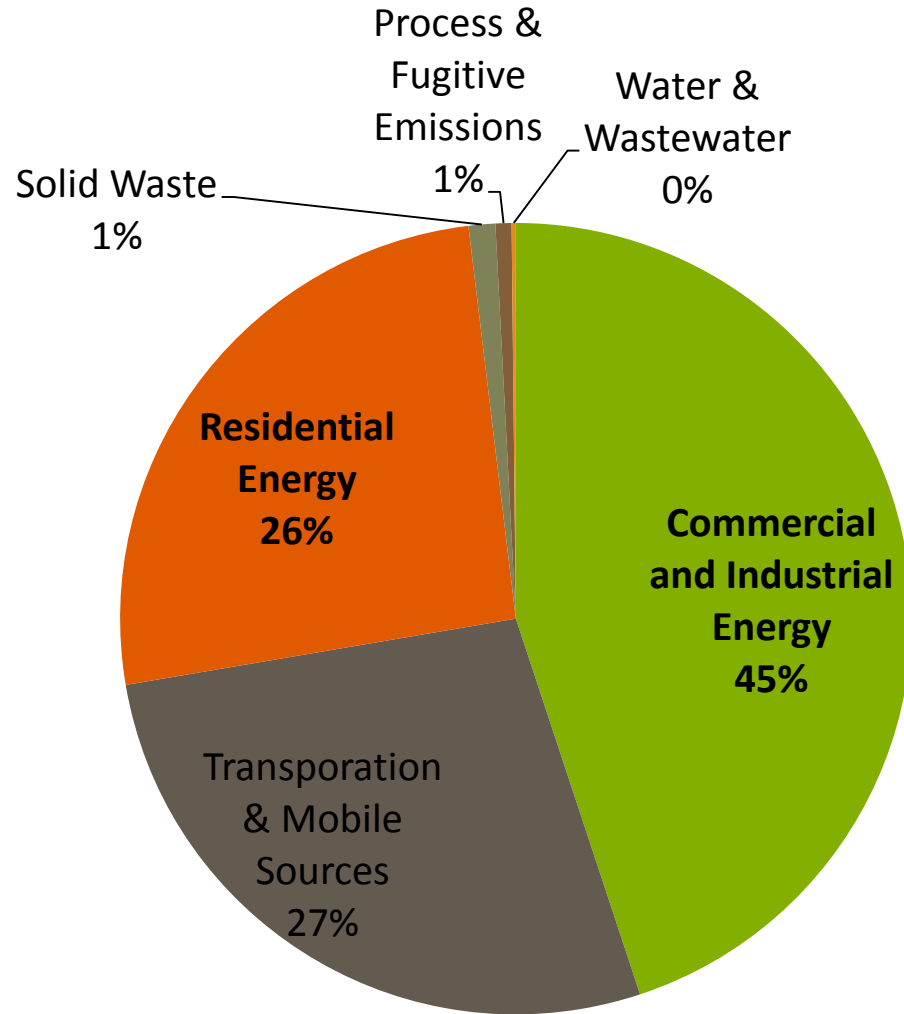


- Expenditures on energy have declined 28%
- Carbon emissions are down 26%
- Electricity consumption is down 21%
- Fuel oil has nearly been eliminated
- 29 buildings increased their Energy Star scores between 2010 and 2017

