

Penn State's Local Climate Action Program

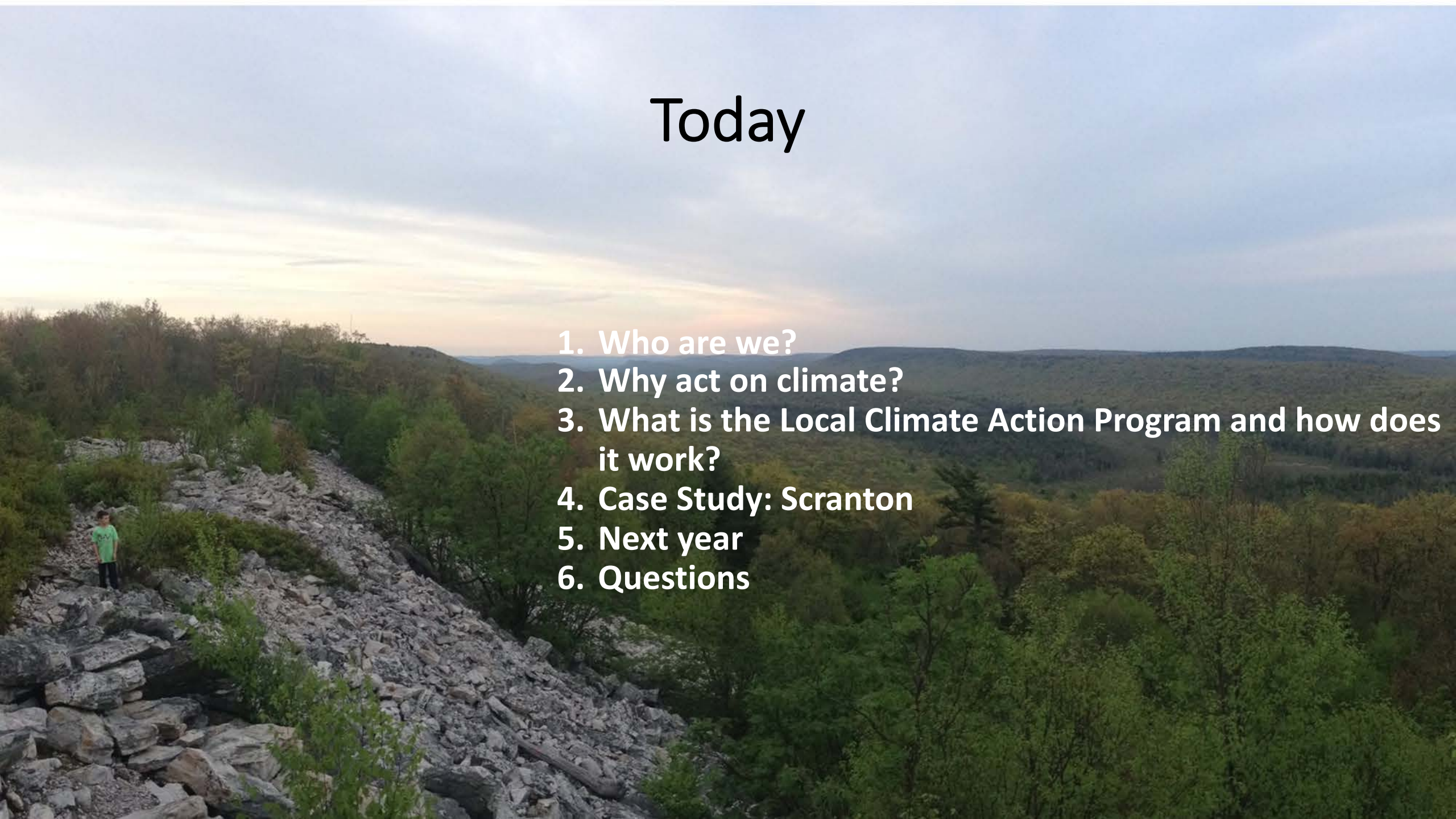
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Today

1. Who are we?
2. Why act on climate?
3. What is the Local Climate Action Program and how does it work?
4. Case Study: Scranton
5. Next year
6. Questions





