

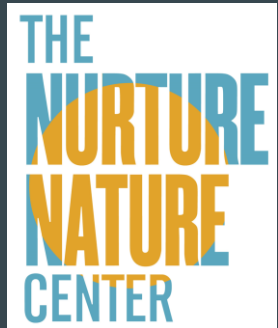


Easton is creating a Climate Action Plan!

Easton Climate Action Plan and Shared Energy Manager



Nurture Nature Center
City of Easton
2022



City of
EASTON
PENNSYLVANIA

Building community resiliency to environmental risk through informal science education, art-centered approaches to learning, and community dialogue and networking.

Featuring NOAA's Science on a Sphere™ suspended globe and other exhibits.



Join us!

SCIENCE PROGRAMS • COMMUNITY DIALOGUE • ART EXHIBITS
URBAN GARDEN • SCIENCE ON A SPHERE • FILMS • KID'S CRAFTS • ENVIRONMENTAL

Nurture Nature Center
518 Northampton Street
Easton, PA 18042

Home of
BUY FRESH BUY LOCAL
GREATER LEHIGH VALLEY



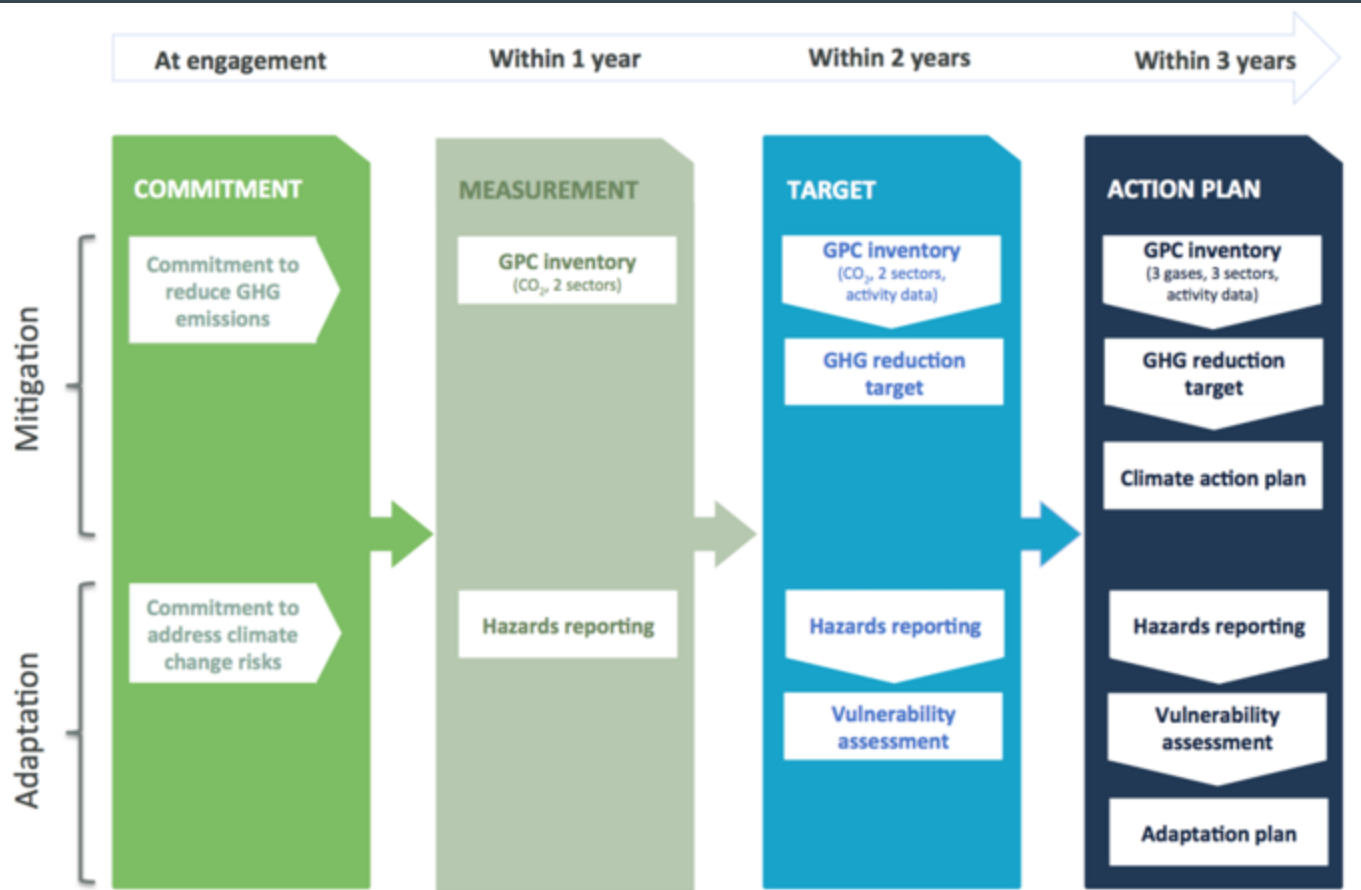
From Flooding to Climate



Hazards as entry point for climate and resiliency discussions...



City of Easton Global Covenant Timeline



Why develop a Climate Action Plan?

- Plan will help reach the emissions reduction target goal
- Strategies have co-benefits including economic, public health, sustainability, livability, environmental, social, and more.
- DEP will pay for a shared energy manager
- In line with PA State and other neighboring cities

Engaging the Community

Easton Climate Action Plan Draft - Community Feedback Survey

We are looking for your feedback so that we can make any needed adjustments before creating the final Climate Action Plan (CAP) for the City of Easton. Other than the first two questions, all sections of this survey are OPTIONAL, so you can give your thoughts on anywhere from just one sector to all 10 sectors in the plan. This survey has space for feedback on each sector of the climate action plan as well as general feedback in the following order:

- Municipal Operations
- Commercial Buildings
- Residential Buildings
- Energy Production
- Waste, Composting, and Recycling
- Water and Wastewater Management
- Transportation
- Urban Forest, Green Space, and Habitat
- Local Food & Agriculture
- Public Engagement and Education
- General Feedback



ISEECHANGE

Help the City of Easton track
extreme heat.



Vision and Objectives

1. Make the City of Easton a leader in climate actions, including sourcing clean and local energy that comes from the sun, wind, or other innovative renewable technologies.
2. Transform our buildings into energy efficient, sustainable places to live, work, learn, and play.
3. Ensure the benefits of climate action are equitably distributed and empower historically underserved populations to participate in the process of transitioning to a carbon-free community

Vision and Objectives

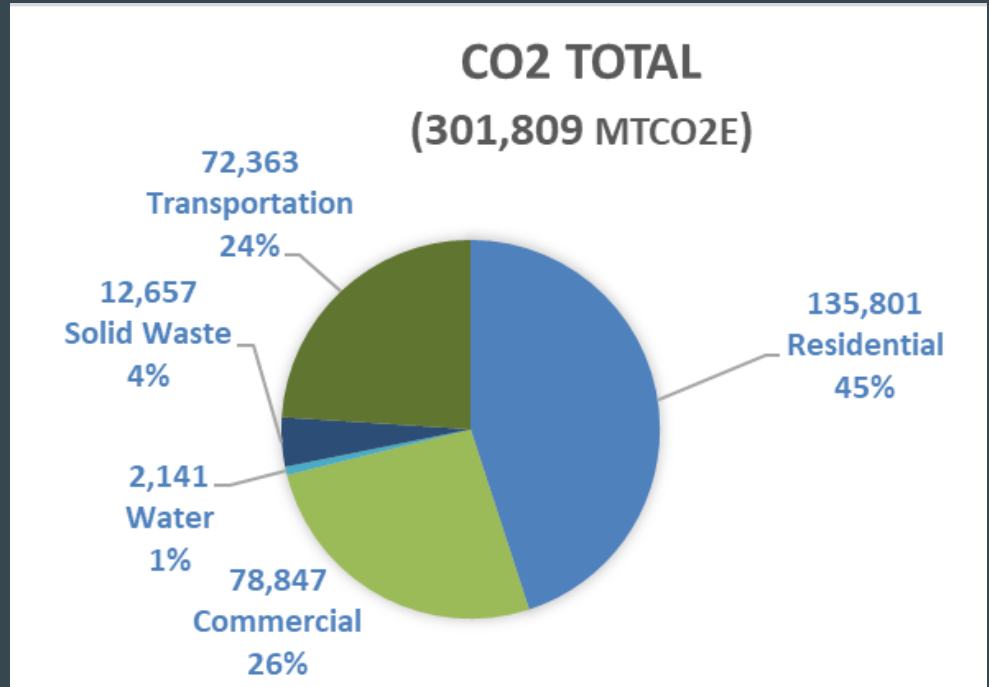
4. Transform the City of Easton into a community where people walk, bike, take mass transit, or carpool for most trips in a safe, accessible, and affordable transportation network.
5. Become a leader in sustainable, smart transportation through innovative partnerships, policies, programs, and technology.
6. Understand potential climate-related risks and mitigate these risks while preparing our community for chronic and extreme weather events.