In 2016, Mayor Elorza signs Executive Order on Climate Action



Providence Carbon Emissions Profile



Buildings are 70% of the city's emissions



We're Investing in Renewables

Virtual Net Metering Project

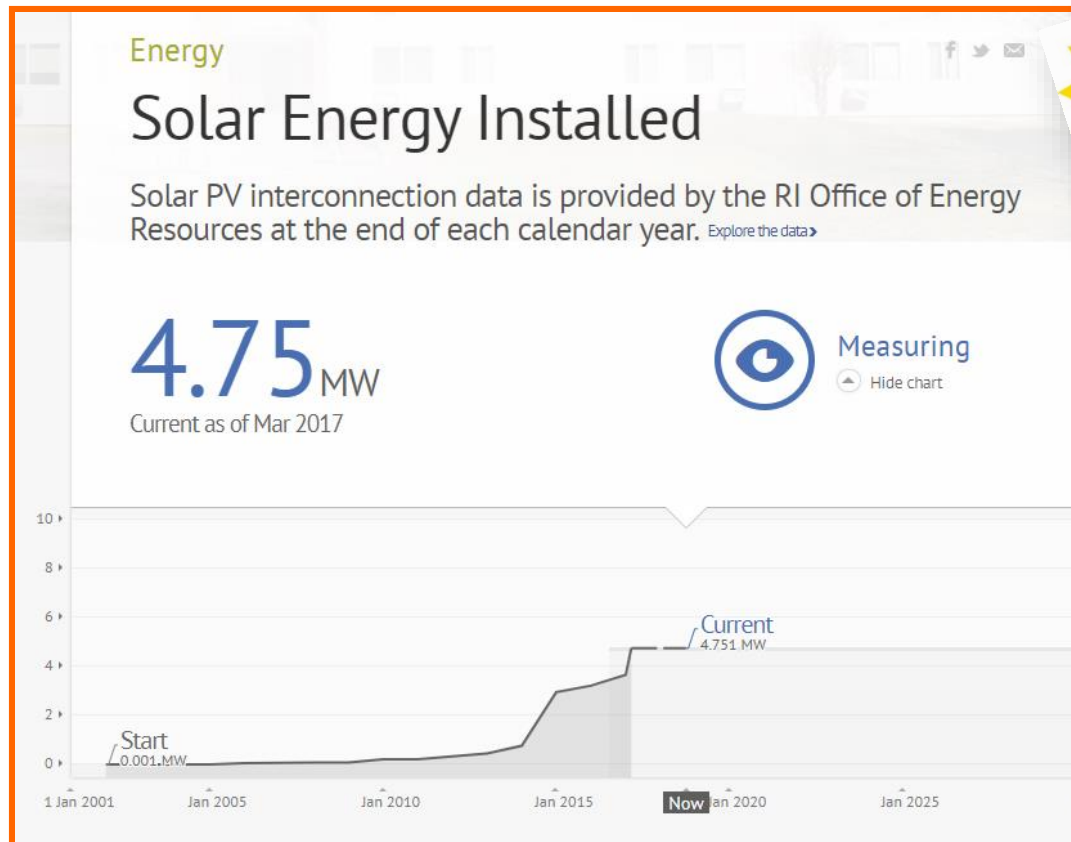
- VNM
- ~21 MW
- Over half of City's electricity consumption
- ~\$2 million in savings / year;
~70% of which goes to developer
- City saves about \$800,000 / year



And helping the community go solar



In May 2017, Providence was awarded a Silver SolSmart Designation, earning high-profile national recognition for its solar friendly zoning, community engagement, and permitting and inspection pathways.



In 2015, City participated in the SolarizeRI program which resulted in 32 contracts signed for a total 191.6 KW of solar capacity installed.

Welcome to **#CityEnergyProject** Providence



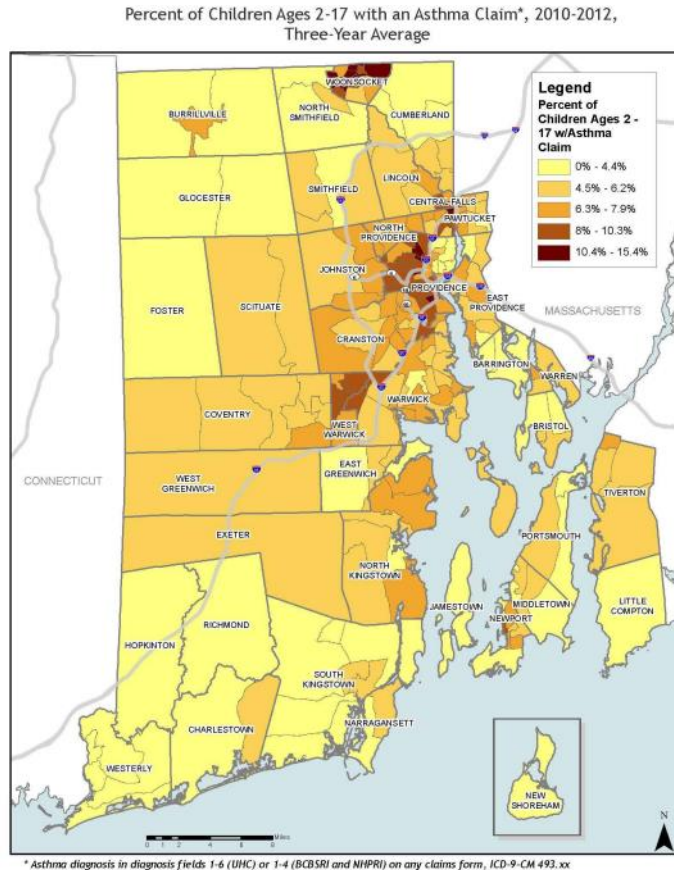
Environmental burden is not equally shared

Providence ranks:

- 5th highest in nation for income inequality (Brookings)
- 5th highest in nation for low-income energy burden (ACEEE)
- Most polluted county for air quality in the Boston-Worcester-Providence metro area. Received an F for high ozone days (American Lung Association)