The LCAP Team

Dr. Peter Buck

- Co-Director, LCAP
- Past President, Pennsylvania Environmental Resource Consortium
- Director, State College Area School District School Board
- Adviser, Penn State's Drawdown Research Experience for Undergraduates (2019, 2020, 2022)
- Former Chair & current Vice Chair, Intergovernmental Solar Power Purchase Agreement Working Group
- Vice-Chair, Centre Region Climate Action and Adaptation Plan Technical Advisory Group I
- Board member, Centre Region Climate Action and Adaptation Plan Technical Advisory Group II
- Co-author, Penn State's Faculty Senate Climate Action Resolution
- Former Chair, Ferguson Township Board of Supervisors




The LCAP Team

Brandi Robinson

- Co-Director, LCAP
- Chair, Ferguson Township Climate Action Committee
- Adviser, Penn State's Drawdown Research Experience for Undergraduates (2019, 2020, 2022)
- Chair, Centre Region Climate Action and Adaptation Plan Technical Advisory Group I
- Chair, Centre Region Climate Action and Adaptation Plan Technical Advisory Group II
- Co-author, Penn State's Faculty Senate Climate Action Resolution




Local Actions and Policies to reduce our greenhouse gas emissions and increase our climate resilience

**Executive Summary of the Centre Region
Climate Action & Adaptation Plan**

For the Borough of State College and Townships of
College, Ferguson, Halfmoon, Harris, and Patton



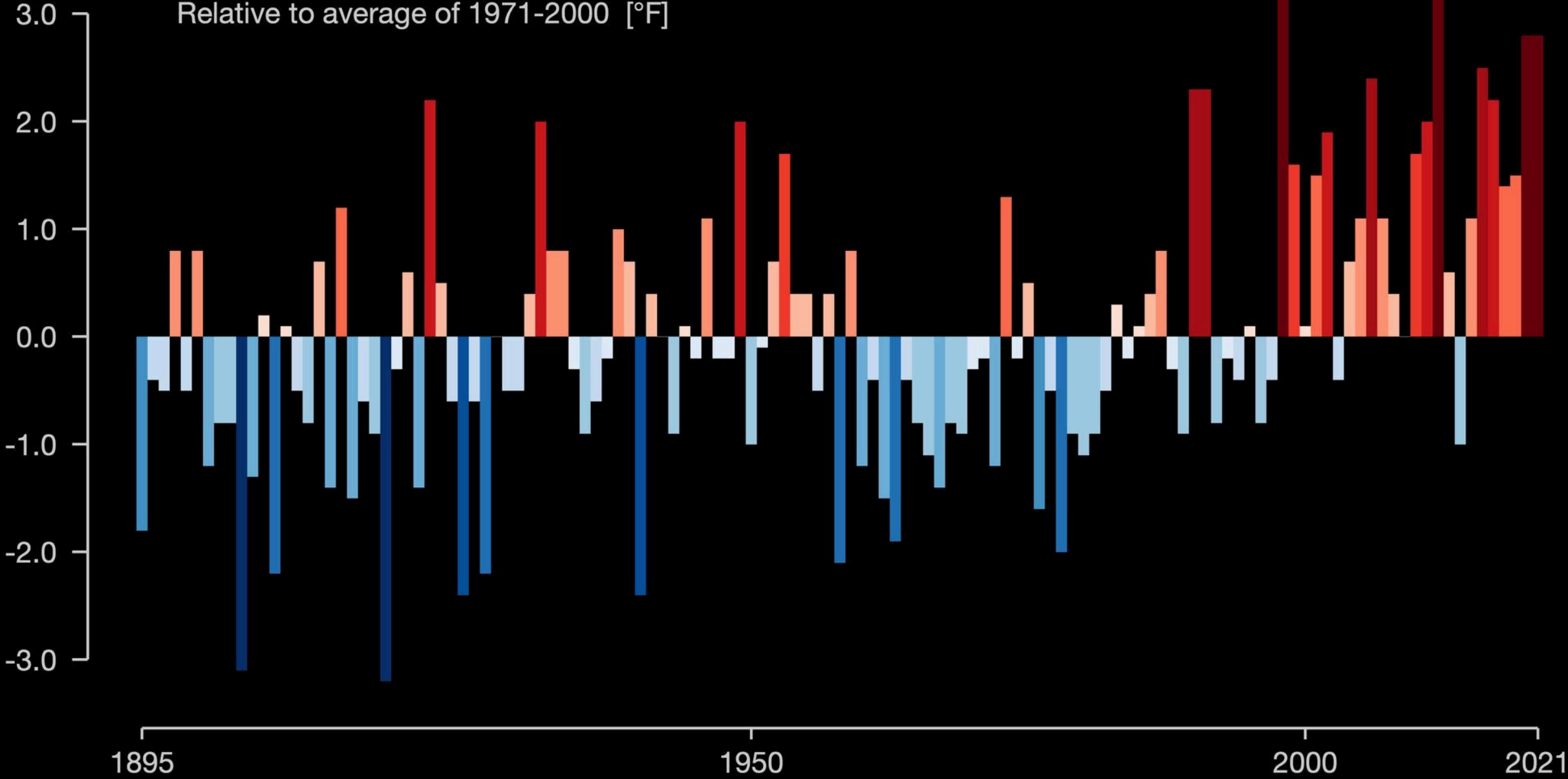
Adopted by the Centre Region Council of Governments
11/22/21



