

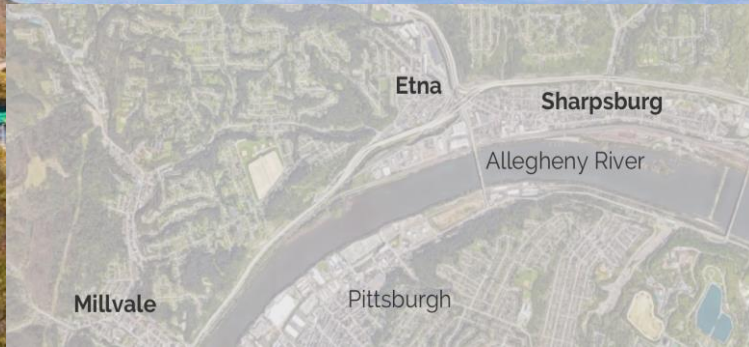
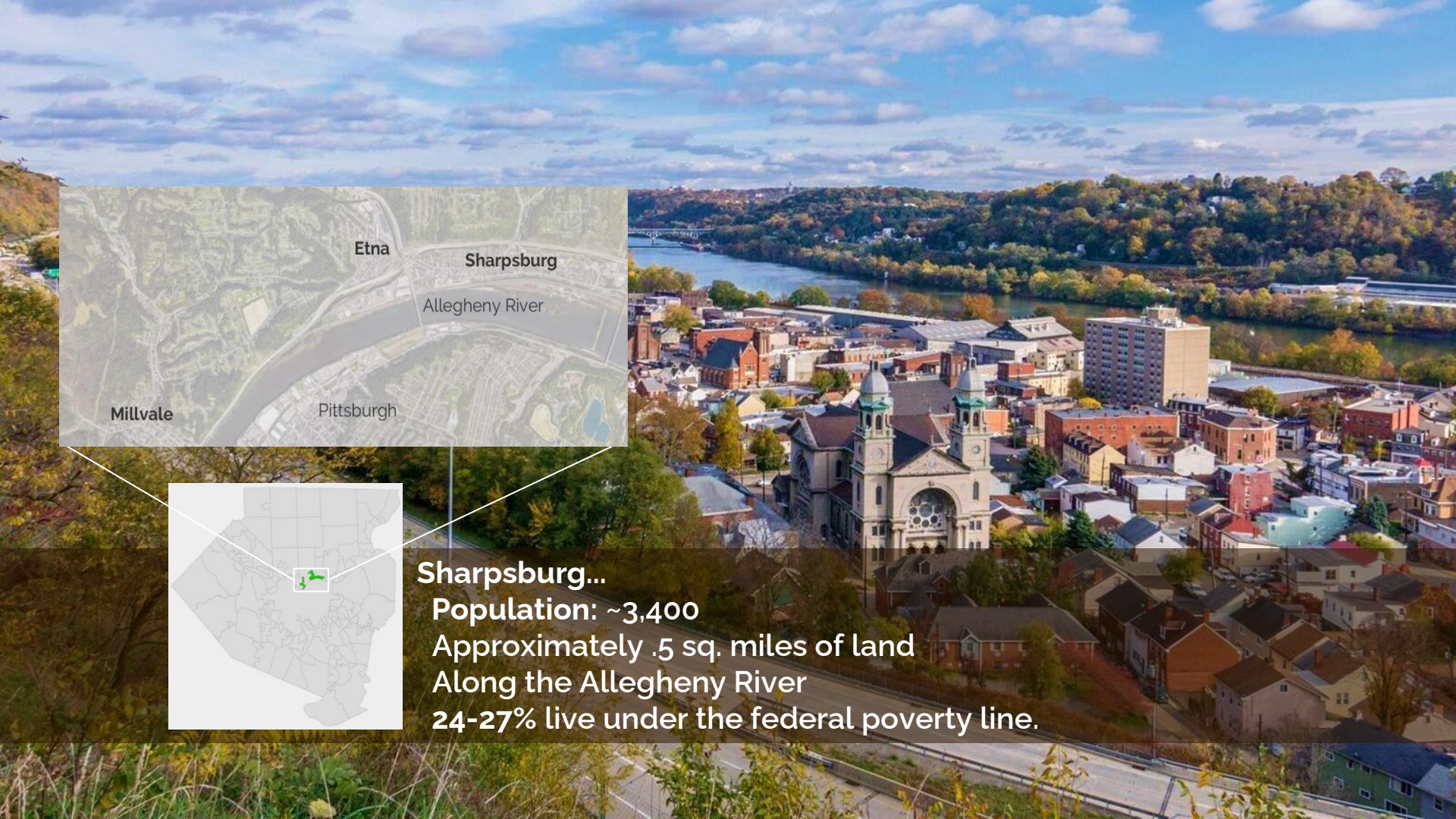
Sharpsburg Borough: Climate Adaptation & Resiliency In a Working-Class PA Rivertown

Brittany Reno
Founder/Executive Director, Sharpsburg Neighborhood Organization
Mayor, Sharpsburg Borough

Overview

- I. Community Overview
- II. Previous Planning and Organizing Efforts
- III. Climate Action Plan
- IV. Residential and Commercial/Municipal Solar Efforts
- V. Solar Microgrid Feasibility Study
- VI. “Small Win” Projects
- VII. Takeaways and Next Steps
- VIII. Discussion





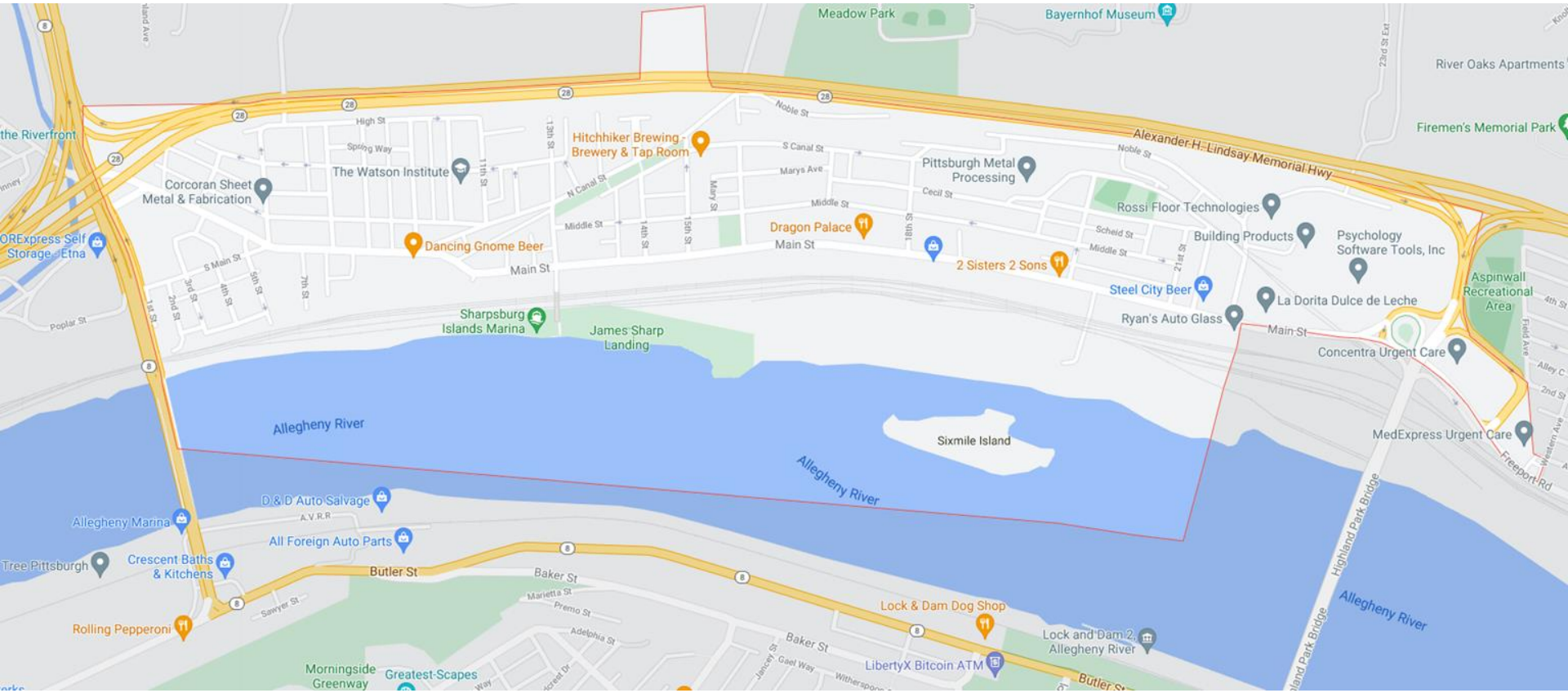
Sharpsburg...

