

Centre Region's Changing Climate

We are working here in the Centre Region to address both the causes and consequences of a changing climate to build a more **resilient** and **sustainable** community. **Local government can't do this work alone.** We need your help to create and implement solutions that address our climate goals while improving our community's **economic prosperity, environmental health, and social equity.**

Local Carbon Footprint

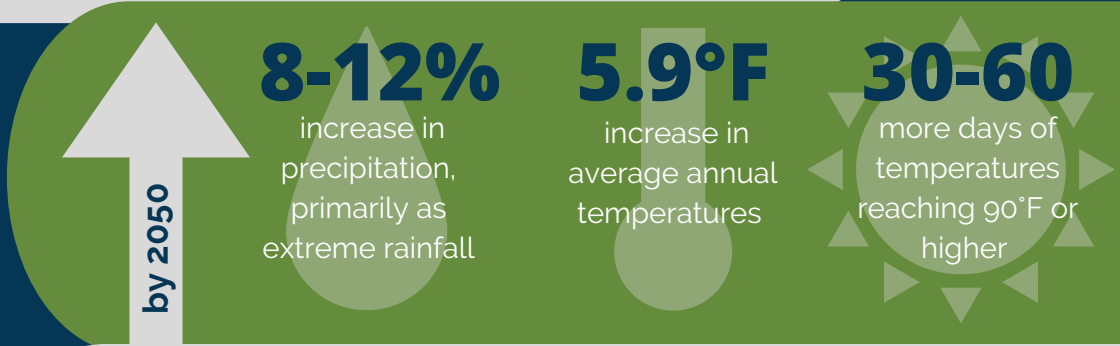
10.21

MT CO₂ /person*

824,209

MT CO₂ across Centre Region annually

*metric tons CO₂e emissions. Our emissions per person is 2x the global average.



Centre Region's Vulnerabilities

Gradual Climate Changes

Increased Temperature

Local Climate Hazards

Extreme Heat Events
Worsened Air Quality

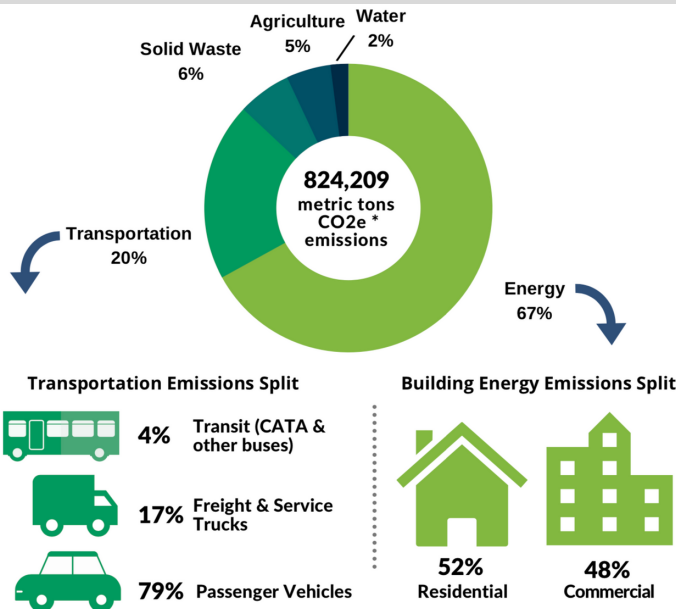
Fluctuations in Precipitations

Increased Extreme Rain Events
Increased Tornadoes & Windstorms
Increased Drought

Direct Impacts

- Heat-related Illness or Death
- Power Outages
- Asthma & Respiratory Impacts
- Vector-borne Disease & Pathogen Outbreaks
- Property Loss & Damage
- Crop Loss & Increased Food Prices
- Increased Utility Rates
- School & Business Disruption
- Transportation Impacts
- Water Shortages
- Septic System Failures

Our Greenhouse Gas Emissions Profile



What is Climate Change?

Climate Change refers to the broad range of changes that our happening to our planet, including, but not limited to, average temperature increases, rising sea level, shifts in plants' growing seasons, and intensified storms. **Since the 1800's, human activities have been the main driver of climate change,** primarily due to burning **fossil fuels** like **coal, oil, and gas.** Burning fossil fuels generates **greenhouse gas emissions** that act like a **blanket wrapped around the Earth,** trapping the sun's heat and raising temperatures.

What is Centre Region Doing to Address Climate Change?