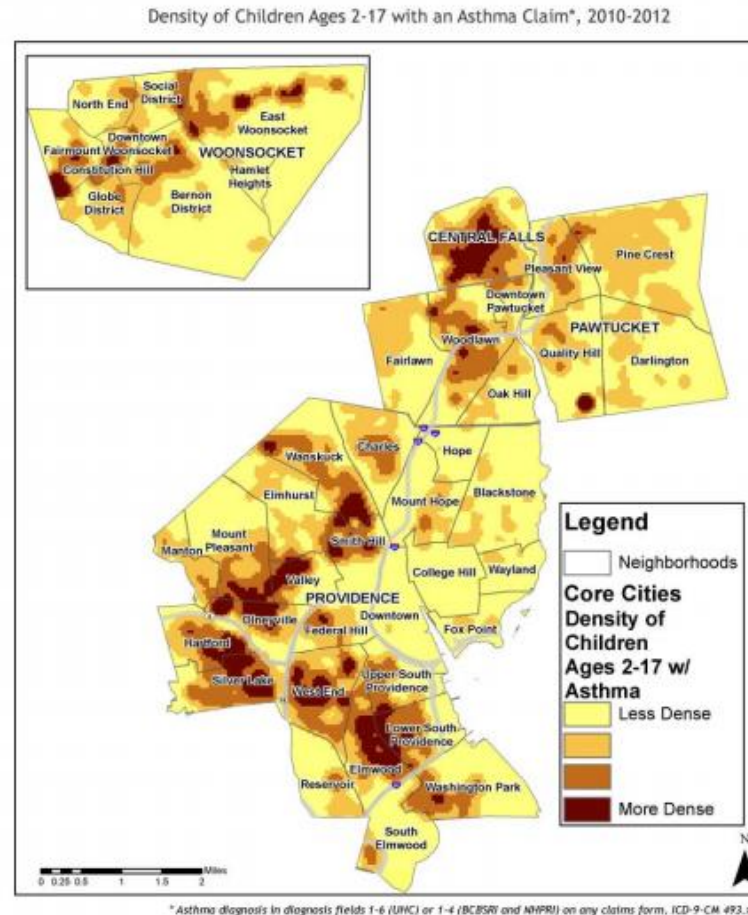


Providence's low-income neighborhoods have some of the highest asthma rates in the state



Rhode Island State Plane Feet, NAD83
Data Sources: Census 2010, American Community Survey 5-year (2007 - 2011),
Rhode Island Geographic Information System (RIGIS),
Neighborhood Health Plan of Rhode Island, United Healthcare of New England,
Blue Cross & Blue Shield of Rhode Island, Rhode Island Department of Health

Map Produced by: The Providence Plan
For: Rhode Island Department of Health

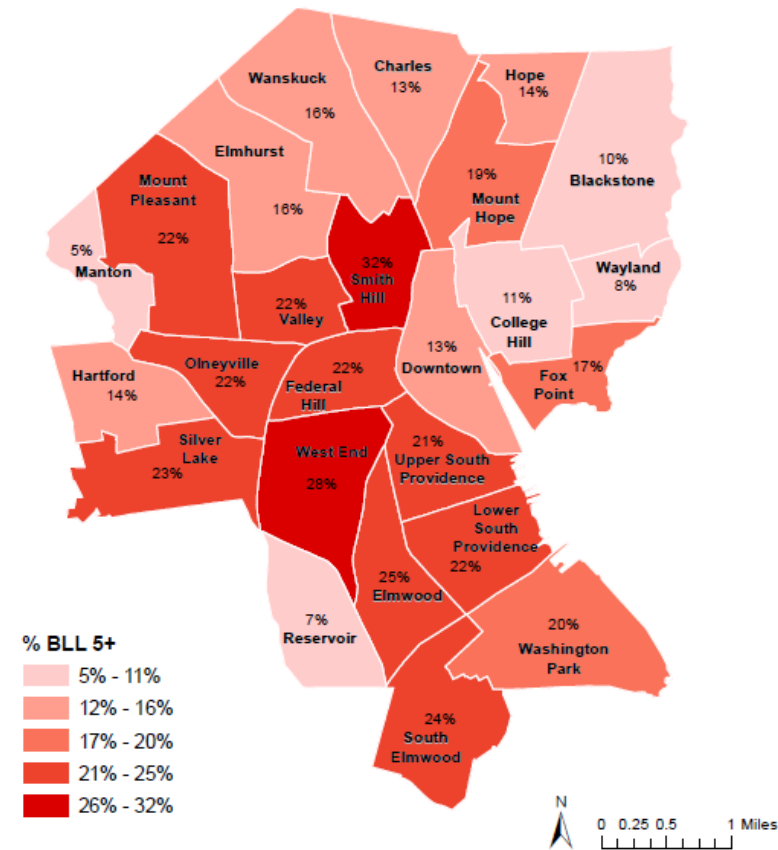


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Map Produced by: The Providence Plan
For: Rhode Island Department of Health

And highest
lead poisoning
rates

Kindergarten-Aged Children Who Have
Had Elevated Blood Lead Levels
In Providence, 2014



Statewide average = 12.4%

Source: Rhode Island Department of Health Lead Elimination Surveillance System, Rhode Island GIS

Note: The population includes the total number of children eligible to enter school in fall 2014 (born between 9/1/08 and 8/31/09) with at least one confirmed lead test. Elevated blood lead levels are defined as at least one confirmed lead test of 5 micrograms/deciliter or higher in the child's lifetime.