Population: ~3,400

Approximately .5 sq. miles of land

Along the Allegheny River

24-27% live under the federal poverty line.



the Riverfront

ORExpress Self Storage - Etna

Corcoran Sheet Metal & Fabrication

Allegheny Marina

Tree Pittsburgh

Crescent Baths & Kitchens

Rolling Pepperoni

Morningside Greenway

High St

The Watson Institute

Dancing Gnome Beer

Sharpsburg Islands Marina

D & D Auto Salvage

All Foreign Auto Parts

Butler St

Greatest Scapes

Hitchhiker Brewing & Tap Room

Dragon Palace

2 Sisters 2 Sons

James Sharp Landing

Lock & Dam Dog Shop

LibertyX Bitcoin ATM

Lock and Dam 2, Allegheny River

Butler St

Meadow Park

Pittsburgh Metal Processing

Steel City Beer

Sixmile Island

Lock & Dam 2, Allegheny River

LibertyX Bitcoin ATM

Butler St

Lock and Dam 2, Allegheny River

Bayernhof Museum

River Oaks Apartments

Firemen's Memorial Park

Aspinwall Recreational Area

MedExpress Urgent Care

Highland Park Bridge

Allegheny River

Allegheny River

Alexander H. Lindsay Memorial Hwy

Pittsburgh Metal Processing

2 Sisters 2 Sons

James Sharp Landing

Lock & Dam Dog Shop

LibertyX Bitcoin ATM

Lock and Dam 2, Allegheny River

Butler St

Noble St

Pittsburgh Metal Processing

2 Sisters 2 Sons

Sixmile Island

Lock & Dam Dog Shop

LibertyX Bitcoin ATM

Lock and Dam 2, Allegheny River

Butler St

Alexander H. Lindsay Memorial Hwy

Pittsburgh Metal Processing

2 Sisters 2 Sons

Sixmile Island

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LibertyX Bitcoin ATM

Lock and Dam 2, Allegheny River

Butler St



SEVERE WEATHER TEAM
Flash Flood Damage
Sharpsburg, Allegheny County



Where We Were (2014-2016)

- General civic disengagement/apathy, with a very small handful of long-standing community members doing A LOT with few resources, little support, and minimal broader, long-term vision
- Sharpsburg Neighborhood Organization established through grassroots organizing effort to address community quality-of-life issues

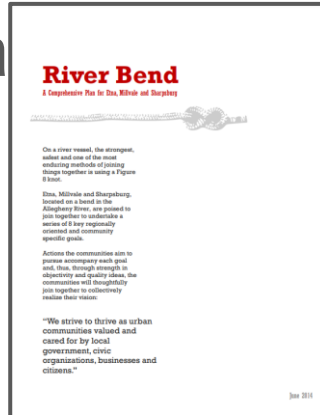
Where We Were (2014-2016)

- Initial formation of Sharpsburg Neighborhood Organization (SNO):
 - Two-page Word document
 - Countless meetings with random neighbors + organizations
 - Incorporation with founding board of directors, bylaws creation, and mission/visioning work
 - Small funding to bigger funding, full-time staff, and 501(c)(3) attainment



Where We Were (2014-2016)

- Funding granted by Hillman Foundation for Community Vision Planning process with evolveEA
 - Building on 2014 River Bend Joint Multi-Municipal Comprehensive Plan
 - 1959 Sharpsburg Comprehensive Plan



Goals

1. Seize opportunities to work together
2. Strengthen the Sense of Place
3. Leverage Existing Assets
4. Focus on Opportunities to Grow
5. Update Zoning Ordinances
6. Target Key Land Use Changes
7. Improve Bike/Ped Infrastructure
8. Address Stormwater Management

Laying the Groundwork (2017-2018)

- **Community Vision Planning process**
 - Engaged hundreds of residents over two years of conversations, meetings, surveys, and events
 - Listening, learning, educating, ground-truthing data vs. lived experiences, and **CONNECTING** on a human level

Equitable Engagement + Advocacy

- **Every perspective and lived experience is unique & valuable**
- **Ask who is not in the room & why**









Equity



Food



Water



Energy



Air Quality



Mobility

Some of the issues we're wrestling with in Sharpsburg:

Low accessibility & affordability of healthy foods

Air pollution and related poor health outcomes

High utility bills due to old, inefficient homes

Civic disengagement & lack of participation

Racism & past redlining

Lack of teen activities

Flooding and related economic, health, and environmental impacts

High rates of poverty

Many senior residents aging in place

No grocery store or mental healthcare provider in town

Inadequate public transit and bike/ped infrastructure

Rent affordability in a changing real estate market



Keeping equity at the core of all issues and projects to ensure that those already most burdened by the current structure of our society will be the priority of our efforts.



Food



Water



Energy



Air Quality



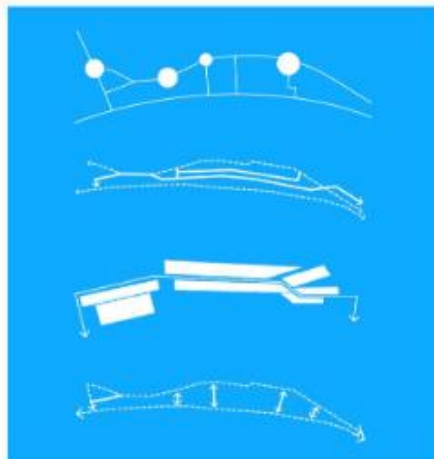
Mobility

SHARPSBURG ECODISTRICT



https://issuu.com/evolveea/docs/sharpsburg_community_vision_plan_for





ENHANCE GREEN LINKS
Connect existing green assets and develop new ones.

PRIORITIZE THE PEDESTRIAN
Make walking, biking, and public transit easier and safer.

STRENGTHEN THE VILLAGE
Stabilize and improve existing character.

CONNECT TO THE RIVER
Reconnect to the riverfront physically and mentally.

URBAN SYSTEMS

The recommendations for Sharpsburg's urban systems are informed by Sharpsburg's existing assets and current and future challenges (including market pressure), and act as overarching place making goals. These urban systems guide the project recommendations and act in fulfillment of Sharpsburg's identity.

A community of opportunity is defined by its systems:

S1. ENHANCE GREEN LINKS
pg. 82

S3. STRENGTHEN THE VILLAGE
pg. 96

S2. PRIORITIZE THE PEDESTRIAN
pg. 88

S4. CONNECT TO THE RIVER
pg. 102



The EcoDistricts Protocol

Imperatives

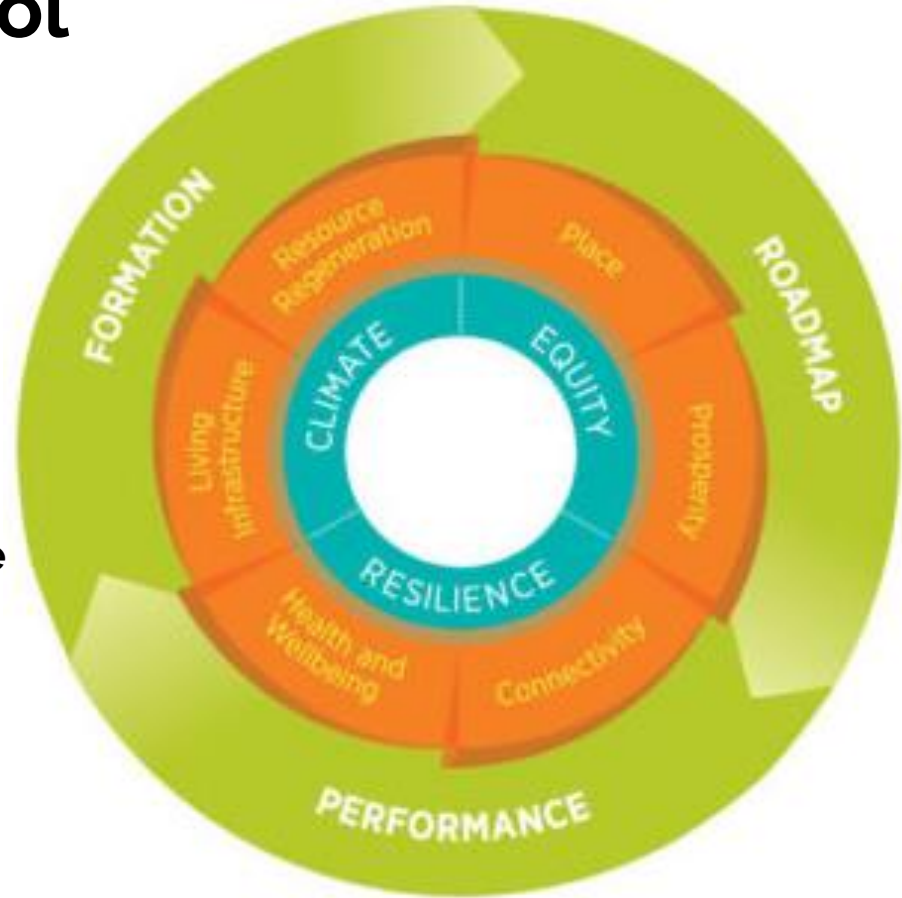
Equity • Climate • Resilience

Priorities

Health & Wellbeing • Connectivity
Prosperity • Place • Living Infrastructure
Resource Regeneration

Implementation Phases

Formation • Roadmap • Performance



Indicators & Roadmap

Sharpsburg
Ecodistrict
Indicators

Sharpsburg
Ecodistrict
Roadmap

SHARPSBURG ECODISTRICT



ROADMAP

Adopted on
January 4, 2021

by the Sharpsburg Ecodistrict Collaborative and
the Sharpsburg Neighborhood Organization

Principal Authors

Brittany Reno, Sharpsburg Neighborhood Organization
Anna Rosenblum, evolveEA

Sharpsburg Collaborative Members

Brittany Reno, SNO Executive Director
Kathleen Stanley, Roots of Faith Outreach Director
Bonnie DeMotte, Second Harvest Executive Director
Sara Mariacher, Sharpsburg Community Library Manager
Katie Power, Volunteers of America Youth Empowerment Project Lead Teacher & Youth
Coordinator