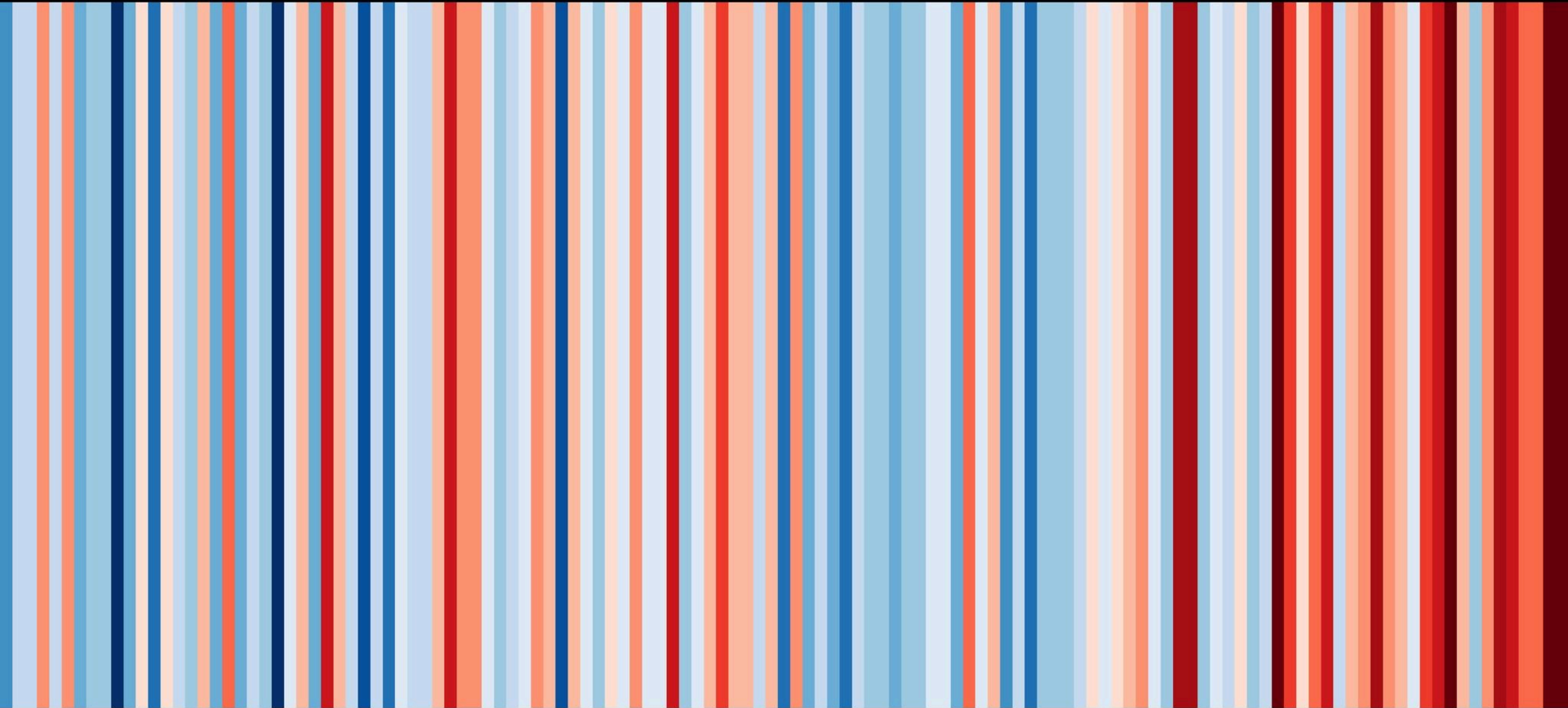
Climate Action & Adaptation Planning

Temperature change in Pennsylvania

Relative to average of 1971-2000 [°F]