By 2030

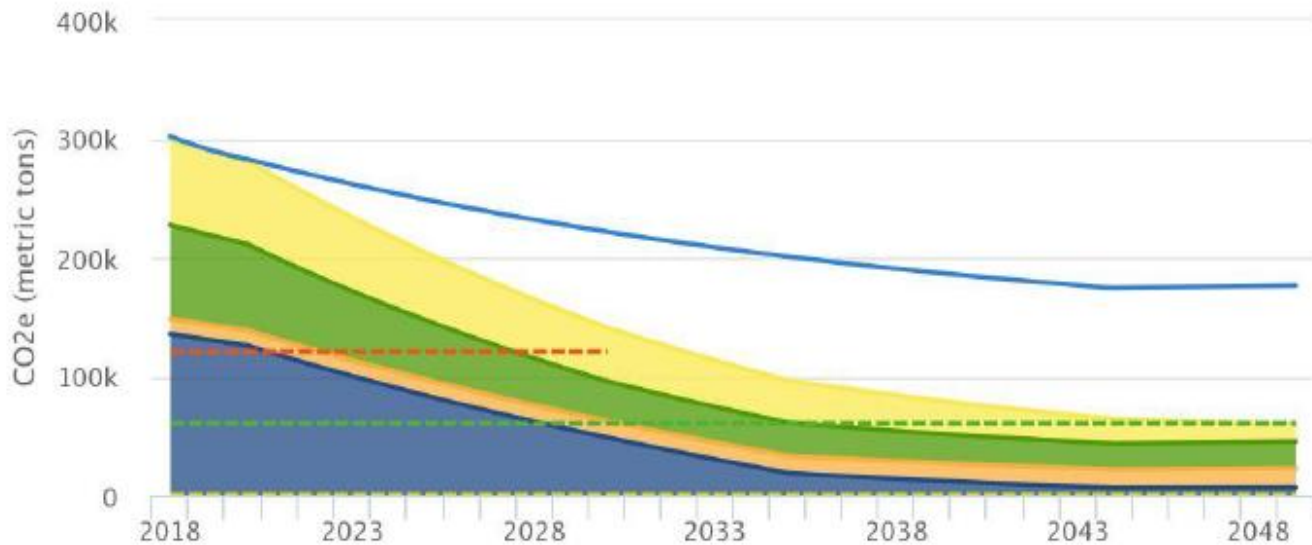
- Easton will reduce energy use in its buildings by 20%
- Easton will incentivize LEED certification or equivalent, and/or enforce net-zero building codes for new buildings
- At least 30% of new housing units are within ¼ mile of high-frequency transit are designated affordable.
- A food outlet selling fresh produce is located within a 15 minute walk
- Increase number of households reached by low-income weatherization or energy efficiency programs by 30%
- Decrease the energy costs of low-income residents by 20%
- Install roof-top solar on homes of 20% of low and moderate income residents