SNO Board Members

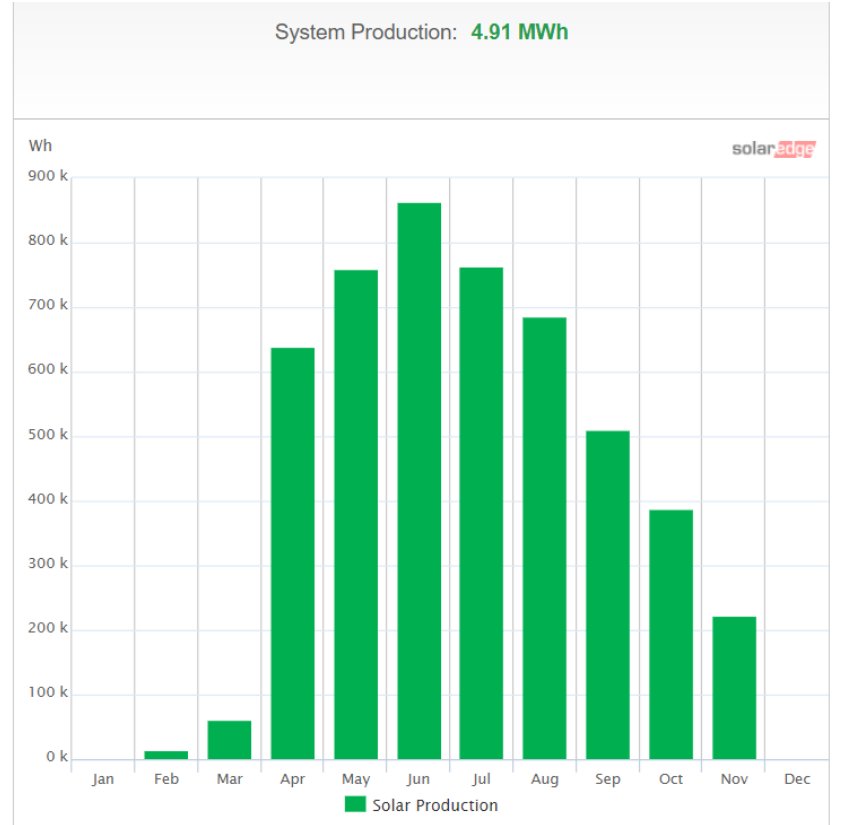
Shanna Carrick, SNO Board President
Kacie Cope, SNO Secretary ___
Nanci Goldberg
Nathan Pearce, SNO Vice President ___
Paul Perowicz
Sydney Rabinovitz
Mayor Matthew V. Rudzki, Mayor of Sharpsburg Borough
Rev. Scott Shaffer, SNO Treasurer
Charles Smith



Sharpsburg Community Library

Front Studio Architects



Current Power	Energy today	Energy this month	Lifetime energy	Lifetime revenue
0 W	3.09 kWh	222.11 kWh	24.21 MWh	\$2,374.46



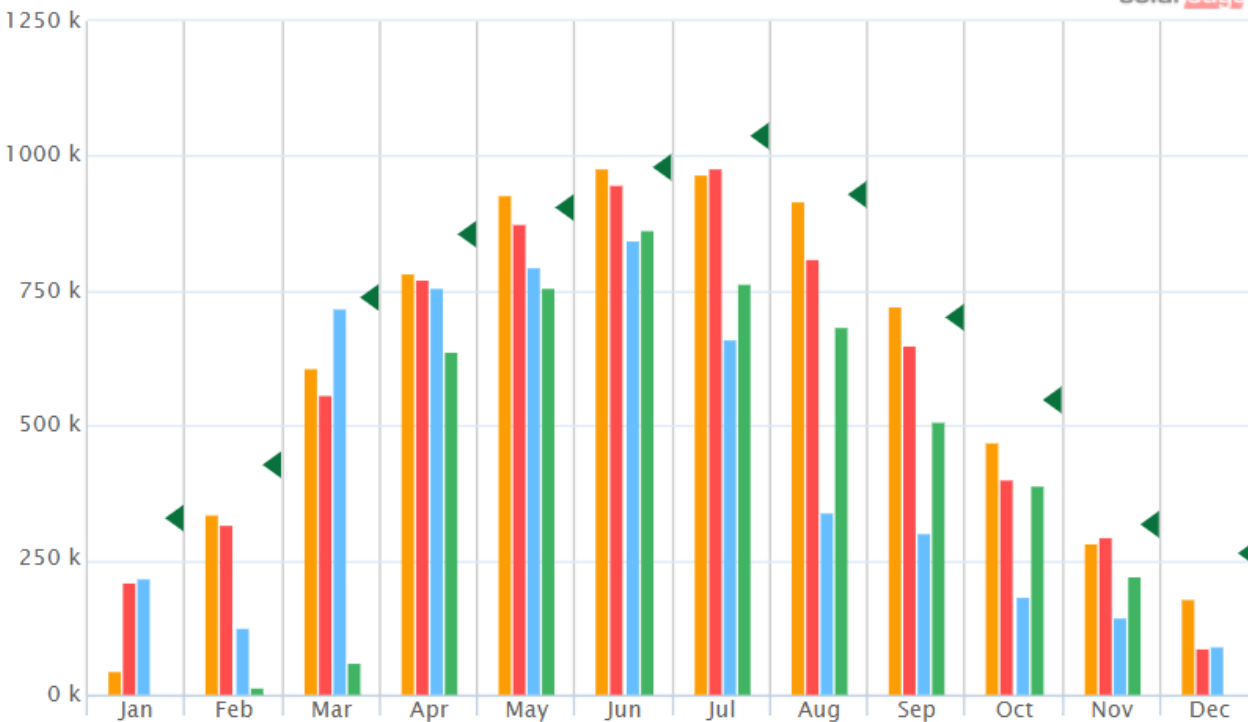
	Site Name	Address	Peak Power [kWp]
1	 EIS Sharpsburg Community Libr	Main Street 1212	7.7
2	 EIS Sharpsburg Neighborhood C	South Main Street 511	7.03

Comparative Energy



Month Quarter Year

2019 2020 2021 2022 Estimated



Clear
33.62 °F
Feels like 33.62 °F
Wind 2.42 MPH
Humidity 75.6 %
Sunrise at 07:20
Sunset at 16:55

Sunday



30.2 - 48.2 °F
Sunny

Monday



28.4 - 51.8 °F
Sunny

Tuesday



42.8 - 55.4 °F
Mostly Cloudy

Environmental Benefits



CO2 Emission Saved
37,491.47 lb



Equivalent Trees Planted
283.28



Front Studio Architects



Tawnya Panizzi, TribLIVE



Green Grocer Produce Truck in Sharpsburg

Special deals for customers paying with SNAP or Seniors Farmers Market Nutrition Program coupons!

Mondays year-round from 3:30-4:30 pm behind the Sharpsburg Community Library

Cash, credit, debit, EBT, and WIC accepted!

Second Harvest Community Thrift Store



A SECOND HARVEST OF RESOURCES FOR RENEWABLE ENERGY AND STORM WATER



- Thorough, Welcoming, & Diverse Community Engagement
- Meaningful Community Partnerships
- Community Vision Plan Integration

Rothschild Doyno Collaborative



ROOTED IN COMMUNITY:

- Local board members
- Workforce development program employees





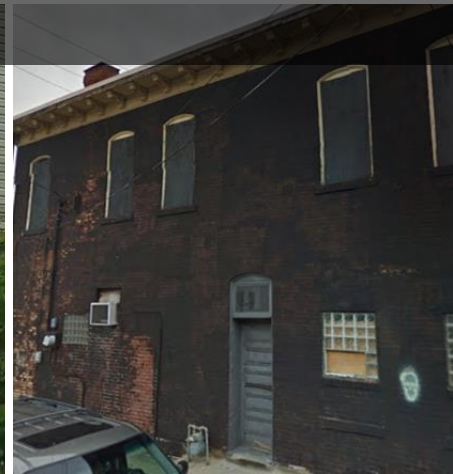
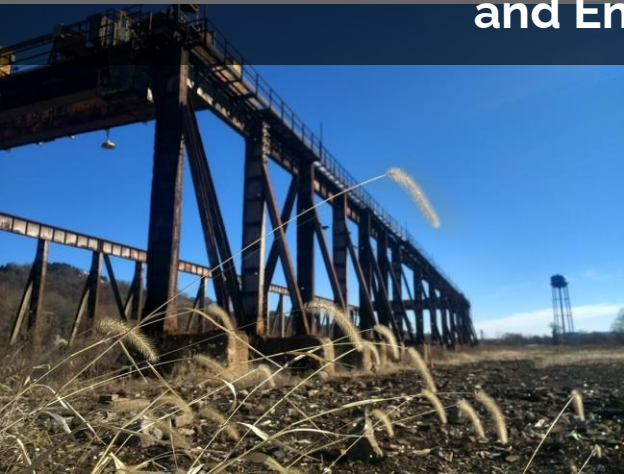
- Environmental issues rarely respect municipal boundaries.
- **No one** wants to be knee deep in floodwater in their basement.



HITCHHIKER
BREWING CO.



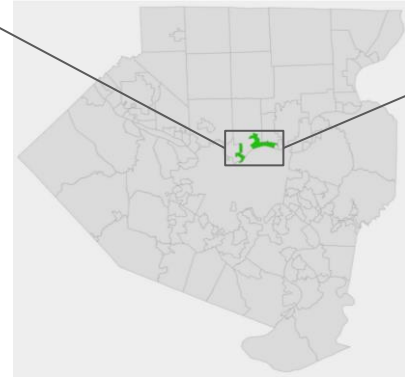
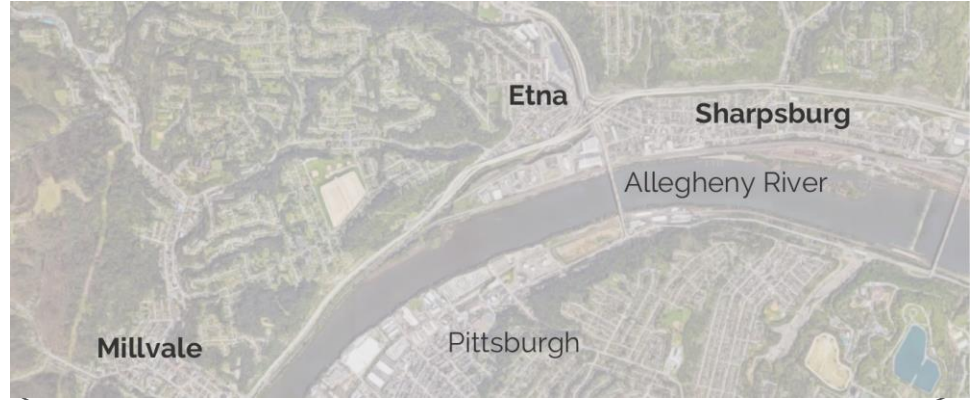
**Shared History of Economic Collapse, Housing Decline,
and Environmental/Economic Challenges**