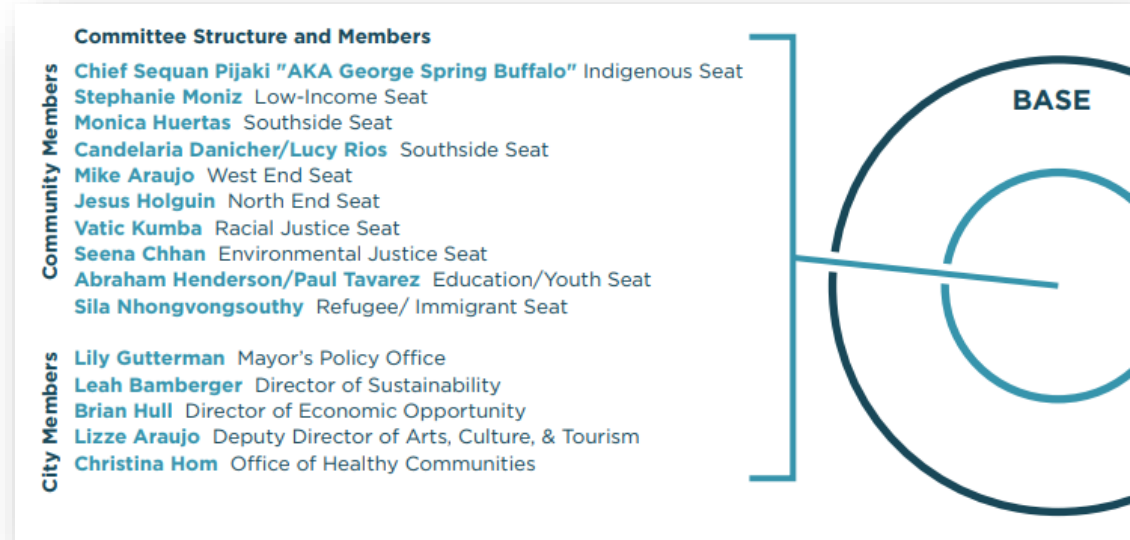
ProvPlan

What are we sustaining?
And for who?

Equity in Sustainability Initiative

Racial & Environmental Justice Committee

- Identify key concerns, issues and needs of the community
- Base-building
- Racial Equity Trainings
- Provide recommendations for a long-term process and structure



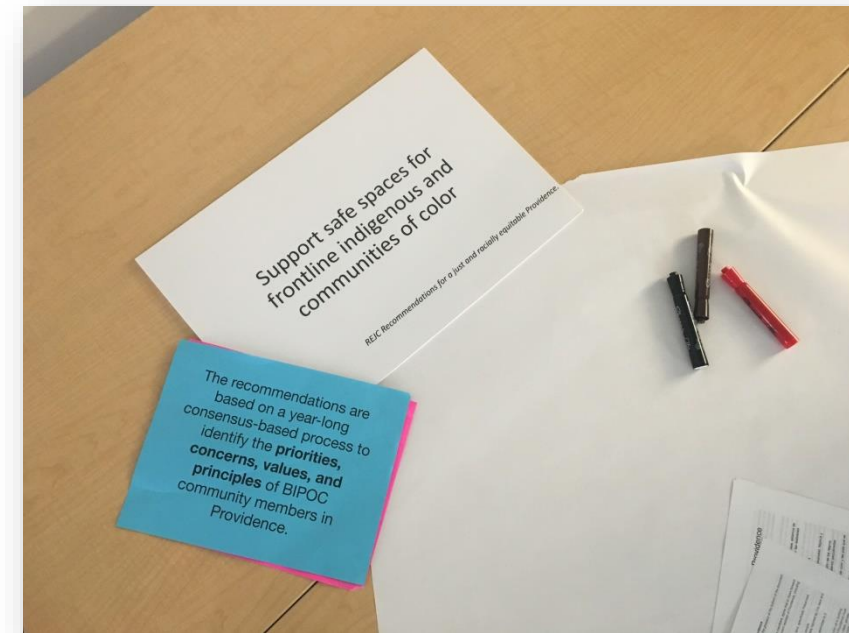
UNDOING RACISM

The People's Institute
For Survival and Beyond

Recommendations for a Racially Equitable and Just Providence

A Racially Equitable and Just Providence...

- Moves us toward el Buen Vivir
- Supports safe spaces for frontline communities of color
- Knows people are sacred and respects their cultures and traditions.
- Upholds self-determination
- Co-creates and co-leads governance with frontline communities of color and the City of Providence to protect the space for communities' self-determination, and ensure equitable access to resources, information, and power.
- Values education for our children and youth. Education is a fundamental right for our children and youth
- Practices local, regional, national and international solidarity
- Creates meaningful work.
- Requires building a sustainable local economy now, one in which we produce and consume to live well without living better at the expense of others.
- Respects community rights to land, water, and food sovereignty
- Works to end the extractive economy.