2018 GHG Inventory

Emissions
Reduction
Target:
80% by 2050
30% by 2030



Projected CO2e Values With Reductions Applied







- Transportation & Mobile Sources
- Commercial Energy
- Solid Waste
- Water & Wastewater
- Residential Energy
- Original Forecast
- - Emission Goal 2050 Reduction Goal
- - Emission Goal 2030 Reduction Goal
- - Net 0 2050 Reduction Goal





Plan Structure

- 10 sectors
 - e.g. Residential Buildings, Energy Production, Transportation, etc.
- Objectives within each sector
 - e.g. “Maximize energy generated by small-scale renewable systems”
- Strategies to achieve each objective
 - e.g. “promote funding opportunities for rooftop solar”





Municipal Operations

Objective	Supporting Actions	Co-Benefits	Reduction Potential
MO 1 – Continue to reduce emissions from municipal operations	EP 2, EP 3, WR 3, WW 2, TR 2		
MO 2 – Implement Easton's Climate Action Plan	EP 1, PE 1, PE 3		





Transportation

Objective	Supporting Actions	Benefits	Reduction Potential
TR 1 – Reduce vehicle miles traveled by single-occupancy vehicles	UF 2, LF 1, PE 1		
TR 2 – Support adoption of electric vehicles (EVs)	MO 1, EP 3, WR 3, PE 1		

Commercial Buildings

Objective	Supporting Actions	Co-Benefits	Reduction Potential
CB 1 – Decrease emissions from existing commercial and industrial buildings	EP 1, EP 2, EP 3, UF 1		
CB 2 – Ensure new commercial and industrial buildings are constructed to minimize emissions	EP 2, UF 1, UF 2		

Residential Buildings

Objective	Supporting Actions	Benefits	Reduction Potential
RB 1 – Support retrofits and energy efficiency measures in existing residential buildings and homes	EP 1, UF 1, PE 1, PE 2		
RB 2 – Ensure new residential buildings and homes are built to maximize energy efficiency	EP 1, EP 2, EP 3, UF 1		

Commercial Buildings

Objective

CB 1 - Decrease emissions from existing commercial and industrial buildings

CB 2 - Ensure new commercial and industrial buildings are constructed to minimize emissions

CB 1 includes benchmarking and disclosure of energy and water use, educational and incentive programs for retrofits, appliance/heating system replacement, and energy efficiency measures

CB 2 includes updating building codes and encouraging sustainable building standards such as net-zero emissions standards or LEED (Leadership in Energy and Environmental Design) Standards

Residential Buildings

Objective

RB 1 - Support retrofits and energy efficiency measures in existing residential buildings and homes

RB 2 - Ensure new residential buildings and homes are built to maximize energy efficiency

Supporting Actions

EP 1, UF 1, PE 1, PE 2

EP 1, EP 2, EP 3, UF 1

Benefits



Reduction Potential









Community Spotlight: Green Building United



Strategy CB-1D: Conduct outreach and/or trainings regarding the benefits of energy efficiency measures

Strategy RB-1D: Educate homeowners about the comfort and cost-saving benefits of energy efficiency measures

Energy Production











Objective	Supporting Actions	Benefits	Reduction Potential
EP 1 – Educate residents and businesses about the benefits of renewable energy and the options available to them.	PE 1, PE 2		
EP 2 – Maximize energy generated by small scale renewable energy systems within the city	CB 1, CB 2, RB 1, RB 2		
EP 3 – Support policy changes that expand renewable electricity options for all Easton residents	PE 1, PE 2		

Community Spotlight: Easton Public Market















Strategy EP-2A: Publicize and expand existing incentives for installation of rooftop solar on residential and commercial properties. Revise any building codes that may act as obstacles to solar installation.