Triboro Ecodistrict

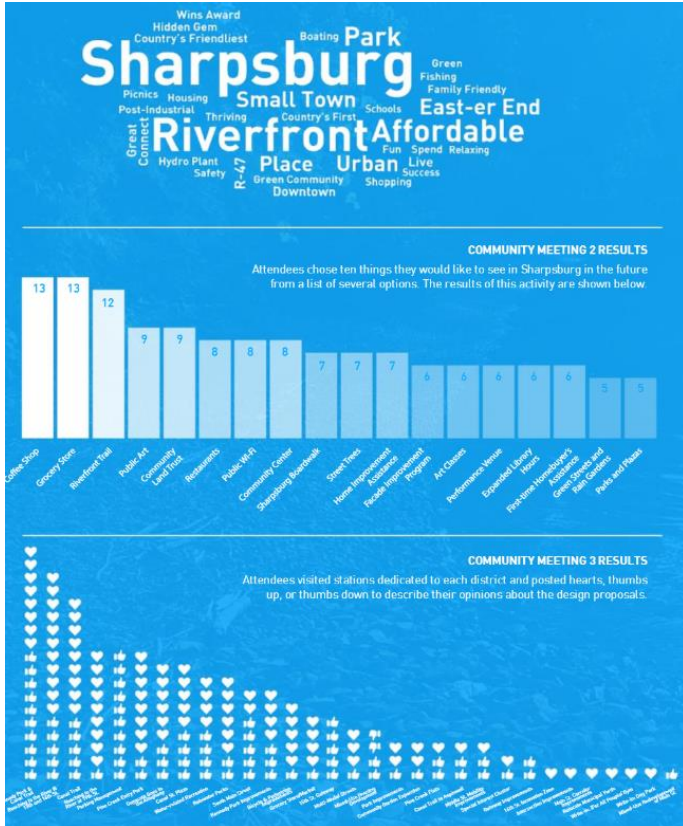
MILLVALE • ETNA • SHARPSBURG



**Combined
Population:
~10,500**



Sharpsburg Community Vision Plan Highlights



COMMUNITY OF OPPORTUNITY

A community where people can find the opportunities and resources needed to thrive economically, live safely in quality affordable housing, are healthy and connected to their neighbors and environment and are empowered to make change.¹

BEST IN CLASS ENVIRONMENTAL PERFORMANCE

A community that leverages resiliency and sustainability with innovative environmental practices, programs, and technology to improve quality of life for residents.

RIVERFRONT COMMUNITY

A community that leverages their riverfront to improve quality of life, catalyze economic development, and for recreational and environmental purposes.

2026 ENERGY METRICS

Energy Conservation

of weatherization projects (commercial and residential)
of BTUs saved

Renewable Energy

of renewable energy projects
% of municipal demand supplied by renewable energy

Sharpsburg Ecodistrict Roadmap

EcoDistrict Priority	EcoDistrict Objective	Sharpsburg Ecodistrict Indicators <i>(equivalent to EcoDistricts Objective)</i>	SCVP Crosswalk
Place	Engagement & Inclusion	# of unique and total Sharpsburg Ecodistrict participants	Principle #1
Place	Culture & Identity	# of times the Sharpsburg Ecodistrict is positively mentioned in the regional media annually	Principle #4
Place	Public Spaces	# of community events programmed annually for outdoor public spaces, including streets	N/A
Place	Housing	Median rent and median home sale price	Equity indicator
Prosperity	Access to Opportunity	# of Sharpsburgers participating in job training programs	Principle #3
Prosperity	Economic Development	# of businesses in Sharpsburg	Principle #1
Prosperity	Innovation	# of businesses or projects that establish a Community Benefits statement or agreement	Principle #2

Viewable at:

<https://ecodistricts.org/wp>

=
[content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf](https://ecodistricts.org/wp-content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf)

Sharpsburg Ecodistrict Roadmap

Health & Wellbeing	Active Living	# of painted crosswalks in the public realm	Principle #5: Mobility
Health & Wellbeing	Health	% of residents with health insurance (including medicaid and medicare) & fatal and non-fatal opioid overdoses	Principle #3
Health & Wellbeing	Safety	# of reported transportation crashes annually	Principle #5: Mobility
Health & Wellbeing	Food Systems	# of people accessing fresh, healthy food & # of people educated on healthy food preparation or consumption who improved their knowledge, awareness, skills, or attitude	Principle #5: Food
Connectivity	Street Network	# of ADA compliant ramps in the public realm	Principle #5: Mobility
Connectivity	Mobility	# of bike racks	Principle #5: Mobility
Connectivity	Digital Network	# of metrics tracked in publicly available community dashboard	Principle #6

Viewable at:

<https://ecodistricts.org/wp>

[= content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf](https://ecodistricts.org/wp-content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf)

Sharpsburg Ecodistrict Roadmap

Living Infrastructure	Natural Features	% of shade tree canopy coverage	Principle #5: Air
Living Infrastructure	Ecosystem Health	# of green infrastructure projects implemented and \$ spent on green infrastructure projects	Principle #5: Water/ Resilience indicator
Living Infrastructure	Connection with Nature	Acres of public green space	N/A
Resource Regeneration	Air & Climate	MWh/year of renewable energy generated within Sharpsburg	Principle #5: Energy/ Climate Protection indicator
Resource Regeneration	Water	# of people educated on water safety impacts and prevention who improved their knowledge, awareness, skills, or attitudes & gallons of stormwater retained through green infrastructure	Principle #5: Water
Resource Regeneration	Waste	# of recycling and compost drop-off sites	Principle #5: Food

Viewable at:

<https://ecodistricts.org/wp>

[= content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf](https://ecodistricts.org/wp-content/uploads/2020/05/Sharpsburg-Roadmap-SIGNATURES.pdf)

Sharpsburg Climate Action Plan

Sharpsburg Community CO₂e by Sector

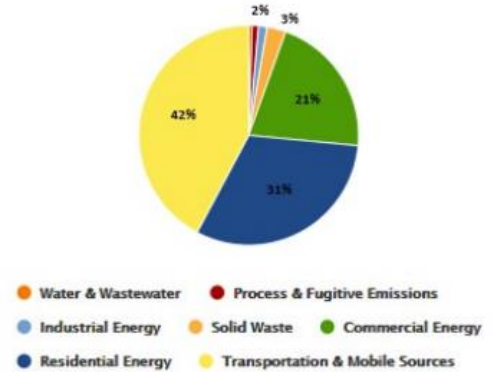


Figure 2: Sharpsburg Community-Wide GHG Emissions

Borough of Sharpsburg Climate Action Plan

Viewable at:
<https://www.sharpsburgborough.com/post/proposed-sharpsburg-climate-action-plan>



Local Actions and Policies
To Reduce Sharpsburg's
Greenhouse Gas Emissions









Draft: April 2021





Objective LU 1 – Implement sustainable, accessible, and resilient land use practices in the community

Action Number	Action	New (N) or Existing (E)	Statewide CAP Action	Co-Benefits
LU1-A	Implement new or modified policies (e.g., zoning regulations, tax incentives, and rolling easements) that encourage appropriate land use and reduce repetitive losses	N	Y	
LU1-B	Preserve and create open spaces, parks, and trails that enhance natural stormwater and flood management, allow people to maintain connectivity to outdoor activities, and promote pedestrian use	N	Y	
LU1-C	Promote urban tree planting on public and private land	E	Y	

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Action Number	Potential Action	New (N) or Existing (E)	Statewide CAP Action	Reduces Climate Risk	Co-Benefits
CB-1A	Work with surrounding communities to participate in a solar co-op for residents and businesses	N	N	N	
CB-1B	Assist businesses in determining feasibility of rooftop solar on their homes via formation of a community work group.	N	N	N	
CB-1C	Install solar panels onto commercial business rooftops.	N	Y	Y	
CB-1D	Solarize municipal-owned and non-profit-owned buildings	N	N	Y	
CB-1E	Incentivize large parking lot owners to install solar arrays with electric vehicle charging stations and electric vehicle car rentals	N	N	Y	
CB-1F	Encourage broad implementation of recent commercial PACE legislation to fund energy projects	N	Y	N	
CB-1G	Execute a renewable power purchase agreement with hydroelectric power plant for residential energy	N	N	Y	
CB-1H	Maximize onsite generation in public buildings and purchase additional renewable power through renewable energy certificates (REC's) direct	N	Y	Y	

Action Number	Potential Action	New (N) or Existing (E)	Statewide CAP Action	Reduces Climate Risk	Co-Benefits
CB-2/3A	Work with Triboro Energy Baseline Project to collect actual energy consumption data for Sharpsburg to establish a more accurate energy baseline in public buildings	N	N	N	
CB-2/3B	Establish a strategic energy inventory and management plan for public facilities to identify patterns in energy use and savings opportunities	N	Y	Y	
CB-2/3C	Partner with organizations such as Conservation Consultants Inc. and Rebuilding Together to establish an energy efficiency program that provides assistance and training to businesses to receive free or reduced cost energy audits and retrofits.	N	Y	N	
CB-2/3D	Educate consumers on the benefits of occupant performance, retrocommissioning, and low energy usage improvements in building system technologies	N	Y	N	

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THE BOROUGH OF SHARPSBURG

PA Energy 2022 Study of Energy Services
Inc. 2022

Critical Facility Energy Feasibility

Prepared for: The Borough of Sharpsburg

8/5/22

Developed by:



QUAKERTOWN, PA
ProtoGenEnergy.com
888-365-GRID

Confidential

Funded by:



Energy Programs Office
HARRISBURG, PA

Table 1: Modeling scenario summary

	Muni. Bldg.	Linden Gym	DPW
Solar PV (kWdc)	n/a	45	166.5
ESS Energy (kWh)	n/a	24.1	53
ESS Power (kW)	n/a	7	16
CapEx	\$0	\$101,030	\$424,369

4.1 Key Findings

The three Sharpsburg facilities surveyed have a total annual energy load of 83,990 kWh, 73% of which is used by the municipal building. The relatively small loads at the recreation center and the DPW building allow for the energy production to significantly exceed the energy needs of those buildings and can even create a net energy surplus via [virtual metering aggregation](#).