GOAL



Reduce 2010 level greenhouse gas emissions by **45% by 2030**

In late 2021, the local government in the Centre Region adopted a comprehensive **Climate Action and Adaptation Plan (CAAP)**. This plan assesses Centre Region's climate vulnerabilities and areas for mitigation and adaptation in 6 sectors. The plan identifies **82 actions** to be taken by the community and local government to **reduce community wide greenhouse gas emissions** and **build resiliency** to current and expected climate change impacts. This plan, to be successful, will require **partnerships** with businesses, organizations, and residents across our region. **We need your help!**

What can I do to Cut Emissions?



- Evaluate the potential for powering your home with solar energy: <https://bit.ly/GoSolarCR>
- Buy green energy: <https://www.papowerswitch.com/>

Renewable Energy



- Plant native & pollinator-friendly plants and remove invasive species
- Avoid pesticides and fertilizers
- Become a Certified Watershed-Friendly Property through Penn State Master Gardeners

Land Management



- Eliminate 10 miles of driving each week
- More than 10 seconds? Don't idle your car
- Consider hybrid or electric for your next vehicle purchase

Sustainable Transportation



- Start backyard composting your food waste
- Buy locally grown food & products: <https://happyvalley.com/eat/farmers-markets/>

Solid Waste



- Eat vegan once a week to reduce CO2 & save water
- Install water-saving showerheads & low flow toilets
- Use a rain barrel to collect water for watering your plants

Clean Healthy Water



- Sign up for West Penn Power's FREE energy audit: <https://homeaudit.energysavepa.com>
- Wash clothes in cold water
- Replace 5 frequently used bulbs with ENERGY STAR LED bulbs

Energy & Buildings

Economically Feasible

Environmentally Sound

Sustainability

Socially Equitable

Additional Resources

Visit Centre Region Council of Government's Website for More Information:

Information:

<https://www.crcog.net/sustainablecr>

Learn More About CAAP & Climate Change at Centre Sustains:

Change at Centre Sustains:

<https://centresustains.com/resources>



SUSTAINABLE CENTRE REGION



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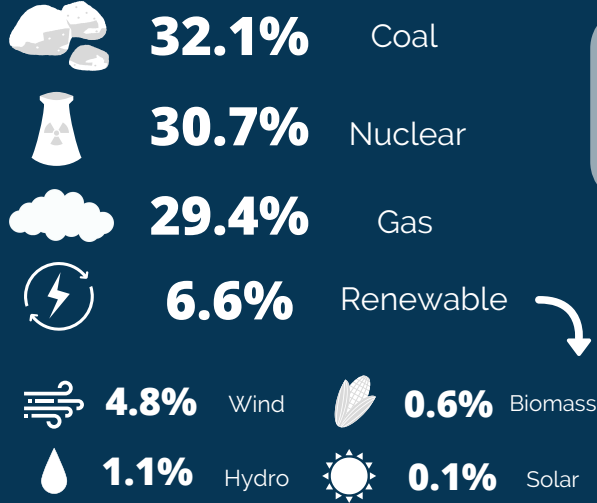
Renewable Energy in Centre Region

GOAL



Transition fossil sources to **renewables** for **10%** homes' and **5%** businesses' energy usage

A Breakdown of Our Energy Use



Why Transition to Renewables?

- Less air pollution
- Better respiratory health
- Increase your property value
- Reduce your electric bill
- Resilience, diversification, & security
- Economic prosperity for our community

Local Action

Solar Power Purchase Agreement (SPPA): a working group of 15 entities in Centre County formed to explore the viability of investing in a joint solar power purchase agreement.

SolSmart Silver Designation: Centre Region formed a partnership with SolSmart to recognize our efforts of making it faster, easier, and more affordable to go solar.

EV & Solar Charger Co-op: In partnership with Solar United Neighbors (SUN), residents were offered economical and easy-to-install solar and EV chargers. We had 142 members participate between Fall 2021-Winter 2022.