Waste, Composting, and Recycling

Objective	Supporting Actions	Benefits	Reduction Potential
WR 1 – Reduce solid waste generation	LF 1, LF 2, PE 1, PE 2	 	
WR 2 – Increase recycling and composting to redirect waste away from landfills	LF 1, PE 1, PE 2	  	
WR 3 – Reduce emissions from current waste management practices	MO 1	 	





Water & Wastewater Management

Objective	Supporting Actions	Benefits	Reduction Potential
WW 1 – Use stormwater best management practices	UF 1, UF 2, LF 1, PE 1	   	
WW 2 – Implement energy conservation at the wastewater treatment plant	MO 1, EP 2	 	
WW 3 – Protect floodplains and riparian areas	WR 1, WW 1, UF 2	  	







Urban Forest, Green Space, and Habitat

Objective	Supporting Actions	Benefits	Reduction Potential
UF 1 – Continue to grow Easton’s urban forest	WW 1, WW 3, PE 1, PE 2		
UF 2 – Increase and enhance Easton’s green space for the benefit of both native species and Easton residents	WW 1, WW 3, TR 1, LF 1		

Local Food & Agriculture

Objective	Supporting Actions	Benefits	Reduction Potential
LF 1 – Expand food production within the city	WR 2, WW 1, TR 1, UF 2, PE 1, PE 2		
LF 2 – Support local agriculture and the local food system	TR 1, PE 1, PE 2		

Public Engagement & Education

Objective	Supporting Actions	Benefits	Reduction Potential
PE 1 – Share information about new and expanded initiatives, public education campaigns, and important city actions with regard to the CAP through a variety of channels	RB 1, EP 1, UF 1, LF 1		
PE 2 – Partner with schools to develop civic and environmental literacy in K-12 students	WW 3, UF 1, LF 1, LF 2		
PE 3 – Continued transparency, progress reports, and public engagement regarding this Climate Action Plan	MO 2		

Next Steps



- PA DEP – Shared Energy Manager, Wilson Engineering
- Energy Management Plan
- Building Benchmarking
- Pilot Energy Assessment
- NEEP Residential Energy Labeling Program?



Northeast Energy
Efficiency Partnerships

Next Steps

- Climate Action Plan dashboard
- Climate Action Plan Advisory Task Force – 9 member group that meets quarterly to assess progress, set goals and priorities for CAP implementation, first meeting this July.
- NOAA Environmental Literacy Grant submitted – enable community outreach and education in Easton and Bethlehem



City of Easton PA Climate Action Plan Dashboard


EASTON CLIMATE ACTION

How to Get Involved

Are you interested in helping Easton reach its sustainability and climate action goals? Everyone can make a difference. Start by looking at the CAP outline in the website - what strategies are you most interested in and might be able to contribute to? What behaviors or actions do you do at home that you could adjust to reduce emissions? Let us know! (If you have ideas, comments, or suggestions here [LINK](#) to email form to submit inquiries)



MUNICIPAL OPERATIONS



City of Easton is directly responsible for a subset of total community emissions resulting from government buildings, City of Easton fleet vehicles, and management of city-owned land. The actions listed in this section not only reduce the portion of community emissions attributable to city operations, but also present opportunities for the City of Easton to model best practices for cutting emissions and maximizing co-benefits. [More here](#)

Low income families struggle to stay cool in their homes during the summer, doctors see more cases of tick and mosquito-borne illness like West Nile Virus or Lyme disease, more heavy precipitation events cause flash flooding – these and many other experiences of Easton residents are connected to climate change, and are expected to worsen in the coming decades, but there are things we can do to make our community more resilient and to lessen the amount we contribute to global warming.

A climate action plan (CAP) is a collective game plan for city government, community organizations, schools, individuals, and local businesses to respond to the ways climate change affects our residents and to reduce the greenhouse gas emissions we put into the atmosphere. The plan lays out strategies that can improve air quality, make homes more comfortable all year, make homes more comfortable in both winter and summer while reducing energy costs, ensure future

Energy Management Plan – Wilson Engineering Services

Table 2 – City of Easton Building List

Facility Name	Facility Address	Gross Floor Area (ft ²)	Electric (Y/N)	Natural Gas (Y/N)	Water (Y/N)
City Hall	123 S 3rd St	44,000	Y ¹	Y ¹	Y
City Hall Parking	123 S 3rd St	120,000			Y
Police Station	48 N. 4th St	28,000	Y	Y	Y
Fire Central	6th & Northampton St	10,000	Y	Y	Y
College Hill Fire	327 Parsons St	4,100	Y	Y	Y
South Side Fire	420 Reynolds St	4,600	Y	Y	Y