Temperature change in Pennsylvania since 1895



1910

1930

1950

1970

1990

2010

The Global Risks
Report 2023
18th Edition

INSIGHT REPORT

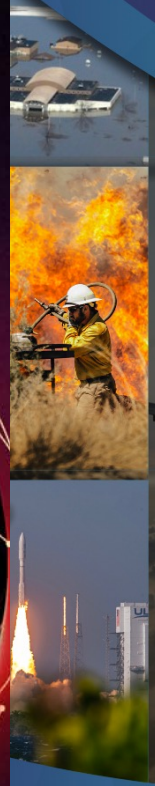


WORLD
ECONOMIC
FORUM

Department of the Air Force

CLIMATE
ACTION
PLAN

October 2023



Business
Roundtable

ADDRESSING
Climate Change

Principles and Policies

September

UNITED NATIONS
**PARIS CLIMATE
AGREEMENT**
SIGNING CEREMONY
— 22 APRIL 2016 —





The United States of America

Nationally Determined Contribution

**Reducing Greenhouse Gases in the United States:
A 2030 Emissions Target**

Pennsylvania Climate Action Plan



Strategies for government, business, agriculture, and community leaders—and all Pennsylvanians



LOCAL GOVERNMENT FACT SHEET

SMART SOLUTIONS AND HAPPIER COMMUNITIES

POPULATION OF THE STATE OF PENNSYLVANIA

1,591 RURAL
MUNICIPALITIES

3.5 million
RURAL POPULATION (27%)

12.7
million
TOTAL POPULATION

969 URBAN
MUNICIPALITIES

9.2 million
URBAN POPULATION (73%)

48 OF PENNSYLVANIA'S **67** COUNTIES ARE CONSIDERED RURAL

Pittsburgh, PA

What else about Pennsylvania?

Hydrologic Extremes in the Spring Creek Watershed



The Local Climate Action Program

Overview

Who we are



Penn State's Local Climate Action Program

We are...drawing down Pennsylvania's emissions!

Penn State's Local Climate Action Program (LCAP) recognizes the threat and the opportunity of climate change. So, we work on it where it matters most.

We are partnering exceptional undergraduates and graduate students with Pennsylvania's municipalities and counties to achieve the goal of net zero emissions as soon as possible.

We are supporting climate action in the places where people live, work, and play right here in Pennsylvania, including the City of Erie, the City of Reading, the City of Pottsville, Lower Merion and Swanton Townships, and Bucks County. We are developing technical skills in greenhouse gas accounting, local and regional policy, supporting drawdown strategies, & building the climate action network.

We are going to work with State College Borough, Mechanicsburg, the Department of Conservation and Natural Resources, and more in 2023-2024.

If you are a third- or fourth-year undergraduate or graduate student or a county or municipal official who wants to support a net zero future, contact:

Peter Buck, Co-Director of the Local Climate Action Program
pbuck118@psu.edu

Brandi Robinson, Co-Director of the Local Climate Action Program
bjn151@psu.edu

Learn more at: <https://climateaction.psu.edu/localclimateaction/>

The Local Climate Action Program (LCAP) is built on a simple idea: cooperation can make Pennsylvania's communities draw down carbon emissions and support the places we call home. The LCAP brings Penn State students, faculty, local governments, and experts from different fields together to support and create a thriving and prosperous future for all Pennsylvanians.

What we do

The LCAP partners upper-level Penn State students with Pennsylvania's local governments to determine a community's contribution to climate change and help that government develop plans to draw down carbon emissions and adapt to a changing climate. In the fall semester, our students develop a working relationship with local government staff and officials. Using publicly available data from utilities, authorities, and other sources, they create a sector-based greenhouse gas emissions inventory using ICLEI ClearPath software. They adapt this report into a presentation and deliver it to their municipal or county partners. In the spring, our partners formulate a project that our students can deliver. The project can assist in greenhouse gas reduction, resilience, or a combination of the two. Students and our co-directors can help set up a planning process, troubleshoot solar cooperatives, create communication and education materials, explore impact fees, or develop reports on model zoning ordinances. At the end of the day, we want to ensure our students have a rich and professional experience and that Pennsylvania's citizens and localities are well-served.