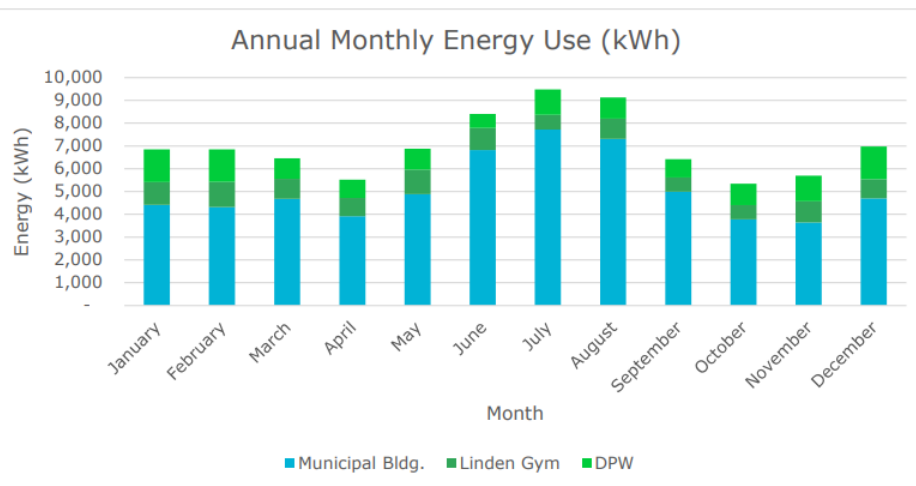
The systems designed for the gym would export 47,663 kWh per year and the systems on the DPW would export 202,416 kWh per year. This net export of energy would fully offset the energy usage at the municipal building with an annual load of approximately 61,000 kWh.

Resilience

- The resilience goals of the municipal building are already met by the existing generator.
- PV and energy storage allows for 2-week resiliency at 200% load for both the gym and DPW buildings.
- No generators are necessary at the gym or DPW building as the solar is of sufficient capacity to cover the load when combined with correctly sized battery energy storage systems.

Sustainability

- The addition of any solar PV to the sites will reduce GHG and move Sharpsburg closer to net-zero GHG.
- The significant net export of PV energy, combined with the avoidance of additional generators, offsets the GHG emissions of the studied borough buildings as well as additional buildings and facilities beyond the scope of this study.



Economics

- Implementing solar PV will create a long-term positive revenue impact by reducing energy costs (given the PV has no fuel costs) and making them more predictable.
- GHG emission reduction was prioritized for the rec center; consequently, this project has a payback period of greater than 20 years.
- Economics were prioritized for the DPW facility resulting in a simple payback of 16 years. While longer than traditional commercial development targets, the alternative (diesel standby generators) are typically sunk costs that *never* yield an economic return.
- The solar systems would all easily qualify for a <5MWac net-metering interconnection agreement. This could create an opportunity for revenue generation; alternatively, virtual net metering could be implemented to offset the energy requirements of other borough facilities within a 2-mile radius of the gym and DPW building.
- Additional revenue would be possible with the sale of alternative energy credits created by the Alternative Energy Portfolio Standards Act of 2004 ([AEPS](#)). A credit is created for every 1000kWh or 1 MWh of PV generation and sell annually for about [\\$40/each](#) or \$0.04/kWh.

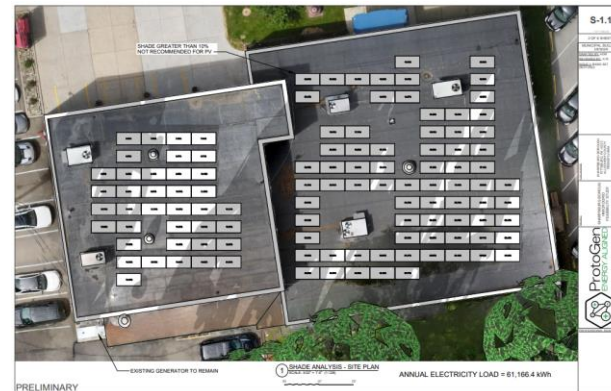
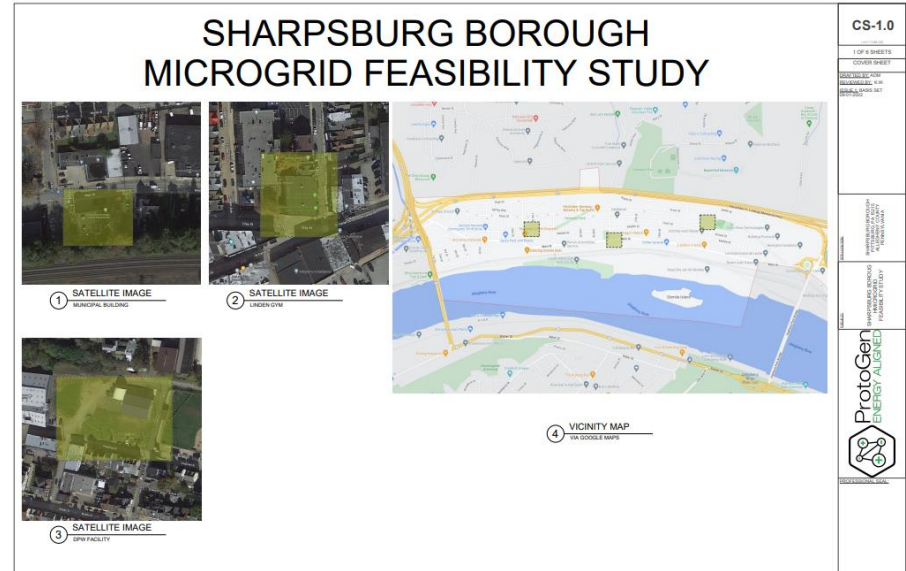
5 Recommendation

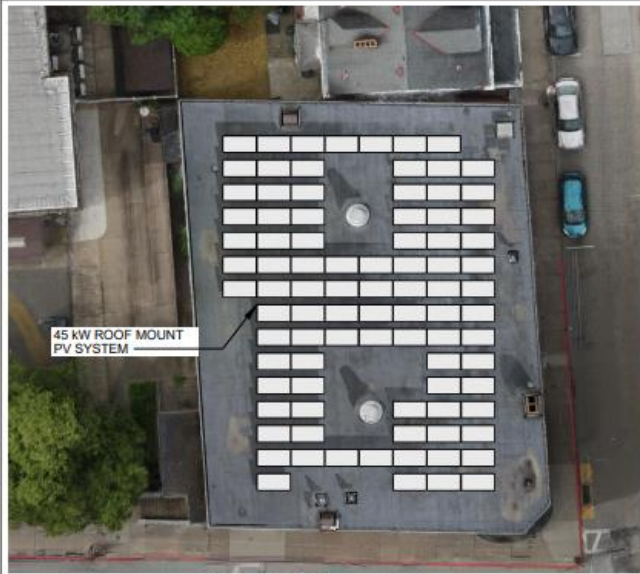
Sharpsburg has an opportunity to deploy solar PV directly on the sites. If deployed the PV would contribute to daytime load reductions and reduce the annual GHG footprint by over 2,000% as the systems are significant net exporters of solar energy.

There are two likely paths to financing a PV project, which typically has a 20–35-year operational life.

- First is a long-term (20-25yr) loan or bond, that results in a loan payment that is less than the monthly savings, e.g., the loan payment is \$1000/month, and you save \$1500/month from the installation of solar PV.
- Second, Sharpsburg Borough can enter a long-term (20-35yr.) power purchase agreement (PPA) with a third-party, for-profit taxable entity. PPA providers can benefit from federal tax incentives and generally offer no-cost construction of the solar PV and a discount of 5-20% on the energy (kWh items) portion of the off-taker's bill. Deal structures can vary if the host site has money to invest or interest in a post-tax (>5yrs.) project buyout agreement.

The projects modeled at the Rec Center and DPW facility provide sufficient generation capacity to indefinitely run the facility off-grid (designed around a two-week period at 200% of their respective peak loads). As such, the incorporation of such systems would support several FEMA lifelines and therefore be a good candidate for [BRIC grant](#).