Table 7 – City of Easton Buildings General Metrics

Facility Name	Site EUI (kBtu/ft ²)	Median Site EUI (kBtu/ft ²)	% Above/Below Median EUI	Source EUI (kBtu/ft ²)
City Hall ²	150.7	62.4	142%	281.1
Police Station	51.9	58.8	-12%	110.3
Fire Central	76.3	76.6	0%	124.4
College Hill Fire	92.4	90.8	2%	127.0
South Side Fire	66.6	69.7	-4%	119.3
Department of Public Works Complex ^{2,3}	25.4	46.7	-46%	52.8
Pine St. Parking	5.2	6.1	-15%	NA
Heil Park Football Field	13.5	266.8	-95%	30.1
WWTP Sewer Collection Garage	34.9	74.4	-53%	45.4

- Notes: 1) Benchmarking figures reflect utility information provided by the City of Easton.
 2) Facility includes multiple buildings.
 3) The Department of Public Works Maintenance building was renovated in 2006.

Department of Public Works Complex
 Parks Vehicle Storage
 Main Office/High Storage
 Police K-9 Building
 Maintenance Office
 Vehicle Lube Garage
 Vehicle Equipment
 Vehicle Equipment
 Pine St. Parking
 WWTP Sewer Collection Garage
 Heil Park Pool Concession

Notes: 1) Meter covers a

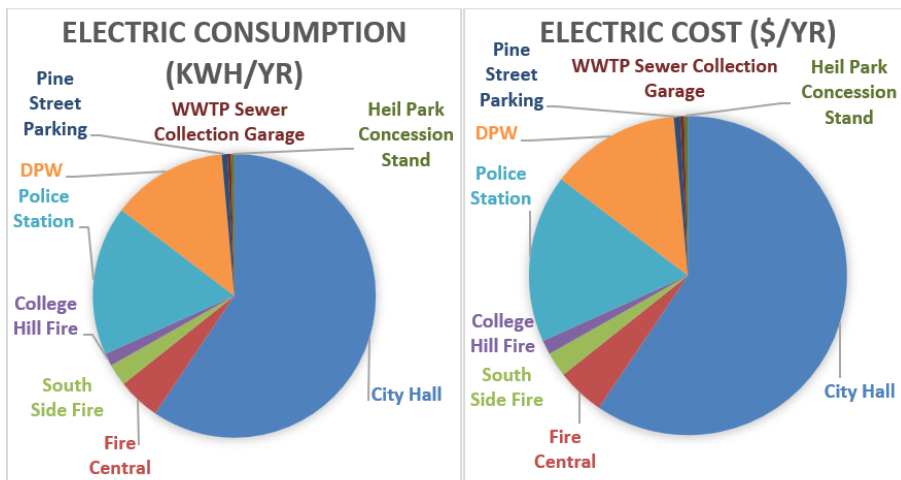


Figure 3 – City of Easton Building Electricity Usage and Cost

Table 5 - Annual Facility Electric Profile

Facility	Usage	Cost	Electricity Use Intensity (kWh/ft ²)	Electricity Use Intensity (kBtu/ft ²)
City Hall	912,609	\$57,877	4.47	15.26
Police Station	261,630	\$20,030	9.34	31.88
Fire Central	74,852	\$5,791	7.49	25.54
College Hill Fire	22,157	\$1,857	5.40	18.44
South Side Fire	38,439	\$2,726	8.32	28.39
Department of Public Works Complex	203,364	\$16,256	4.50	15.35
Pine St. Parking	9,843	\$1,057	0.10	0.34
Heil Park Concession	5,815	\$704	3.42	11.67
WWTP Sewer Collection Garage	6,245	\$892	1.39	4.74

Notes: 1) Electricity Use Intensity is calculated based on the most recent full year data.

