



PHILADELPHIA GAS WORKS (PGW)

Low Carbon Pathways Study

COMMUNITY ENGAGEMENT MEETING NO. 1

JUNE 3, 2026

Sustainability is our business

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Meet the Project Team



Philadelphia Gas Works (PGW) is the city-owned natural gas utility that serves homes and businesses across Philadelphia with safe, reliable, affordable energy.



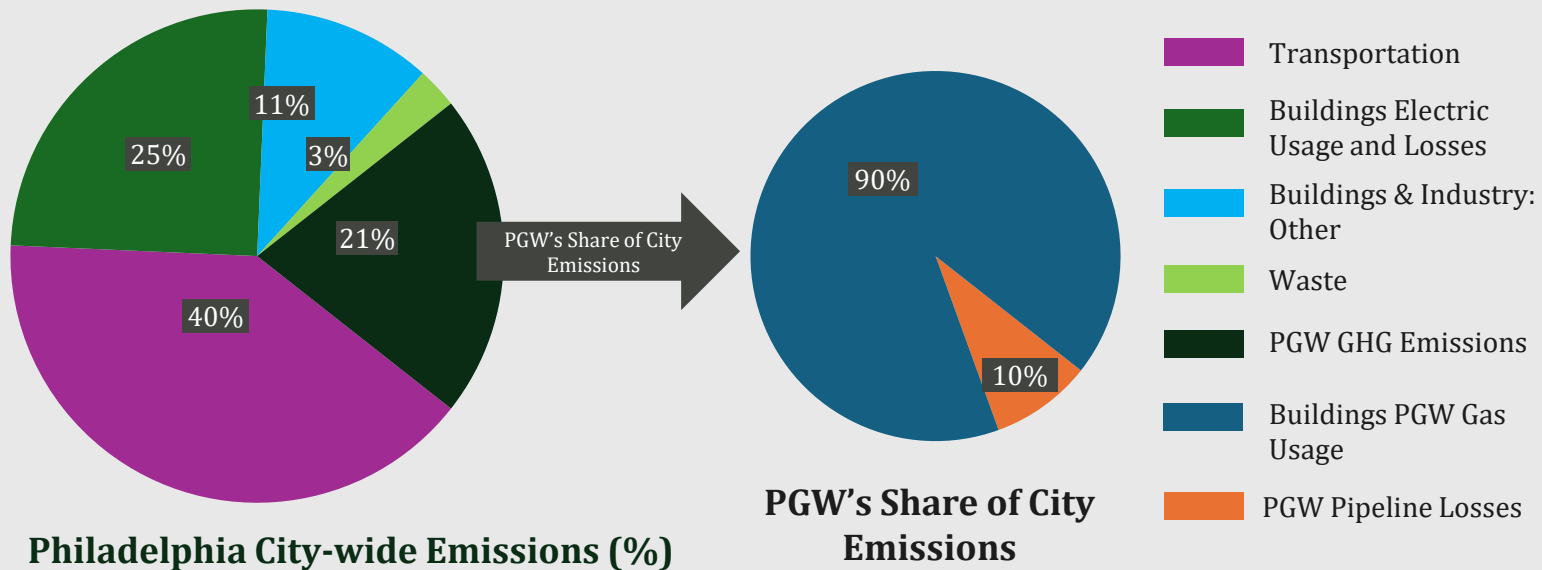
Through a competitive RFP process, PGW selected **Environmental Resources Management, Inc. (ERM)**, a leading sustainability consulting firm, to support analytical modelling and stakeholder engagement for the study.