45 kW ROOF MOUNT PV SYSTEM

1 SITE PLAN
SCALE: 1" = 20' (1:240)



PV INVERTERS AND 7 kW / 24 kWh ESS LOCATED IN MECHANICAL ROOM

2 ISO VIEW
SCALE: N.T.S.

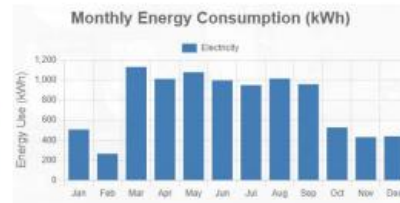


PV AND ESS EQUIPMENT POINT OF COMMON COUPLING GEAR LOCATION

MAIN SERVICE DISCONNECT

3 MECHANICAL ROOM
SCALE: N.T.S.

Type	Total New Capacity	Technology (New Capacity)
	45 kW	Roof PV (45 kW)
	24.1 kWh	Battery Energy Storage System (24.1 kWh)
Reference	Total Annual Energy Costs (\$/kWh in thousands)	Total Annual CO ₂ Emissions (metric tons)
Investment scenario (incl. annualized capital costs and electricity sales)	\$3.4 @	-36 @
Total Savings (%) (incl. annualized capital costs and electricity sales)	-101.0 % @	540.8 % @



S-1.2

3 OF 6 SHEETS

LINDEN GYM DESIGN

PROJECT NO. 2024-001
DESIGNED BY: K.W.
CHECKED BY: S.K.
DATE: 10/20/24

DESIGNED BY: K.W.
CHECKED BY: S.K.
DATE: 10/20/24

DESIGNED BY: K.W.
CHECKED BY: S.K.
DATE: 10/20/24

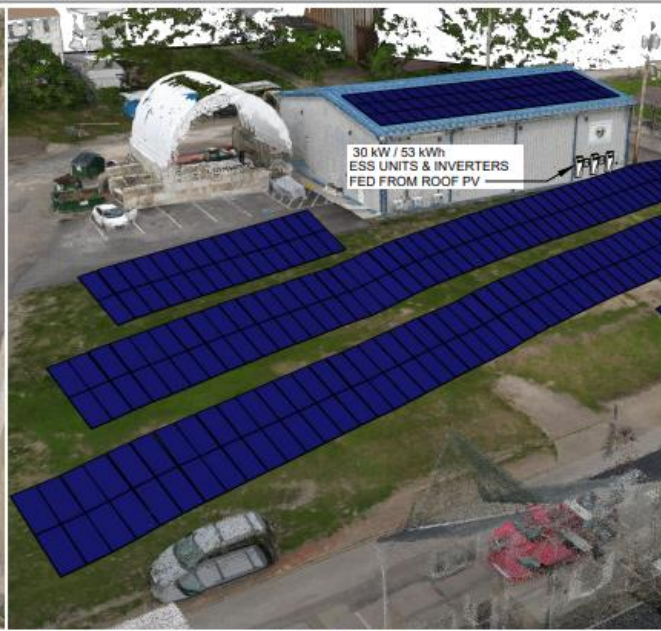


OPERATIONALS DEPT.

PRELIMINARY

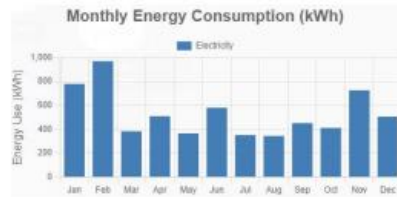


1 SITE PLAN
SCALE: 1" = 30' (1:360)



2 ISO VIEW
SCALE: N.T.S.

Type	Total New Capacity	Technology (New Capacity)
	166.5 kW	Array 1 - Roof PV (31.5 kW) Array 2 - Ground PV (135 kW)
	53 kWh	Battery Energy Storage System (53 kWh)
	Total Annual Energy Costs (\$/kWh in thousands)	Total Annual CO ₂ Emissions (metric tons)
Reference	\$2.1 Ⓢ	7 Ⓢ
Investment scenario (incl. annualized capital costs and electricity sales)	\$7.7 Ⓢ	-116 Ⓢ
Total Savings (%) (incl. annualized capital costs and electricity sales)	-270.7 % Ⓢ	1,707.6 % Ⓢ



S-1.3

DATE: 08/20/2024
4 OF 6 SHEETS
DPW DESIGN

DESIGNED BY: ADM
REVIEWED BY: K.W.
SCALE & BASIS SET
08/20/2024

SWANSEA BOROUGH
PROCESSED BY
ALLEGANY COUNTY
PENNSYLVANIA

SWANSEA BOROUGH
PROCESSED BY
ALLEGANY COUNTY
PENNSYLVANIA

ProtoGen
ENERGY ALIGNED



DATE: 08/20/2024



D-1-1

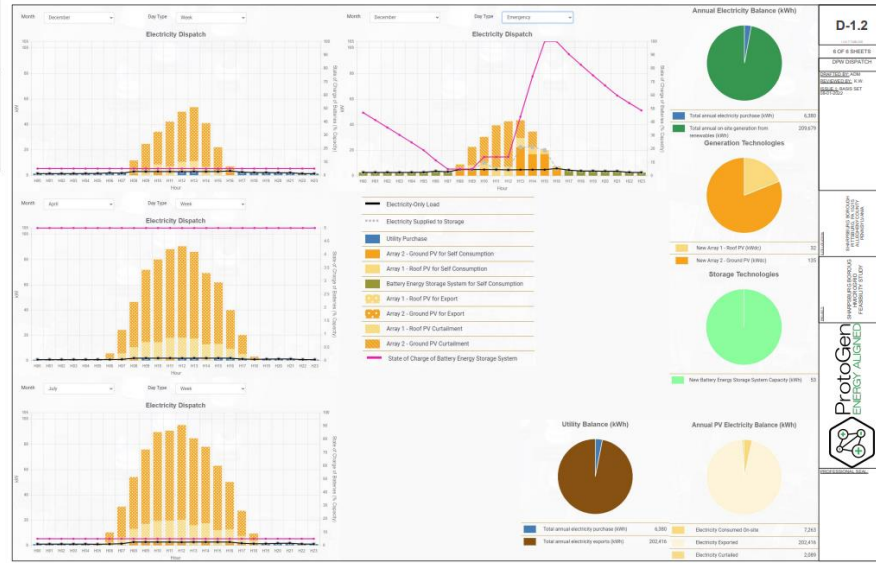
5 OF 6 SHEETS

LINDEN DTM DISPATCH

10/10/2024 10:10 AM
10/10/2024 10:10 AM
10/10/2024 10:10 AM

10/10/2024 10:10 AM
10/10/2024 10:10 AM
10/10/2024 10:10 AM

10/10/2024 10:10 AM
10/10/2024 10:10 AM
10/10/2024 10:10 AM



D-1-2

6 OF 6 SHEETS

DTM DISPATCH

10/10/2024 10:10 AM
10/10/2024 10:10 AM
10/10/2024 10:10 AM

10/10/2024 10:10 AM
10/10/2024 10:10 AM
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10/10/2024 10:10 AM
10/10/2024 10:10 AM
10/10/2024 10:10 AM



“Small” & Visible Wins

Relatively quick and inexpensive projects to show that your efforts are having an impact



CO-OP COMPLETED

Triboro Solar Co-op

Open to homeowners and residents throughout the Boroughs of Etna, Millvale, and Sharpsburg, as well as anywhere in Allegheny and Westmoreland Counties.

102 members of 100 member goal

JOIN THE WAITLIST

📅 Co-op closes to new members on July 30, 2021



G.E.T. Solar Triboro

Information Session and Q/A Forum

Wednesday
April 6
5:00—7:00pm

Millvale
Food+Energy Hub
112 E Sherman St



Does your business or nonprofit need help going solar?

Join G.E.T. Solar Triboro a community-led program in partnership with the nonprofit PA Solar Center, to learn about going solar and how it can save your organization money. At the session we will provide you:

- A free solar estimate for your property
- Information about the G.E.T. Solar process and financing options
- Complimentary beverages and appetizers

To Register Online visit
getsolartriboro.eventbrite.com

For more information contact
Leo Kowalski
Director of Programming
Pennsylvania Solar Center
leo@pasolarcenter.org
pasolarcenter.org



Get Training, Certification and Hands-on Experience in Solar Installation

New Sun Rising's Solar Energy Workforce Program provides training necessary for entry into the growing Photovoltaic solar industry for no cost to participants

PROGRAM INCLUDES:

- Training and education necessary to obtain NABCEP Associate Certification
- Hands on experience with a solar training platform and field installation

PARTNERS INCLUDE:

- Community College of Allegheny County
- Triboro Ecodistrict
- South Hilltop Men's Group
- EIS Solar
- AYA Instruments

CLICK TO FILL OUT
INTEREST FORM

FOR MORE INFORMATION CONTACT:

gackerman@puls pittsburgh.org
724-504-9793
www.newsunrising.org



This program made possible by Duquense Light, Wells Fargo Foundation and through the Department of Community and Economic Development's Neighborhood Partnership Program with contributions from TriState Capital Bank and Giant Eagle



TRIBORO ECODISTRICT

ENERGY BASELINE STUDY



with New Sun Rising and
support from The Henry L. Hillman Foundation

August 2022



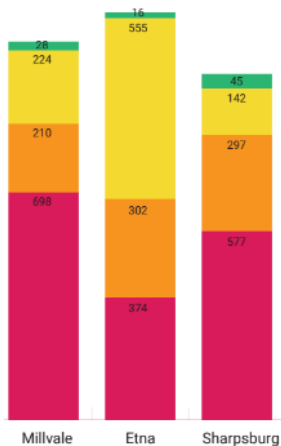
109 years
is the average house age
(in 2022)



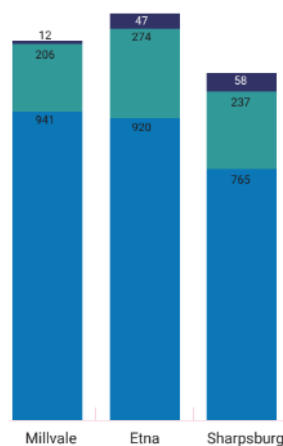
79%
of houses have heat with no
central air conditioning



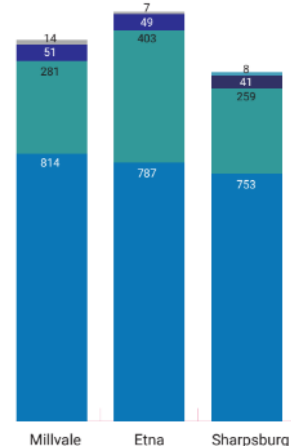
68%
of houses have a
frame exterior



1971 or later
1921 to 1970
1901 to 1920
1900 or earlier



Unit Heat
Central Heat w/AC
Central Heat



Frame
Brick
Masonry Frame
Other



SHARPSBURG RESIDENTIAL SNAPSHOT

IN TOTAL



1,061 households
1,882,402 ft.² total square footage



~ **25,834** MMBTU of electricity consumption
~ **100,518** MMBTU of natural gas consumption