Carbon Neutral Strategy Development



Grant
Awarded:
Oct. 2017

Community
Leaders
Program:
July – Nov.
2018



Draft Report
for Public:
~Jan. 2019



Thank You!

Lbamberger@ProvidenceRI.gov

SustainPVD.org

Facebook.com/SustainPVD

Twitter.com/Sustain_PVD





City of Hartford, CT Office of Mayor Luke A. Bronin

Office of Sustainability

October 2, 2018

HARTFORD
CLIMATE ACTION PLAN

OFFICE OF SUSTAINABILITY

MISSION & OVERVIEW



In 2015, Mayor Luke Bronin established the Climate Stewardship Council to dramatically improve community resilience while advancing the local economy, improving public health, and promoting social equity through environmental stewardship initiatives.

The CSC's Climate Action Plan was adopted by the City Council in January 2018.



HARTFORD

CLIMATE ACTION PLAN





VISION SUMMARY



ENERGY

Cleaner, cheaper, and more reliable energy that reduces the likelihood of power outages during storms, creates green jobs, reduces fossil fuel dependence, and cuts energy costs for all.



FOOD

Nutritious food that is locally grown or non-carbon-intensive, and is readily available across all neighborhoods, leading to improved health and greater resiliency for area families.



LANDSCAPE

Private and public landscapes filled with trees and meadows that together mitigate the effect of high heat days and flooding, provide ecosystem services, offer recreation, and clean our air.



TRANSPORTATION

A multi-modal, affordable transportation network with safe biking and walking options and fewer vehicle-related emissions, which improves air quality and cuts asthma rates.



WASTE

Eradication of the worst trash and blight, and public education that boosts diversion, recycling and reuse rates—which in turn cuts costs, related emissions, and environmental degradation.



WATER

More efficient use of potable water, better protection against floods and droughts, and waterways made cleaner through green infrastructure that reduces and cleans stormwater runoff.

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TIMELINE OF CLIMATE ACTION



The Planning & Zoning Commission creates the Climate Stewardship Council, which convenes nonprofits, regional and state governments, and private businesses to collaborate on sustainability and draft a Climate Action Plan.



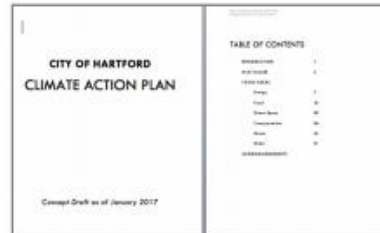
The Climate Stewardship Council launches a website, which includes "What Can You Do?" pages, has an interactive map developed by Trinity College students, hosts a regularly updated blog, and has a "Contact Us" page to welcome feedback.



A Twitter account, @hartford-climate, is created to publicize events, initiatives, and Climate Action Plan milestones.



Graduate students from UConn work with members of the Climate Stewardship Council and the broader community to research and draft sections of the Climate Action Plan, and publicly present their work.



A concept draft, based largely on the students' work, is discussed by the Climate Stewardship Council, and feedback is incorporated into the ongoing drafting process.



Climate Stewardship Council members present the concepts behind the Climate Action Plan to a wide variety of groups. Pictured is a presentation to Hartford 2000, which is the umbrella association of all neighborhood revitalization zone associations.

2016

2017

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TIMELINE OF CLIMATE ACTION



The Climate Stewardship Council cohosts a conference at UConn Law School on municipal climate policy, drawing over 200 people. Leaders from New York City, Los Angeles, Portland, and other places explained their cities' climate action efforts, and an afternoon workshop focused on the six action areas of Hartford's Climate Action Plan. Pictured top right, the Food focus group.



Mayor Luke Bronin hosts a Town Hall on environmental issues, entitled, "A Cleaner, Greener, Healthier Hartford," asking for public feedback on a draft of the Climate Action Plan.



The City cosponsors several workshops, in the North, South, and West Ends of Hartford, to offer information to homeowners about solar energy options. Pictured is the workshop at Hartford Public High School.



Mayor Bronin creates a Sustainability Office, hiring a coordinator (Shubhada Kambli, above) with support from Partners for Places and the Hartford Foundation for Public Giving, and a green infrastructure team with support from UConn's CT Institute on Resilience and Climate Adaptation.

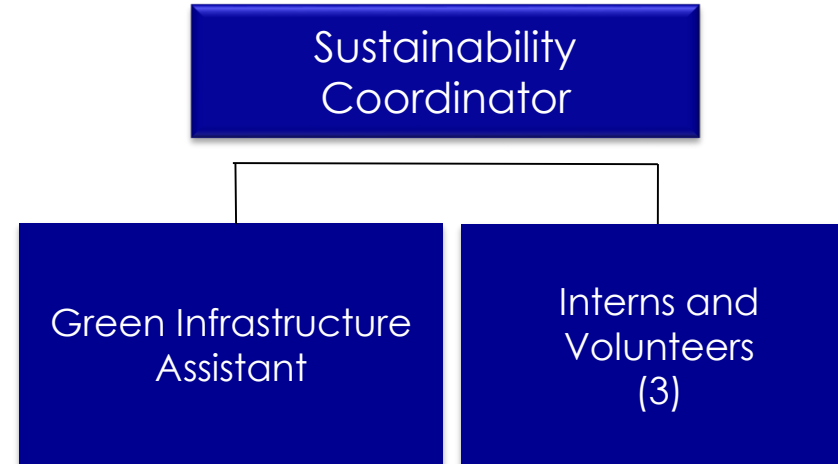


After more public meetings and feedback, the Climate Stewardship Council and Planning & Zoning Commission adopt the Climate Action Plan. Everyone celebrates!