Additional Resources

Transition your home with solar energy: <https://bit.ly/GoSolarCR>

Buy green energy: <https://www.papowerswitch.com/>

Receive a free energy audit: <https://homeaudit.energysavepa.com>

Financing Solar

Solar for RESIDENTS

The average solar purchaser sees a return on their investment (ROI) of 20% or more

- 26% Federal investment tax credit
- Centre County Solar Co-op (September 2021- January 2022) - save money with a bulk discount by going solar in a group
- Solar can potentially increase the home's value by up to 4.1%

Solar for BUSINESSES

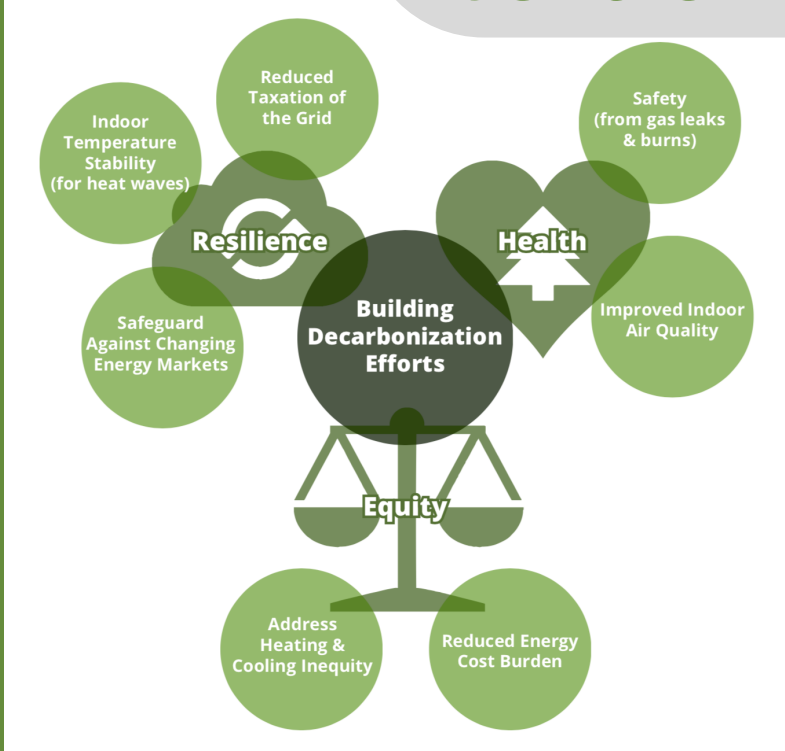
Federal tax benefits can reduce the cost of solar by around 50%

- 26% Federal investment tax credit
- C-PACE: Commercial Property Assessed Clean Energy financing - covers 100% of costs with competitive, fixed interest rates
- Depreciate 100% of the costs in year 1 (MACRS)



Energy & Buildings in Centre Region

Co-Benefits



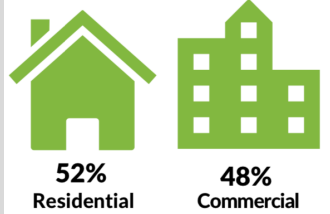
GOAL



Reduce energy consumption by **30% for homes & 25% for businesses**

67% of our greenhouse gas emissions come from buildings

Building Energy Emissions Split



Additional Resources

For more information on LEED:
<https://www.usgbc.org>

State College's LEED accomplishments:
<http://www.gbig.org/collections/9999>

How to upgrade your home:
<https://www.energy.gov/eere/why-energy-efficiency-upgrades>

Energy solutions for businesses:
https://www.firstenergycorp.com/save_energy/save_energy_pennsylvania/for_your_business_pa.html

Energy Toolkit: <https://penntap.psu.edu/energy-toolkit/commercial-energy-toolkit/>

LEED

What is LEED? LEED stands for "Leadership in Energy & Environmental Design." It is a widely used green building rating system that provides a framework for healthy, highly efficient, and cost-saving green buildings. We currently have 55 LEED certified buildings in Centre Region.

LEED Certification in our School District

Platinum: Corl Street, Radio Park, & Spring Creek Elementary Schools

Gold: State College Area High School & Delta

Silver: Mount Nittany Elementary School

Did you Know?

The U.S. Department of Energy estimates that the typical household can save 25% on utility bills with energy efficiency measures, which amounts to over \$2,200 annually.