THE AVERAGE HOME



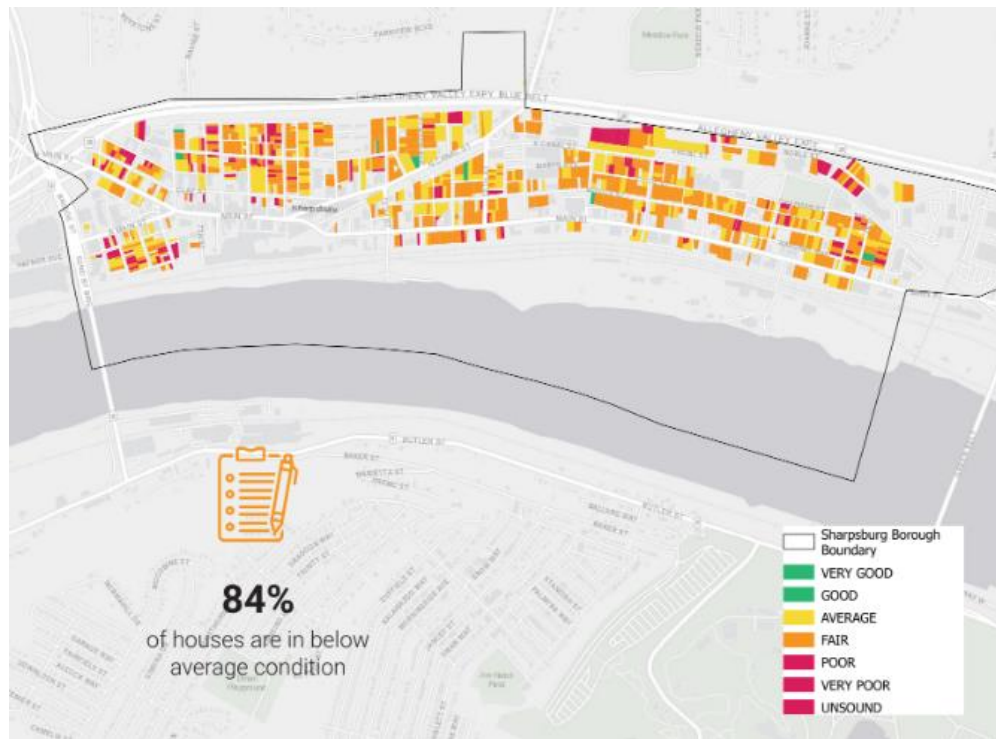
1910
average year
built



1,774 ft.²
average size



67
average energy
use intensity
(kBtu/sf)



ENERGY USE INTENSITY (EUI) & PERCENT TOTAL SITE ENERGY CONSUMPTION SUMMARY

Average EUIs for building characteristic subcategories that exceed the average EUI for the Triboro Ecodistrict by 10% are highlighted in red below and on the following pages. These houses have the biggest opportunity to reduce their annual energy consumption, from an EUI perspective.

The bottom portion of the charts indicate what percentage of the total residential site energy consumption can be attributed to buildings with the indicated building characteristic subcategories. Percentages for building characteristic subcategories that exceed 50% are highlighted in green. The Triboro Ecodistrict has the most opportunity to reduce community-wide energy consumption by targeting those specific building characteristic subcategories with energy conservation initiatives.



Building characteristic subcategories with the biggest opportunity for improvement
(EUI is at least 10% greater than the Triboro Ecodistrict average)



Building characteristic subcategories that account for more than 50% of total energy consumption

EUI (kBtu/sf/yr)	DWELLING TYPE			SQUARE FOOTAGE			CONDITION			
	Single Family Detached House	Rowhouse, Townhouse, or Two-Family House	Three-Family or Four-Family House	less than 1,000 ft. ²	1,000 - 2,000 ft. ²	greater than 2,000 ft. ²	Very Good, Good	Average	Fair	Poor, Unsound, or Very Poor
Millvale	84.4	66.8	47.7	117.9	79.0	90.9	75.6	76.0	76.2	76.5
Etna	86.7	39.1	35.4	118.3	82.4	50.8	70.0	85.4	76.0	60.1
Sharpsburg	78.2	54.6	35.1	123.6	75.1	52.2	52.6	81.7	64.3	66.9

% of Total Residential Site Energy Consumption										
Millvale	71.4%	21.6%	7.0%	11.4%	57.2%	31.4%	2.2%	50.1%	43.8%	3.8%
Etna	86.7%	8.5%	4.8%	10.9%	70.5%	18.7%	1.0%	36.5%	47.1%	15.5%
Sharpsburg	69.9%	25.4%	4.7%	4.8%	63.9%	31.3%	0.4%	17.8%	70.4%	11.4%

YEAR BUILT				SYSTEMS			EXTERIOR FINISH			
1900 or earlier	1901 to 1920	1921 to 1970	1971 or later	Central Heat with Air Conditioning	Central Heat	Floor Furnace, Unit Heat, or Other	Brick	Frame	Masonry Frame	Concrete Block, Stone, or Stucco
72.5	78.0	89.4	59.1	78.1	75.7	53.0	76.1	75.1	80.9	70.9
69.8	73.2	83.3	44.9	79.1	7.5	42.5	78.1	75.6	65.3	75.2
64.6	68.8	77.5	63.7	70.2	65.3	80.5	65.9	67.1	74.3	65.4

59.5%	18.7%	19.9%	2.0%	16.4%	82.8%	0.8%	24.6%	69.3%	4.9%	1.1%
31.3%	25.1%	43.0%	0.7%	20.7%	75.9%	3.4%	32.5%	63.3%	3.6%	0.6%
54.7%	29.8%	12.4%	3.2%	21.4%	71.8%	6.8%	23.9%	71.5%	4.0%	0.6%

SCENARIO MODELING

INTRODUCTION

The Triboro Energy Baseline Study is intended to inform future 2030 Energy Action Plan and goal creation. More specifically, the findings in this report can help the Triboro Ecodistrict understand how energy conservation, renewable energy production, and resilience efforts will impact specific residential building characteristics, and how community-wide programs and improvements will reduce community carbon-based energy consumption. The Triboro Ecodistrict is currently building on their numerous energy successes and has several initiatives underway. The consultant team has modeled the impact of three scenarios that are currently being investigated in Sharpsburg, Etna, and Millvale that demonstrate the Triboro's energy hierarchy of conservation, production, and resilience. These scenarios describe the potential energy and cost impacts of three proposed initiatives.

1

CONSERVE

WHAT IF WE AIR SEALED AND INSULATED ALL OF THE ELIGIBLE HOUSES IN SHARPSBURG?

The Triboro Ecodistrict is currently partnering with Rebuilding Together Pittsburgh to offer free home energy audits and up to \$100 in home repairs to households in Sharpsburg, Etna, and Millvale. This initiative will not only help Triboro Ecodistrict residents reduce their greenhouse gas emissions, but will also help them save money on their utility bills. This program is open to both renters (with the landlord's permission) and homeowners. Households with an income of 50% or less of the area median income will be prioritized for this opportunity. The program is kicking off its first year of engagement in Sharpsburg.

Rebuilding Together Pittsburgh shared three recommendations that are often suggested as a result of the home energy audits, which provide the greatest return on investment with a moderate cost investment. These recommendations include air sealing, attic insulation, and insulating the rim joists in the basement.

Air sealing stops unwanted air flow between the indoors and outdoors by sealing the small gaps around the house. This can include caulking cracks and openings in the building envelope, such as around window and door frames, cracks in the building foundation, and gaps around vent ducts, air conditioners, plumbing, and wiring, among other areas.

Insulating the attic and rim joists is important because it can prevent air from escaping the house and stop outside air from coming in. This saves energy and makes your house more comfortable. The type of insulation recommended for attics and rim joists may depend on the house, but generally spray foam insulation will be the highest performing option because it can easily fill nooks and crannies, it serves as a moisture barrier, and it provides the highest R-value per inch.

For air sealing and insulation, the ideal candidate houses have:

- No water infiltration or sewer backups (as a result, properties in the floodplain have been excluded from this scenario modeling)

Considering these exclusions, there are 634 houses, equating to 1,083,200 ft.² of space that would be ideal candidates for air sealing and insulation in Sharpsburg.

According to Rebuilding Together Pittsburgh (RTP), **air sealing** can reduce air leakage by up to 50%. The average cost of air sealing is \$1,591 and the average house can expect an annual energy savings of 30 MMBTU and cost savings of \$350. The average cost to install **attic insulation** is \$1,886, resulting in 15.9 MMBTU of annual energy savings and \$182 in energy cost savings. The average cost to **insulate the basement rim joists** is \$817, resulting in 4 MMBTU of annual energy savings and \$42 in energy cost savings.

When combined, on average, these improvements cost \$4,294 and would result in **\$574 in energy cost savings annually**, as well as 59.9 MMBTU in energy savings. This is a 7.5 year return on investment. If all of the houses in Sharpsburg that are an ideal candidate for these improvements implemented these recommendations, it would result in 37,977 MMBTU in annual community-wide energy savings.





Sharpsburg Civic Leadership Academy

3 free workshops via Zoom to prepare you for local leadership



FREE Home Energy Audit + Repairs

Up to \$100 in free targeted home repairs to help save on utility bills



PAID Masonry/Carpentry 11-Week Program

Earn \$100 per week and get trained for a guaranteed \$15/hr+ career



FALL 2021 - SHARPSBURG
NEIGHBORHOOD ORGANIZATION

FREE PROGRAMS

LEARN MORE ON FLIP SIDE →



FALL 2021 - SHARPSBURG
NEIGHBORHOOD ORGANIZATION
FREE COMMUNITY PROGRAMS

Make A Positive Difference in Your Community & Life.