Outcomes

Get Involved:

Fill out the form below to express interest in participating in the LCAP program either as a student or a municipal/county government.

GET INVOLVED

Contact:



Peter Buck
pbuck118@psu.edu
(814) 865-7488

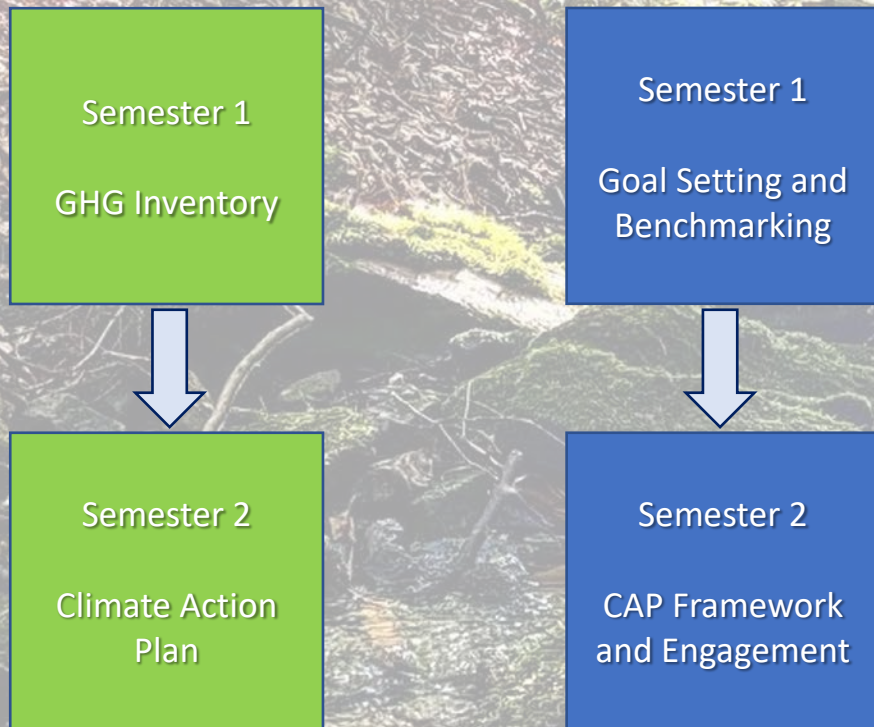


Brandi Robinson
bjn151@psu.edu
(814) 867-4539



Model

Previous Model Present Model



- Establishd explicit **expectations** for municipal partner engagement
- Create more pathways for what **the “end” of the project** looks like
- Move **beyond number crunching** toward **enhancing quality of life**
- Develop a space to scaffold necessary **community engagement** pieces

Webinar vs. Course

Better outcomes for students and municipal partners

- **For students:**

- Real-world, transferrable skills in greenhouse gas accounting,
- stakeholder engagement, and
- action plan development

- **For government partners:**

- Benchmarking needed to measure successful future outcomes,
- a roadmap for action opportunities, and
- an understanding of community interest and priorities



LCAP Participants Year 4

- The 2022-23 Local Climate Action Program includes 11 local government entities, representing 62 municipalities and a population of >950,000*
- Bucks County (representing 54 municipalities)
- City of Erie (Erie County)
- City of Reading (Berks County)
- City of Scranton (Lackawanna County)
- Doylestown Borough (Bucks County)
- Doylestown Township (Bucks County)
- East Fallowfield Townships (Chester County)
- Lower Merion Township (Montgomery County)
- Lower Macungie Township (Lehigh County)
- Uwchlan Township (Chester County)
- Wormleysburg Borough (Cumberland County)



Scranton

- Largest city in Northeastern Pennsylvania (pop. 78,000)
- Formerly known for large coal mining and manufacturing industries
- After WWII, employers moved out or closed, resulting in loss of half the population and tax base.
- Lack of infrastructure and community investments
- Now experiencing revitalization and increasing population with medical and education jobs
- Overall priority: meeting the needs of a 21st century city while staying within its economic means
- Investment in workforce development, active transportation, housing, and climate action