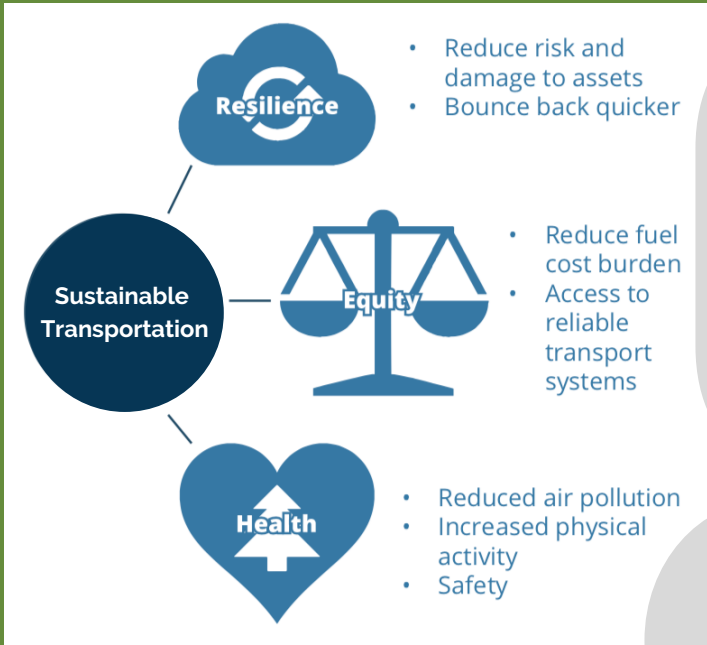


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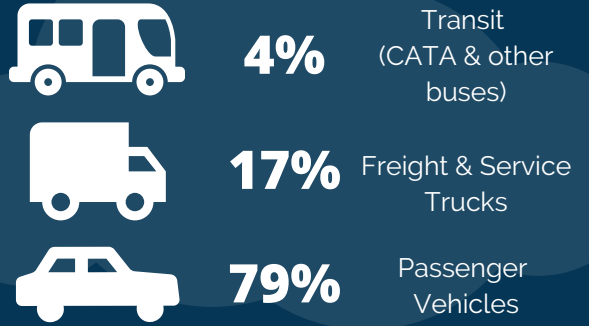
Sustainable Transportation in Centre Region

20% of our Greenhouse Gas Emissions come from Transportation



Co-Benefits

Transportation Emissions Split



GOAL

(1) Increase the trips taken with sustainable options

(2) Convert 25% of vehicles to EV



CATA

(Centre Area Transportation Authority)

CATABUS

19-route community bus system

CATAGO!

On-demand microtransit service with convenient & flexible scheduling

CATACOMMUTE

Shared ride system for long-distance commuters

CATARIDE

Origin-to-destination transportation primarily for persons 65+ & ADA eligible

Bicycles

Bicycle Friendly Community Awards

Centre Region: silver
State College Borough: gold



104 total miles of biking adventure!

Spin E-Bike Share Program

300 available bikes on PSU campus & surrounding area

Electric Car Benefits

- LESS** greenhouse gas emissions
- Tax incentives & rebates
- CHEAP** maintenance & repair

EV drivers spend **60% less** each year on fuel costs compared to gas-powered drivers

Centre Region has **34 public charging stations**

Electric Vehicles (EV)

Additional Resources

[CATA https://catabus.com](https://catabus.com)

<https://www.crcog.net/bikes>

<https://www.plugshare.com>



Land Management

PLANT native & pollinator-friendly plants

PROMOTE soil rebuilding practices

PURCHASE electric landscaping equipment

POLICIES to support sustainable practices

PROPERTY can be Certified Watershed-Friendly through Penn State Master Gardners

FYI:

Integrated Pest Management (IPM) is a better alternative to harmful chemicals & toxins

GOAL: Preserve, restore, and responsibly manage the Region's diverse and fragile environmental resources.



Clean Healthy Water

CREATE resiliency by protecting water resources

CONSTRUCT green infrastructure to manage stormwater

CONSERVE & restore critical habitats

CONSIDER & support the value of trees

COLLECT water with rain barrels to water your plants

KUDOS!

Slab Cabin Run Initiative accomplished water restoration which protects the majority of Centre Region's drinking water

GOAL: Conserve, protect, enhance, and restore our water resources.



Solid Waste

REFILL a non-disposable water bottle or coffee mug

REPLACE single-use anything with reusables

RETHINK before you buy

REPURPOSE throwaways

REFUSE single-use, "free," & over-packaged items

REDUCE your food waste

REUSE by buying second hand & donate

RECYCLE to save raw materials, water, & energy

ROT by composting

GOAL: Reduce the amount of waste sent to the landfill by 25%.

Did you Know?

You can drop off your food waste every Tues from 2-6pm at Boalsburg Farmers Market



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