Sharpsburg Civic Leadership Academy

3 free workshops via Zoom to prepare you for local leadership

Do you have a great idea for a community project and need some support to make it happen? Is there an issue you are passionate about and want to build your knowledge on local organizing and leadership? **Join us for a 3-part series on local leadership, community volunteer opportunities, and how to organize/ lead projects in Sharpsburg!** All are welcome, but spaces are limited.

6-7 p.m. via Zoom on Nov. 9th, Nov. 16th, and Nov. 30th
Register online at bit.ly/SharpsburgCLA or call 412-407-7661



FREE Home Energy Audit + Repairs

Up to \$100 in free targeted home repairs to help save on utility bills



We're partnering with Rebuilding Together Pittsburgh to offer FREE Home Energy Audits + repairs to households in Sharpsburg. This can help you **reduce your greenhouse gas emissions AND save money on your utility bills.** This program is open to both **RENTERS** (with your Landlord's permission) and **HOMEOWNERS.** Households with incomes at or below 80% Area Median Income will be prioritized. **Learn more about the program + sign up at bit.ly/SharpsburgHome**

PAID Masonry/Carpentry 11-Week Program

Earn \$100 per week and get trained for a guaranteed \$15/hr+ career

Are you or someone you know in Sharpsburg interested in a career in the trades? Right now we're sponsoring residents who want to learn masonry/carpentry and other job readiness skills. If you go through the first week and it's a good fit, **we'll pay you \$100/week while you attend Trade Institute of Pittsburgh classes M-F for ten weeks.** Request more info at bit.ly/SharpsburgTIP or 412-407-7661.



Want to volunteer on something important to you but aren't sure where to start? Fill out the Sharpsburg Ecodistrict Interest form at bit.ly/SharpsburgEcodistrict or contact matthew@sharpsburgneighborhood.org or 412-407-7661 to learn more.

Sharpsburg Home Repair Fund

Access up to **\$250** for home repairs
or upgrades that improve **energy efficiency** in your home

Examples of eligible projects:

- Window improvements
- Weatherization kits
- LED lightbulbs
- Weather stripping
- New insulation
- Energy-efficient appliances



Renters are eligible!
Low-income households prioritized

Learn more + sign up at
<https://bit.ly/sbgrepairfund>, call
412-407-7661, or scan the QR code.



SHARPSBURG ENERGY FAIR

Presented by Rep. Sara Innamorato, Sharpsburg Neighborhood Organization, Roots of Faith, Duquesne Light

Monday, March 7th
4:30 p.m. - 6:30 p.m.

Sharpsburg Community Library
1212 Main St. • Pittsburgh, PA 15215



STATE REPRESENTATIVE
SARA INNAMORATO

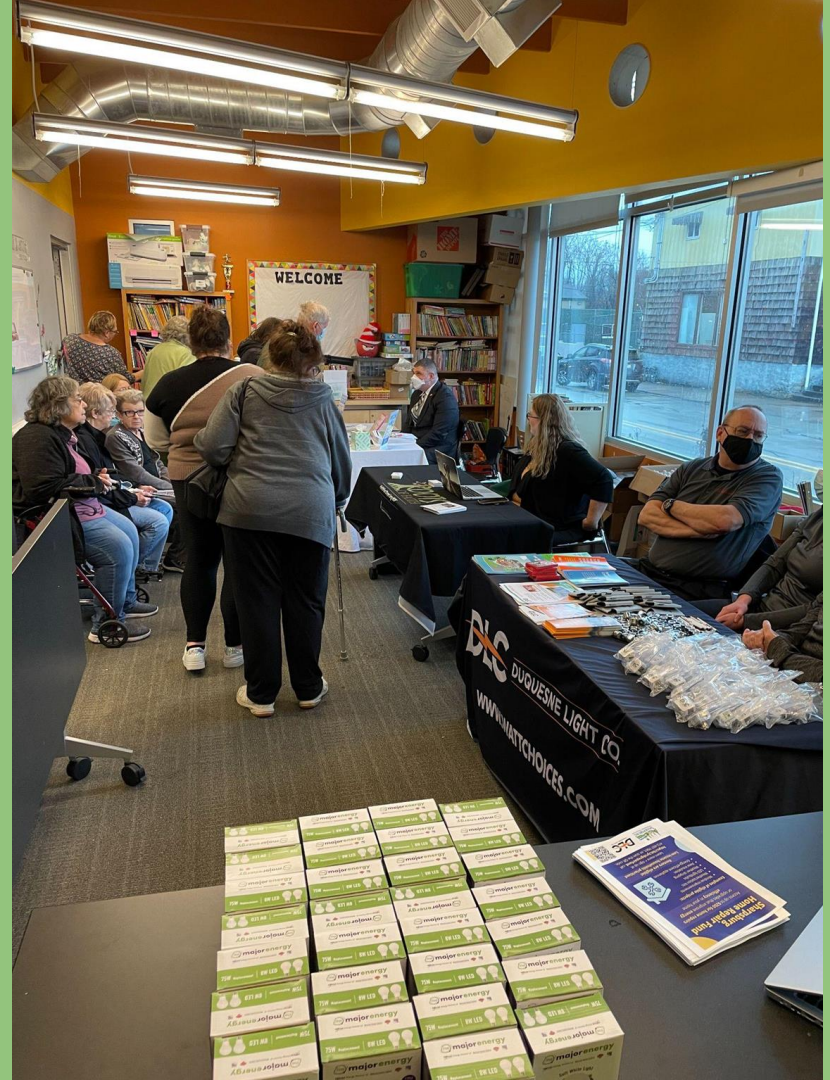
5154 Butler St.
Pittsburgh, PA 15201
(412) 781-2750

I'm hosting with several local organizations to give you tips and tricks on how to be energy efficient. We will have information on how the state and other groups can help save you money on utilities, information on state financial assistance programs, and information from representatives of Duquesne Light.

Free energy efficiency kit giveaways from our partners.

Call our district office at
(412) 781-2750
with any questions.

RepInnamorato.com • /RepInnamorato • @RepInnamorato





Issues Addressed:

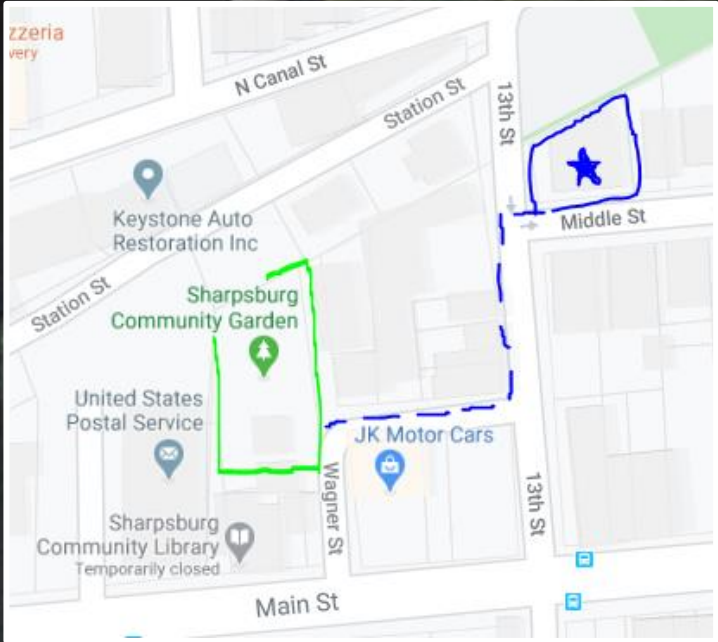
- Stormwater Management
- Internet Connectivity /Jobs & Education Access
- Air & Water Quality
- Environmental Education
- Senior isolation

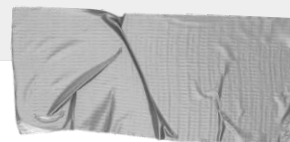


Issues Addressed:

- Stormwater Management
- Public Art
- Public Health

Curley Memorial Parklet





Issues Addressed:

- Food access
- Public health
- Local history
- Affordability
- Accessibility
- Local businesses

Sharpsburg Market Garden











FREE
FRESH PICKED
VEGGIES
HERBS
AT 6PM





Sharpsburg-Etna Gateway Park



Issues Addressed:

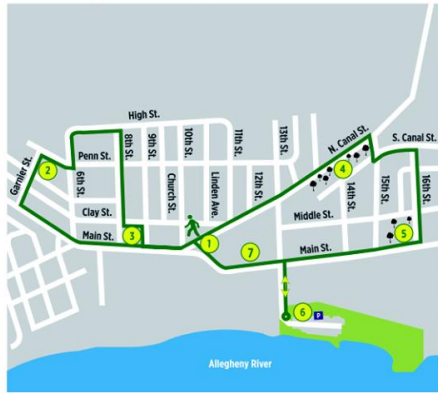
- Mobility
- Public health
- Air quality
- Stormwater Management
- Local businesses



Sharpsburg-Etna Gateway Park



Sharpsburg Main & Canal Walking Route



- 1 Heinz Memorial Plaza & Chief Guyasuta Statue
- 2 St. Mary Church
- 3 Corporal Kenneth Curley Memorial Parklet
- 4 Kennedy Park
- 5 16th St. Children's Park
- 6 James Sharp Landing
- 7 Sharpsburg Community Library & Sharpsburg Community Garden



Start/Stop

..... Distance 1.83 Miles

Issues Addressed:

- Mobility
- Public health
- Local history
- Local civic pride
- Small businesses

An aerial photograph of a town, likely Sharpsburg, Maryland, featuring a prominent church with two towers and a large arched window. The town is situated along a river, with a road and trees in the foreground. The sky is blue with scattered clouds.

Thank you!

Questions?

Brittany Reno
brittany@sharpsburgneighborhood.org