Introduction to Philadelphia Gas Works



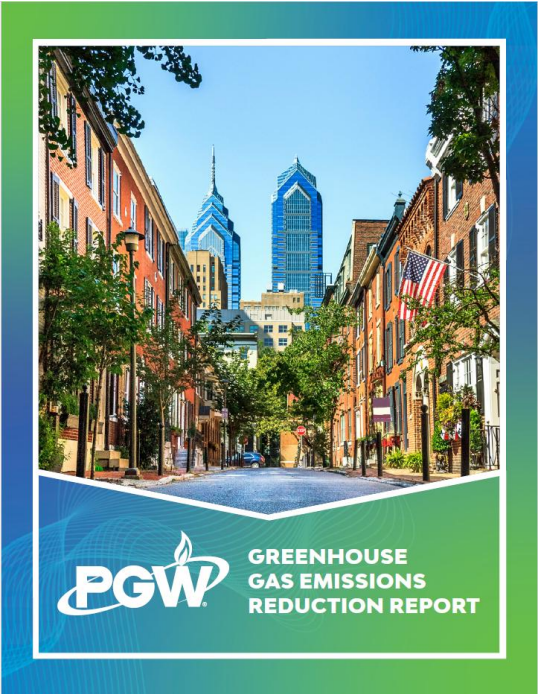
PGW is dedicated to leading Philadelphia’s clean energy future. We continue to upgrade our infrastructure, install new, emission-reducing equipment, help our customers reduce their energy usage, and seek new opportunities for energy innovation and greenhouse gas emission (GHG) reductions.

Philadelphia’s GHG Emissions



Source: <https://www.phila.gov/documents/philadelphia-greenhouse-gas-inventory/>

Sustainability at PGW



Context and Study Overview



The objective of PGW’s Low Carbon Pathways study is to assess a variety of long-term decarbonization pathways balancing safety, affordability, reliability, and sustainability for PGW customers.

What is a Pathways Study?

Four steps of a low carbon pathways study:

1 Where are we today?
Understand current GHG emissions sources and how energy is used

2 Where are we headed?
Evaluate the impact of existing programs and demand trends on future emissions

3 What can we do?
Identify solutions to meet long-term goals and analyze emissions reduction impacts

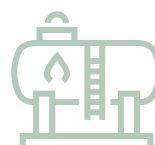
4 What’s next?
Evaluate the results to help plan a clean, safe, affordable, and reliable energy future

PGW Low Carbon Pathways Study Overview

PGW’s Low Carbon Pathways study will:

- Identify and assess a range of leading decarbonization opportunities including end-use energy efficiency, electrification, lower carbon fuels, carbon capture and storage, and thermal energy networks, among others
- Develop and analyze long-term emission reduction pathways to reduce GHG emissions in the City of Philadelphia based on:
 - ❖ Emissions abatement impacts
 - ❖ Total system costs and cost-effectiveness
 - ❖ PGW customer impacts including rates and adoption potentials

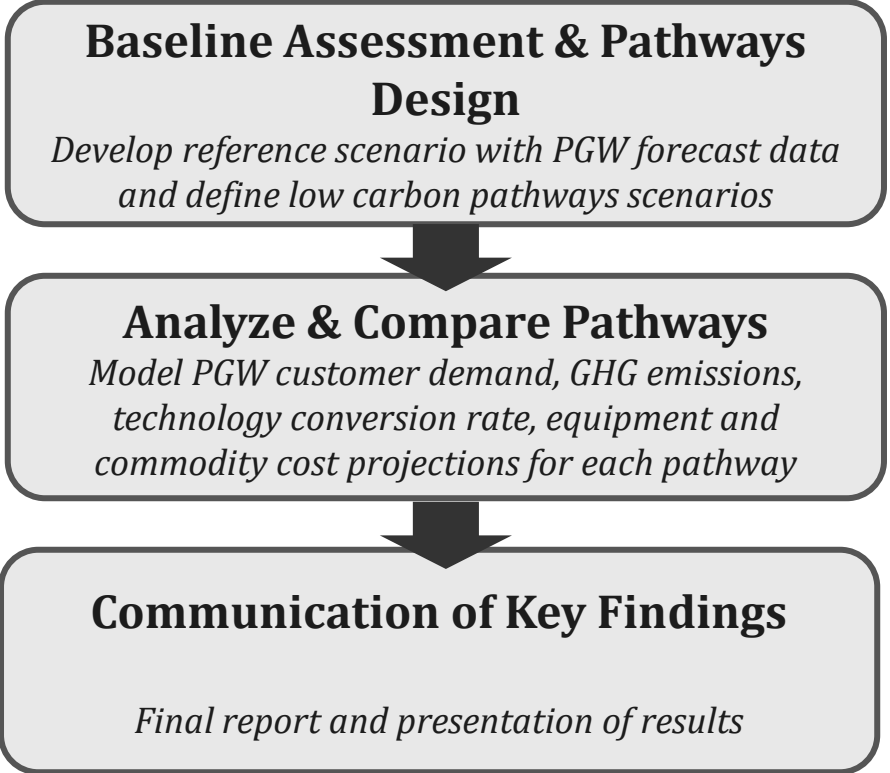
*The goal of this study is not to identify a preferred pathway, but rather to **explore a range of viable options** as representative examples for comparison, and **to establish a foundation for future decision making.***