2017

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ORGANIZATIONAL STRUCTURE



INTERNS AND VOLUNTEERS

Given the size of our Office and scope of the work, we work closely with faculty and staff from local institutions, and have had a series of interns from UConn, CCSU, Trinity, and the University of California at Berkeley. Their work products range from videos to successful grant writing and renewable energy outreach.

This fall, we will be continuing to work with the Greater Hartford Consortium for Higher Education, and the Trinity Action Lab to create high-quality learning experiences for students, while also supporting climate action efforts.

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PARTNERSHIP MODEL



The Office of Sustainability team works with colleagues across the city to implement projects related to the Climate Action Plan.



OFFICE OF SUSTAINABILITY

PARTNERSHIP MODEL



The Office of Sustainability works with stakeholders across the community, including members of Boards and Commissions. We also held a series of climate action meetings this year, to engage residents.

Boards and Commissions		Climate Action Area	Date	Facilitator/Host
Energy	Energy Opportunities, EID Board DEEP / MIRA Community Outreach	Energy/Transportation	January 2018	BiCiCo
Food	Food Policy, FP Working Group, School Gardens	Landscape/Water	February 2018	KNOX
Green Infrastructure	MDC/DDS, Complete Streets, PRAC	Food/Waste	March 2018	KPSP, Blue Earth
General	ACOTE, Discussion Groups Sustainable CT (Board)			

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COMMUNITY ENGAGEMENT



Our climate action meetings reached new groups of residents, including youth of color who participated in multiple meetings.

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Great work in all action areas...

- A fuel cell microgrid in the Parkville neighborhood that provides power to a local grocery store and gas station during outages.
- A 1-MW solar array atop the former landfill in North Meadows.

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- An ambitious \$5 million conversion of streetlights to LEDs.
- The City was recognized as an inaugural Department of Energy Gold “SolSmart” City and received an award in 2016 from the Connecticut Conference of Municipalities.
- In addition, the city’s new, award-winning zoning code, online at www.hartford.gov/landregs, promotes solar and wind energy, as well as electric vehicle charging stations, urban agriculture and green roofs.

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GOAL 1: Improve Energy Efficiency of Public Properties



PUBLIC HEALTH



ECONOMIC DEVELOPMENT



SOCIAL EQUITY

Energy efficiency means wasting less energy by making physical or behavioral changes. To make a building more energy efficient, for example, you might first conduct an audit to see where you are losing energy. You might benchmark your building against similar buildings, to see how you measure up. And then you might retrofit it with insulation, storm windows, or a new roof to keep the cold and heat out.

Hartford's municipal buildings and infrastructure must become more energy efficient, so that taxpayer money can be put toward more productive use. The City is already making a strong effort to audit, benchmark, and retrofit Hartford's municipal and school buildings in partnership with Eversource, energy service companies, the Board of Education, and the Department of Public Works.

Over time, these efforts will pay dividends. City staff is in the process of measuring pay-offs and assessing which public buildings qualify for EPA's ENERGY STAR designation, which would indicate that they meet energy efficiency standards relative to other buildings of similar type across the country.

Below are an array of strategies to continue making our public facilities energy efficient.