Meet our Team



Isabella Briseño
May '23 - ERM & PoliSci



Candace Emanuel
May 23' - ESP



Emma Steely
May '23 - ERM



Craig Beavers
Assistant City Planner
and Sustainability
Coordinator



Peter Buck
Co-Director, Local
Climate Action
Program



Brandi Robinson
Co-Director, Local Climate
Action Program

► Emissions Breakdown by Sector

Sector	Fuel or source	2019 Usage	Usage unit	2019 Emissions (MTCO ₂ e)
Residential energy	PPL Grid Electricity	234,872,100	kWh	74,402
	Natural Gas	28,841,485	Therms	153,398
	Distillate Fuel	24,259	MMBtu	1,806
	Anthracite Coal	921	MMBtu	96
Residential energy total				229,702
Commercial energy	PPL Grid Electricity	406,299,550	kWh	128,706
	PPL Other Electricity	1,944,635	kWh	616
	Natural gas	10,599,264	Therms	56,374
Commercial energy total				185,696
Industrial energy	Electricity	165,098,164	kWh	52,299
	Natural gas	11,983,945	Therms	63,604
Industrial energy total				115,903
On-road transportation	Gasoline	355,153,934	Vehicle Miles Traveled	146,508
	Diesel	36,848,200	Vehicle Miles Traveled	54,244
Transportation total				200,752
Solid Waste	Waste Generated	30,694	Metric Tons	30,694
Solid waste total				30,694
Water and wastewater	Potable Water Treatment Energy Usage	2,840,700	kWh	899.87
	Wastewater Treatment	0.875	Metric Ton N ₂ O	232
Water and wastewater total				1,131.87
Total community-wide emissions				763,878.87

Data Sources and Calculations

Direct Data Entry

Commercial, Residential, & Industrial Energy

- Electricity from *PPL Electric*
- Natural Gas Combustion from *UGI*

Waste, Wastewater, & Water

- Solid Waste from *Keystone Landfill* and *Alliance Landfill*
- Potable Water from *PA American Water*