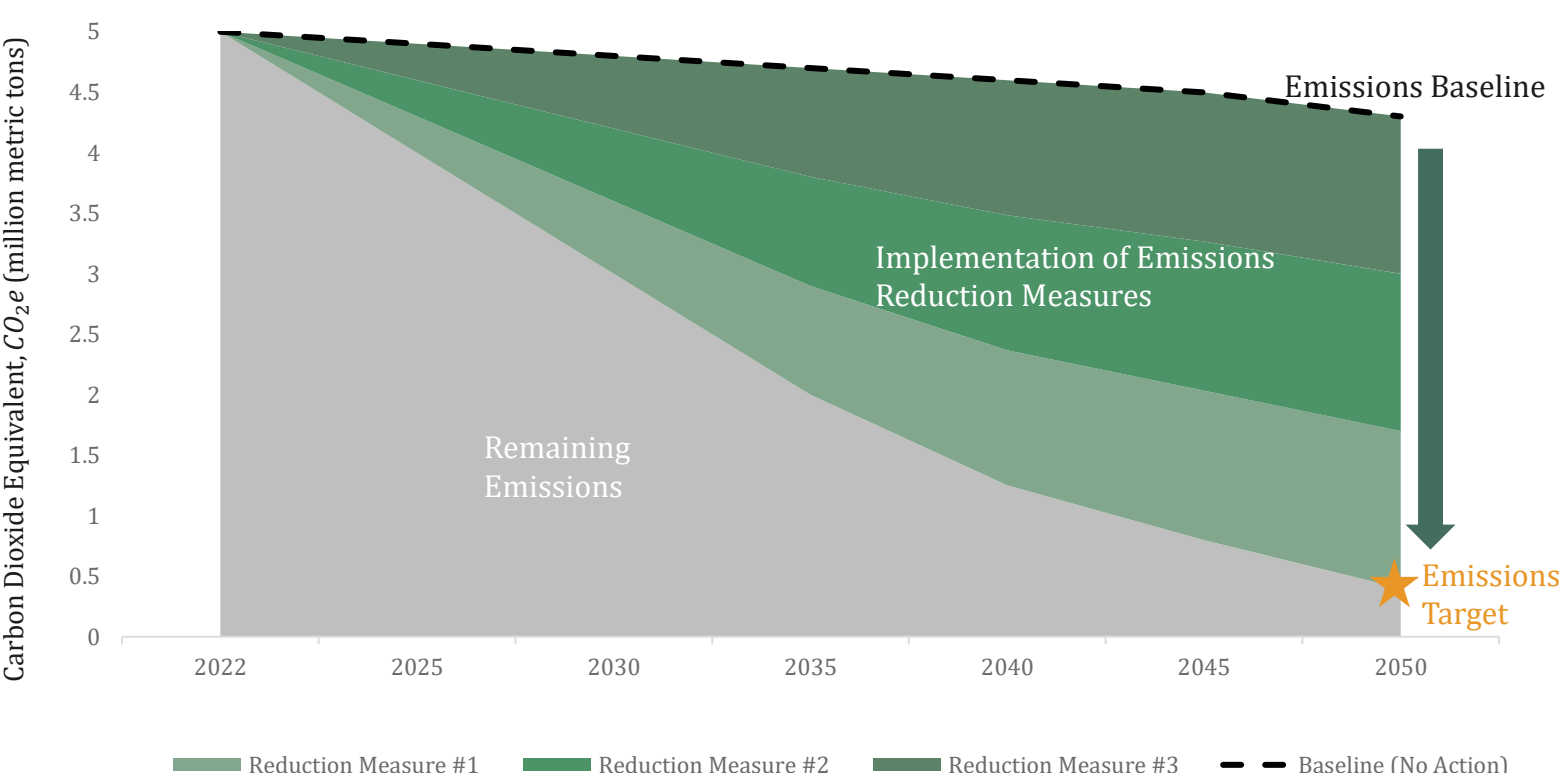
Model Process and Approach

 The PGW Low Carbon Pathways Model analyzes decarbonization scenarios against a reference scenario, quantifying changes in energy demand, GHG emissions and costs.

Workflow



Example Pathway Result



Note: This is an example of a potential low carbon pathways study result – this is not reflective of the data and scenario projections in PGW’s actual Low Carbon Pathways Model.

Low Carbon Technologies



PGW is including a wide range of technologies in a comprehensive analysis of building electrification, natural gas decarbonization, and key emerging technologies.

Natural Gas

Weatherization

Building upgrades (insulation, sealing leaks) to reduce energy demand

High Efficiency Heating Units

Heating system upgrades (>90% AFUE) to reduce energy demand

Gas Heat Pumps

Highly efficient gas-powered heating system

Renewable Natural Gas

Renewable gas produced via anaerobic digestion from organic waste

Building Electrification

Full Heating Electrification

Electric heating systems, such as air and ground source heat pumps

Baseload Electrification

Convert non-heating appliances such as water heaters, stoves, and dryers from gas to electric

Hybrid

Combination system air source heat pump with gas backup

Emerging Opportunities

Advanced Renewable Natural Gas

Renewable gas produced via thermal gasification

Hydrogen

Produce and utilize clean hydrogen as an alternative low carbon fuel

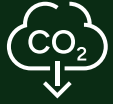
Carbon Capture