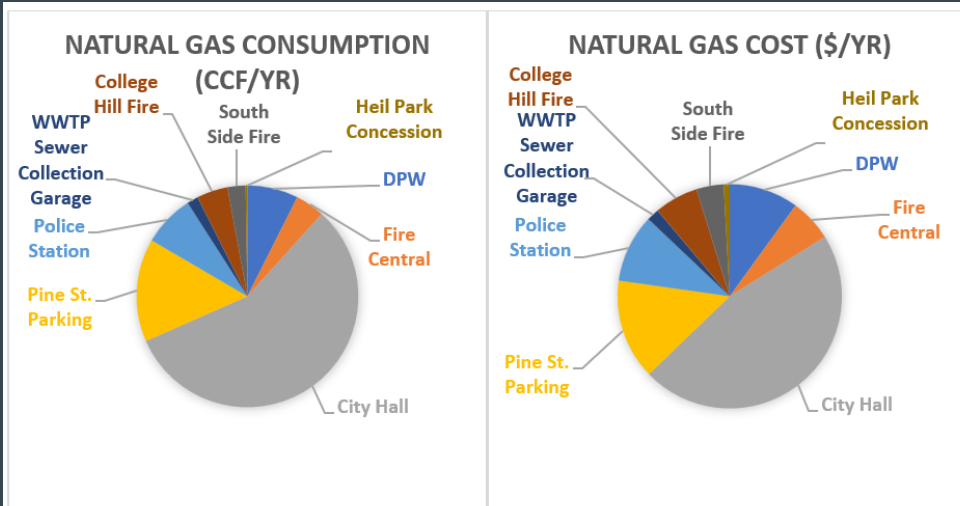


Figure 5 – City of Easton Natural Gas Cost and Usage

Table 6 - Annual Facility Natural Gas Profile

Facility	Usage (ccf)	Cost (\$)	Natural Gas Use Intensity (ccf/ft2)	Natural Gas Use Intensity (kBtu/ft2)
City Hall	32,820	26,674	0.16	16.51
Police Station	4,354	5,616	0.16	15.96
Fire Central	2,465	3,499	0.25	25.29
College Hill Fire	2,625	3,618	0.64	65.68
South Side Fire	1,520	2,244	0.33	33.75
Department of Public Works Complex	4,299	5,714	0.10	9.76
Pine St. Parking	8,706	8,266	0.09	8.93
Heil Park Football Field	194	563	0.04	4.42
WWTP Sewer Collection Garage	950	1,027	0.56	57.34

CITY HALL

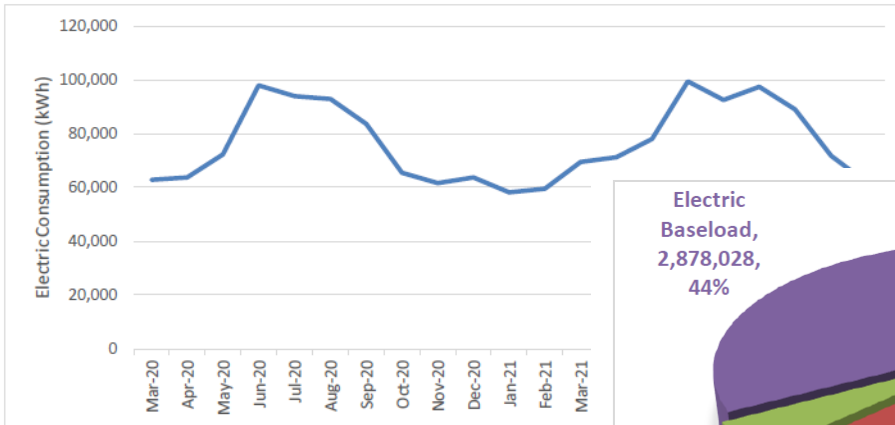


Figure 3: City Hall Electric Usage (10/2020)