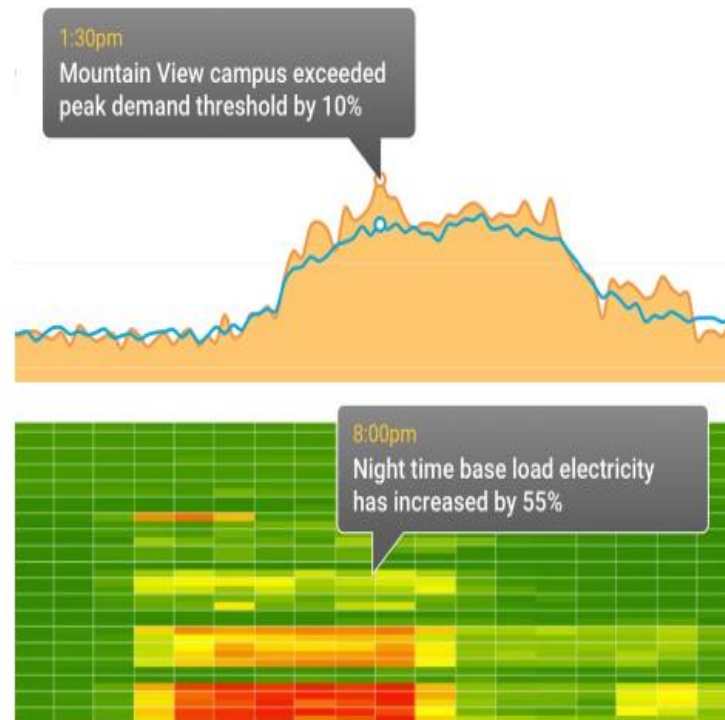
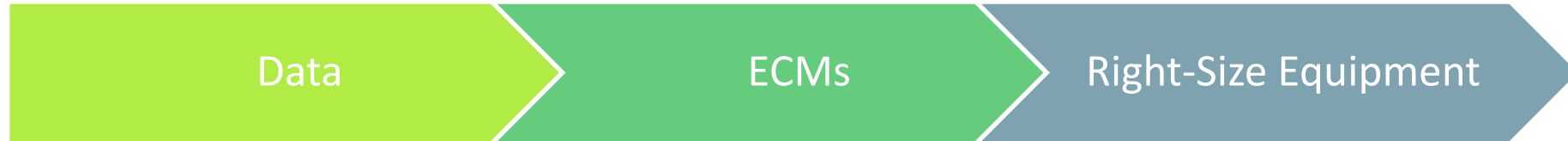


The Public Safety Complex, which houses police and fire headquarters, has saved 10% in energy reductions from the baseline year in 2014, due in part to retrocommissioning and efficiency suggestions from a third party partner.

#	STRATEGY	TYPE	PURPOSE
a	Collect and Analyze ENERGY STAR Data for Enrolled Public Buildings	Inventory/ Assess	Measure energy consumption reductions over time for benchmarking and retrofit efforts.
b	Enroll More Public Buildings in ENERGY STAR Program	Inventory/ Assess	Measure energy consumption reductions over time for benchmarking and retrofit efforts.
c	Join US DOE's Better Buildings Program	Partnership/ Advocacy	Receive technical assistance, peer-to-peer knowledge sharing, and national recognition for improving building energy use.
d	Upgrade and Install New Technology in Public Buildings	Physical Change	Reduce energy use and costs, saving taxpayers money.
e	Conduct a "Challenge" Among School Users	Program/ Plan	Encourage energy savings through behavioral change, saving taxpayers money.
f	Replace Streetlights with High-Efficiency LEDs	Physical Change	Reduce energy use and costs related to streetlights, saving taxpayers money.
g	Encourage Other Governments to Improve Building Efficiency	Partnership/ Advocacy	Reduce energy use and costs, saving taxpayers money.



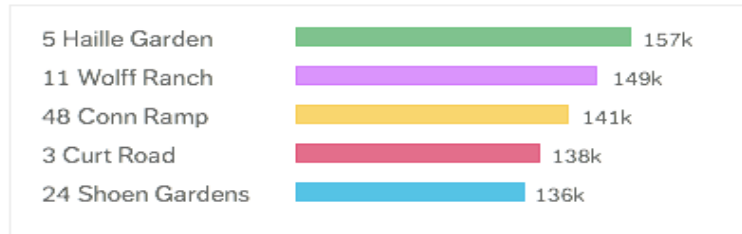
Strategic Framework: Building Energy Use



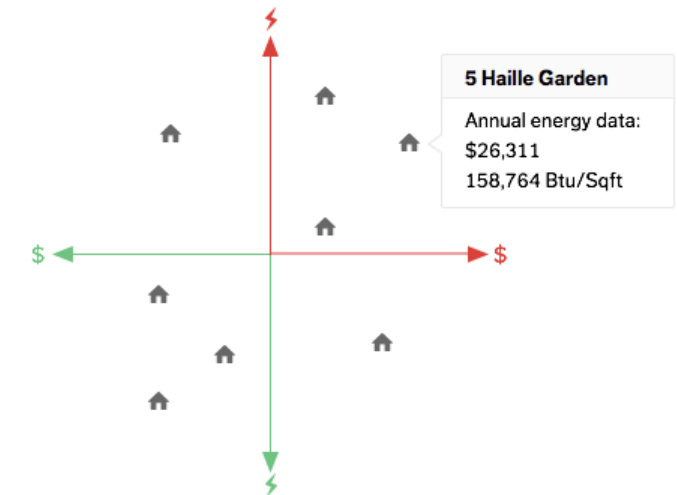
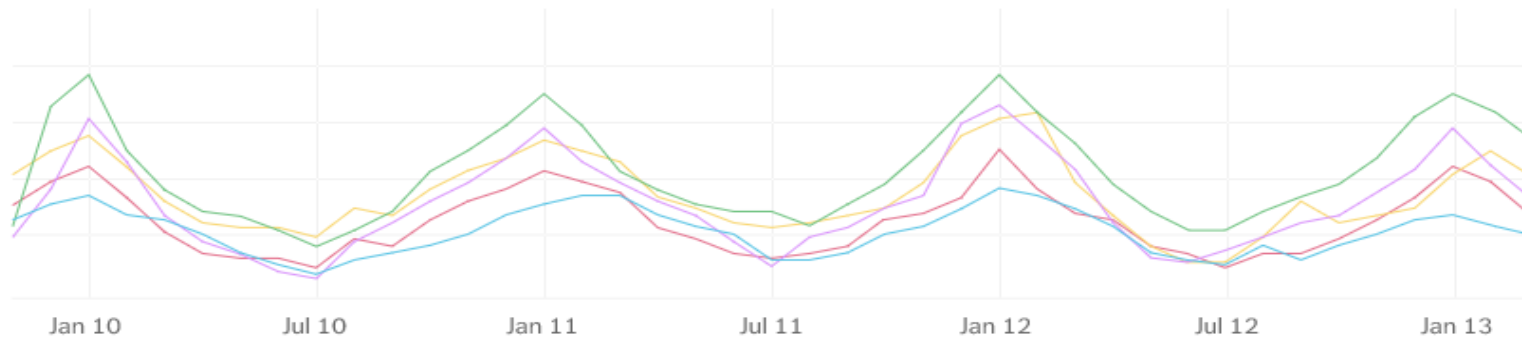