Capturing carbon emissions before they enter the atmosphere

Thermal Energy Networks

Shared thermal systems that use heat sources (i.e., geothermal, waste heat, other) to serve multiple buildings

Low Carbon Pathways



PGW is evaluating two potential pathways for long-term GHG emission reductions in Philadelphia – hybrid and full electrification – with a mix of different tactics and adoption rates within each

Proposed Low Carbon Pathway Scenarios



Reference

Baseline scenario of existing gas network and emission-reduction programs



Full Electrification

Greater deployment of electric space heating, cooking, drying, and water heating

Shifts energy demand from the natural gas to electric system

Low-carbon fuels play a lesser role



Hybrid

Explores primarily hybrid space heating and cooling (electric and gas) and gas heat pumps

Leverages the gas and electric systems

Low-carbon fuels play a supporting role


Project Timeline

 The Low Carbon Pathways Study is currently in the model development phase. The final report will be completed in Fall 2026 and shared with the public.




Winter 2025


Spring 2026


Spring - Summer 2026

A **second community engagement meeting will be held** in the future to share updates on PGW’s study and for additional public feedback.

The project team will **continue to develop and refine the Low Carbon Pathways model** with stakeholder feedback.


Fall 2026

Final Report Published

Stay up to date with other news regarding the PGW Low Carbon Pathways study by visiting pgworks.com/sustainability!

