Our Challenges

Climate change is a global challenge that also presents us with opportunities to create more resilient communities. As our climate changes, local communities will experience different challenges and opportunities. In Pittsburgh, the changing climate presents us with two challenges in particular.

Extreme Temperature

As a result of climate change, we will experience more extreme temperatures. These include heatwaves and extreme cold weather events such as last winter's "polar vortex." Extreme temperatures can lead to air quality issues, heat or cold related injuries and deaths, and power outages. These impacts present the most significant challenge to the most vulnerable residents: children, senior citizens, and people with special needs.

Water

Climate change is causing one of our most valuable resources—water—to become one of our most significant challenges. We are already experiencing these effects. Increased precipitation and more extreme precipitation events have overwhelmed our aging water management infrastructure, causing flash floods, sewage overflows, and the contamination of the region's waterways.

Nowadays and in the future, we will decide how to create opportunities as we minimize and confront the effects of climate change. At our forum, we will discuss how to build a resilient Pittsburgh. The actions we take must help us reduce, anticipate, prepare for, respond to, and recover from the effects of climate change. This pamphlet outlines actions we are already taking and suggests others we might do in the future.

Our Forum

Climate change poses serious challenges to achieving a resilient Pittsburgh. In response, we must seize opportunities to minimize future climate change by reducing greenhouse gas emissions. At the same time, we will need to implement strategies that help us adapt to the climate change effects we are already experiencing, such as heavier precipitation, flooding, and extreme temperatures.

The actions we take to build a more resilient Pittsburgh can provide multiple co-benefits. For some actions the co-benefits will be easy to recognize: actions that reduce carbon emissions from buildings can also reduce energy costs. For other actions the co-benefits may not be as obvious. Improving our water management infrastructure will have costs. However, the green spaces we create to absorb water from increased precipitation can make ours a healthier and more livable region.

At our community forum, experts will respond to your questions and you will engage with your neighbors in small-group discussions. Your input at the forum will provide guidance to public officials, policymakers, and your neighbors as, together, we respond to climate change in ways that will make our region more resilient.

For More Information:

Scan the QR code or visit:
www.cmu.edu/environment/

Building a Resilient Pittsburgh

A Community Forum on Climate Challenges and Opportunities

October 14, 2014

Cohon University Center
Carnegie Mellon University

Sponsors:

Carnegie Mellon University
STEINBRENNER INSTITUTE
for Environmental Education & Research

Collaborators:

The Art of Democracy
Engineering and Public Policy
Pennsylvania Environmental Council
Pittsburgh Climate Initiative
Program for Deliberative Democracy

What We Are Doing Already

Across the country and around the world, cities are taking the lead in confronting climate change. Pittsburgh is no exception. A 2008 Pittsburgh Greenhouse Gas Emissions Inventory revealed that the three most significant contributors to emissions come from privately owned sources, including commercial and residential buildings and vehicles.

In response to this finding, the City has implemented strategies to increase energy efficiency and conservation and reduce energy use. In addition, the City has committed to increasing its use of cleaner energy sources. The actions the City has taken include:

- Installing high-efficiency LED streetlights in business districts
- Improving energy efficiency in the City-County Building, resulting in Energy Star certification
- Committing to reduce energy use in City-owned buildings by 20% or more over ten years.
- Participating in sustainability initiatives like Green Workplace Challenge and Pittsburgh 2030 District, through which buildings in Downtown and Oakland aim to improve indoor air quality and reduce energy use, water consumption, and transportation emissions.
- Installing solar panels at an Uptown Public Works garage and a firehouse in Woods Run.
- Purchasing 25% of electricity for City operations from renewable sources.

Thinking About Our Strategies and Goals

In the coming years, the City will continue to take actions that help it become more resilient. When devising strategies, public officials and policymakers must strive to make the best use of limited financial resources, and they will need your help. As a resident of Pittsburgh, you will need to decide which strategies you will support. In addition, because most emissions come from privately owned sources, you will need to decide which strategies you will want to actively incorporate into your own life. The following terminology will be helpful as you consider which strategies you will support and adopt.

Mitigation Strategies are adjustments we make that are designed to reduce greenhouse gas emissions, such as increasing our use of renewable energy sources.

Adaptation Strategies are adjustments we make that are designed to lessen the negative effects of the climate changes we cannot avoid. Examples include installing landscaping and street surfaces that reduce flooding by absorbing water, or planting tree species that are tolerant of more extreme temperatures.

Co-Benefits are benefits extending beyond the primary goal we have for any particular actions we take to address climate change. These can include cost savings, improved air and water quality, improved health, and improved quality of life. For example, the efforts we take to reduce a building's greenhouse gas emissions can also have the co-benefit of reducing that building's energy costs.

What We Might Do in the Future

Looking towards the future, the City is considering the following strategies as a means to become more resilient and to help residents' take action that will address climate change.

To expand mitigation efforts that reduce greenhouse gas emissions, the City is considering implementing one or more of the following strategies:

- Adopt an ordinance requiring commercial and public buildings to report their annual energy and water use.
- Establish a fund to provide loans for energy efficiency improvements to private residences and small businesses.
- Create online tools to help residents track and manage energy use.
- Expand the high-efficiency LED streetlight retrofit program.
- Install 10 megawatts of renewable energy capacity within the city by 2020.
- Utilize solar energy on all City buildings with solar access by 2020.

To support adaptation strategies that improve our region's water management infrastructure, the City is considering creating a Community Clean Water Fund. The fund will be supported by a fee charged to property owners. Those who create the most stormwater runoff (from large roofs or parking lots) will pay a higher fee. This fund will incentivize developers to incorporate more green space on their lots, and the funds generated by the fee will be used by the City to implement more green infrastructure projects, like planting trees or installing rain gardens.