Energy Dashboard

Track your Energy Usage



Following the one-time setup, your utility data will automatically flow into the WegoWise platform each month for ongoing tracking and analysis. You can compare utility usage across buildings, developments, regions, retrofit categories, and other customized groupings. You can also compare across tenant units within a given building.



Project	Summary	Partners
Streetlights	Upgrade of streetlights to LEDs, improving efficiency and rate tariffs.	CT DEEP, Eversource, Vendors
Parkville Microgrid	Fuel cell powers school, library, senior center, health center, grocery, gas station.	CT DEEP, Constellation, Eversource
Waste Incinerator	Proposal to replace an aging waste-to-energy incinerator.	DEEP, MIRA, Boards and Commissions
Energy Conservation	Includes a range of energy efficiency measures, particularly at schools.	Colliers, Eversource
LRECs and VNM	Two contracts support renewable energy access plus cost savings.	CTEC, CT Green Bank, VFS
Benchmarking	Working to analyze most energy intensive buildings.	WegoWise, BOE, DPW, ENERGY STAR, Eversource
Shared Solar	Allows residents to buy renewable energy without installing equipment. Payment per kWh is capped and made through utility bills.	City Council, CSC
Resident Climate Action Groups	Building upon the work of the CSC, the Office of Sustainability is holding climate action meetings.	BiCi Co, CT Green Bank, Posigen, Chispa, LimeBike
Sustainable CT	The City of Hartford joined the Sustainable CT municipal environmental certification program.	CSC



We anticipate hundreds of thousands of dollars in savings from two energy projects related to renewable energy credits and virtual net metering credits.

- **Energy Dashboard.** We also have a brand new energy dashboard, funded with a 2018 Bright Ideas grant, to track building performance and energy reductions over time. Notably, additional Bright Ideas funding secured in FY 18 also supports a paid fellow and intern in FY19.
- **LRECs.** We will be receiving approximately \$104,000 in savings per year for the term of the VFS fuel cell contract.
- **Streetlights.** More extensive savings will be achieved through the streetlights retrofit project funded by a \$5 million DEEP grant.

OFFICE OF SUSTAINABILITY

RESULTS



TRANSPORTATION

- **LimeBike.** LimeBike dockless bikeshare came to Hartford in June. By August, there were 400 bikes in the city and over 30,000 rides taken.
- **Commuter Rail.** A new commuter rail service started in June. There were 21,850 riders during the first weekend.
- **Complete Streets.** Development Services, with support from staff across the city, is finalizing a Bike Plan. This complements Complete Streets efforts, which make our streets safer for walkers and bikers.
 - From May to October, there were monthly public bike rides in our city parks.
- **Electric Vehicles.** Hartford is home to the state's largest EV charging cluster at 777 Main Street.



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RESULTS



The Office launched a residential program to capture rainwater for use on lawns and gardens, diverting stormwater from basements and the combined sewer.

- **Earth Day.** Our Earth Day tree tags were on Champion trees across the city, raising awareness about the value of trees.
- **Zoning Code.** Working with the Planning and Zoning Commission, our Green Infrastructure Assistant also supported the elimination of parking minimums and introduction of stormwater fees.
- **Green Infrastructure.** The team also developed a best practices guide and runoff analysis tool, and worked with graduate students to develop a cost-benefit calculator.





Measuring Success: Quantitative and Qualitative Analysis
"You can't manage what you don't measure..."

Measure	Analytical Tool
Number of residents positively impacted	Communications: Web analytics, outreach counts Projects: Number of residents served
Cost savings	Cost-benefit projections, actual
Environmental benefits	GHG calculators, stormwater absorption (projections, actual)

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Thank you!

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Follow us @hartfordclimate