Estimated Data

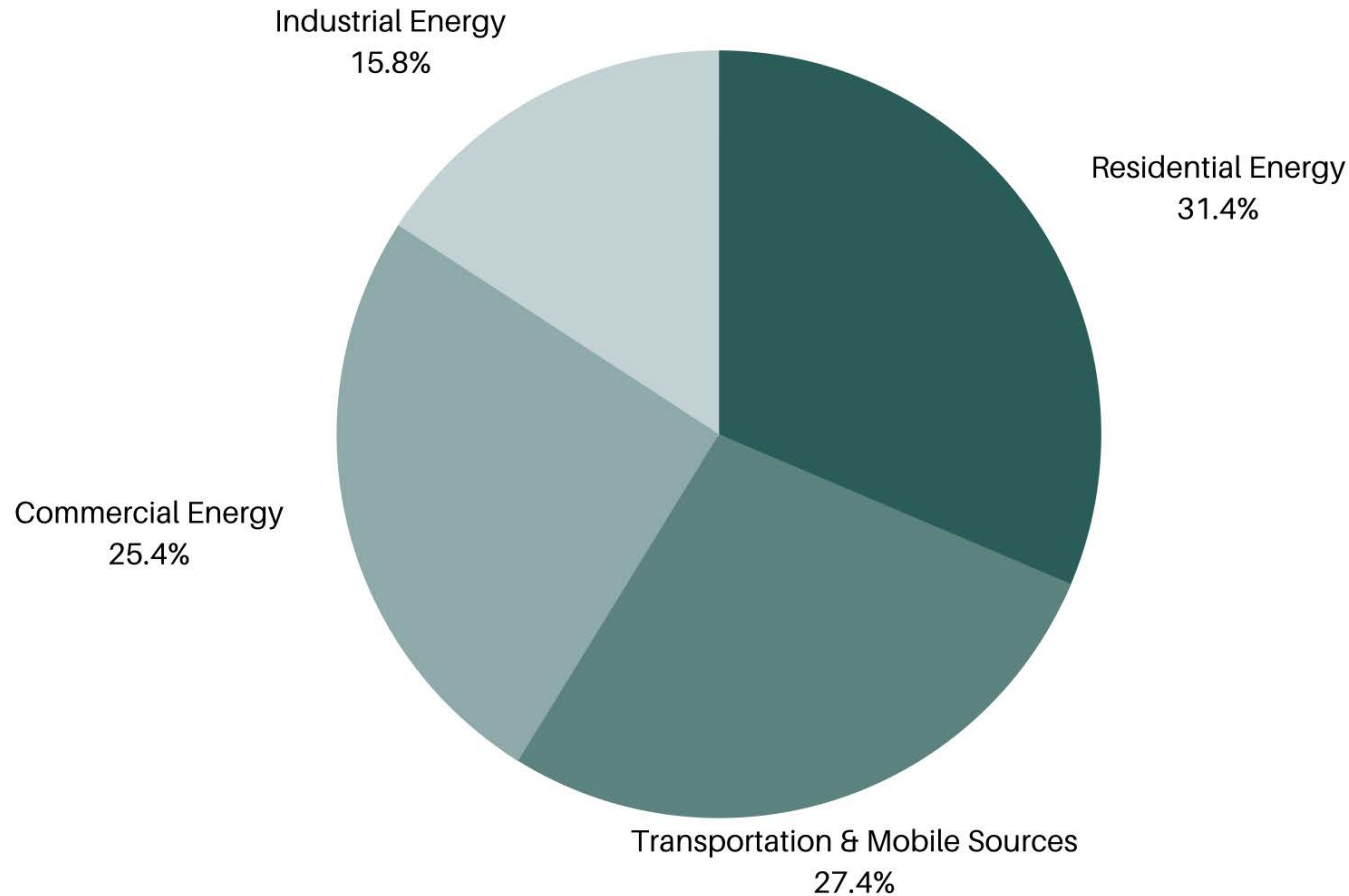
Transportation

- Distances traveled from *Google Environmental Insights Explorer*

Wastewater

- Population estimates from *Scranton Sewer Authority*

Community-Wide Emissions by Sector



Residential Energy 31%

Transportation 27%

Commercial Energy 25%

Climate Action Steps for Scranton

- Conducting community outreach and surveying to understand the needs of our residents
- Developing a Sustainability and Climate Action Plan to set clear goals for reducing emissions and promoting a green city
- Investing in stormwater, transportation, and renewable infrastructure through ARPA funds, IRA grants, and IJA dollars
- Launching an Environmental Advisory Council to monitor progress of plan implementation and provide input and guidance



Scranton Survey Promotional Materials



Participate in Scranton's SUSTAINABILITY AND CLIMATE ACTION SURVEY

SHARE YOUR
THOUGHTS TO

Inform equitable,
just climate policy

Improve your
community



TAKE THE
ANONYMOUS
SURVEY



CONTACT US

340 N Washington Ave
Scranton, PA 18503

(570) 348-4193
ext. 4512



Participa en Scranton's ENCUESTA SOBRE SOSTENIBILIDAD Y ACCIÓN POR EL CLIMA

COMPARTA SUS
IDEAS PARA:

Informar políticas
climáticas equitativas y
justas

Mejorar su comunidad



RESPONDA A
LA ENCUESTA
ANÓNIMA



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SHARE YOUR THOUGHTS TO

CREATE CLIMATE
ACTION

COMMENT ON
CURRENT
ENVIRONMENTAL
POLICIES

IMPROVE YOUR
COMMUNITY

BE VOCAL

Scan to take
the anonymous
survey



Draft Request for Proposal

- *Purpose of Request:* Qualified consultant to develop Scranton's SCAP
- *Deliverables include:*
 - Public Involvement Action Plan and community engagement efforts
 - Baseline GHG Inventory
 - Metrics Reporting Toolkit
 - Sustainability and Climate Action Plan



LCAP Participants Year 5

The 2023-24 Local Climate Action Program includes 6 municipalities, one county, a state agency, and (perhaps) an institution of higher education

- Centre County
- State College Borough
- Churchill
- Mechanicsburg
- Palmer Township
- Solebury
- Conshohocken
- Pennsylvania Department of Conservation and Natural Resources
- Maybe...Penn College



A photograph of a solar farm in a grassy field. The solar panels are arranged in rows, extending into the distance. In the foreground, a white lamb is standing in the tall grass. The sky is blue with scattered white clouds. The text "What's next for LCAP?" is overlaid in the center of the image.

What's next for LCAP?

Questions?



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