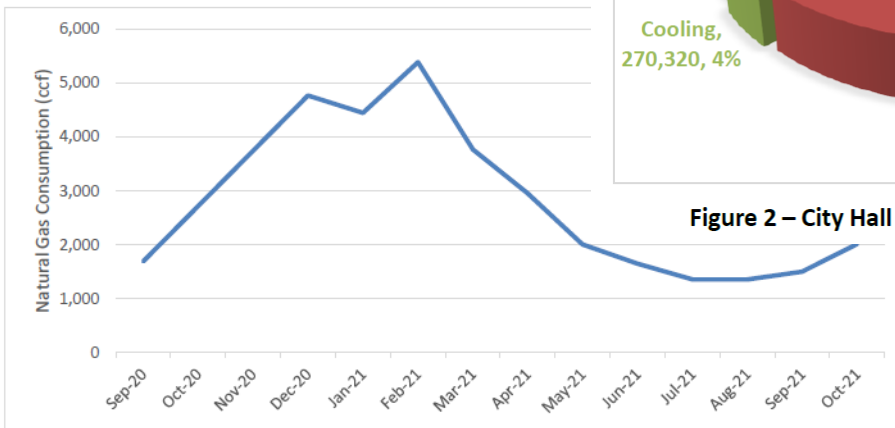


Figure 4: City Hall Natural Gas Usage (12/2019 – 11/2020)

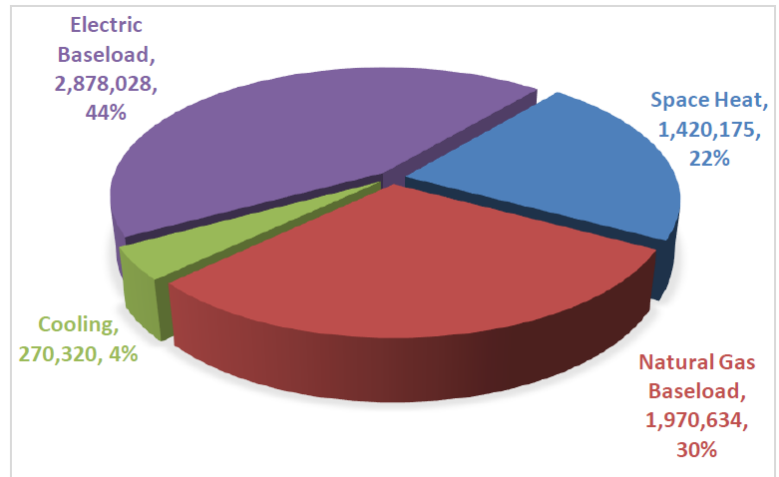


Figure 2 – City Hall End Use Energy Breakdown (kBtu/yr)

Table 14 - Energy Management Performance Evaluation Frequencies

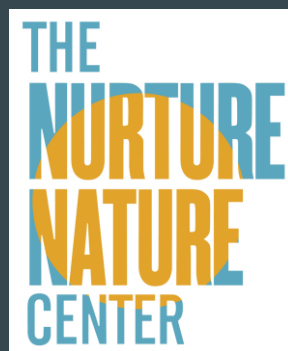
Performance Metric or Task	Evaluation Frequency	Next Due Date
Energy Star Portfolio Manager Building Benchmarking	Annually	2022
Water & Wastewater Infrastructure Energy Benchmarking	Annually	2022
Municipal Lighting Energy Use Evaluation	Annually	2022
Fleet Fuel Usage Benchmarking	• Annually	2022
Energy Audits of Buildings/Facilities	Annually	2022
Evaluation of Streetlight Photocells	Annually	2022
Review Current List of Non-LED Fixtures	Annually	2022

Table 15 - Energy Management Strategies Evaluation Frequency

Strategy	Evaluation Frequency	Next Due Date
Energy Performance Goals	Annually	2022
Staff Training	Annually	2022
Communication Plan	Annually	2022
Financial Strategies	Annually	2022
Energy Procurement Plan	Annually	2022
Building Strategies	Annually	2022
Water/Wastewater Strategies	Annually	2022
Fleet Strategies	Annually	2022
Alternative Fuel Vehicle Availability	Annually	2022
Renewable Energy/Fuel Evaluation	Annually	2022
Municipal Lighting Strategies	Annually	2022



City of
EASTON
PENNSYLVANIA



THANK YOU!

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www.focusonfloods.org