



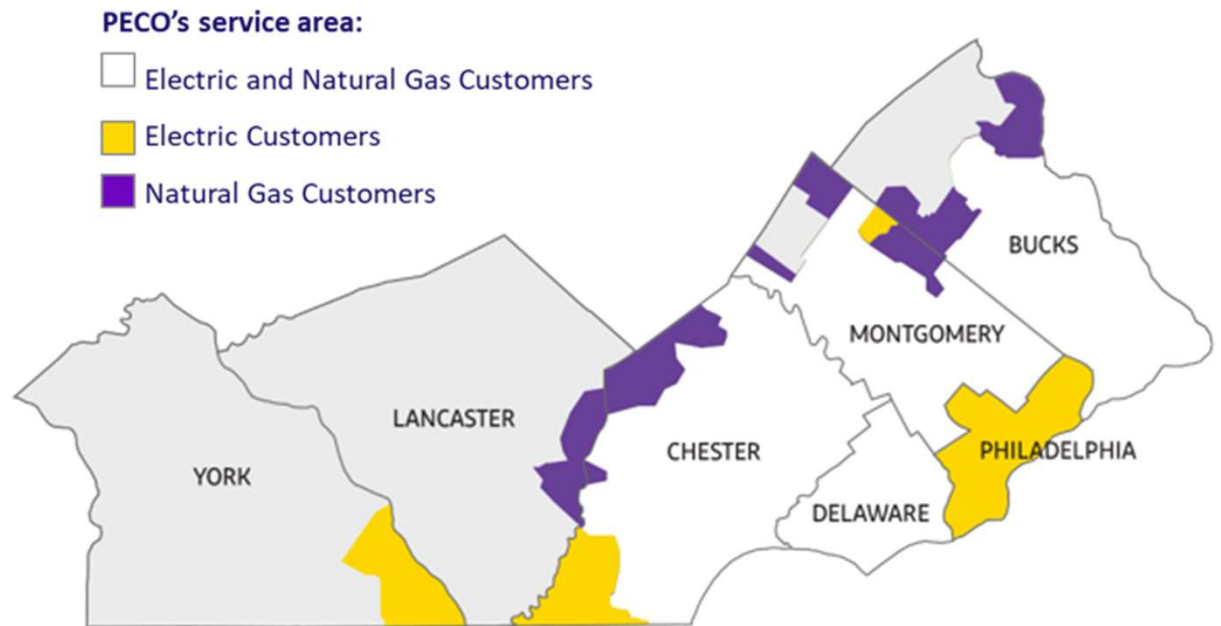
June 2nd, 2023

PECO Hydrogen Pilot

Gas Asset Management and Capacity Planning
Samuel Engel – General Engineer

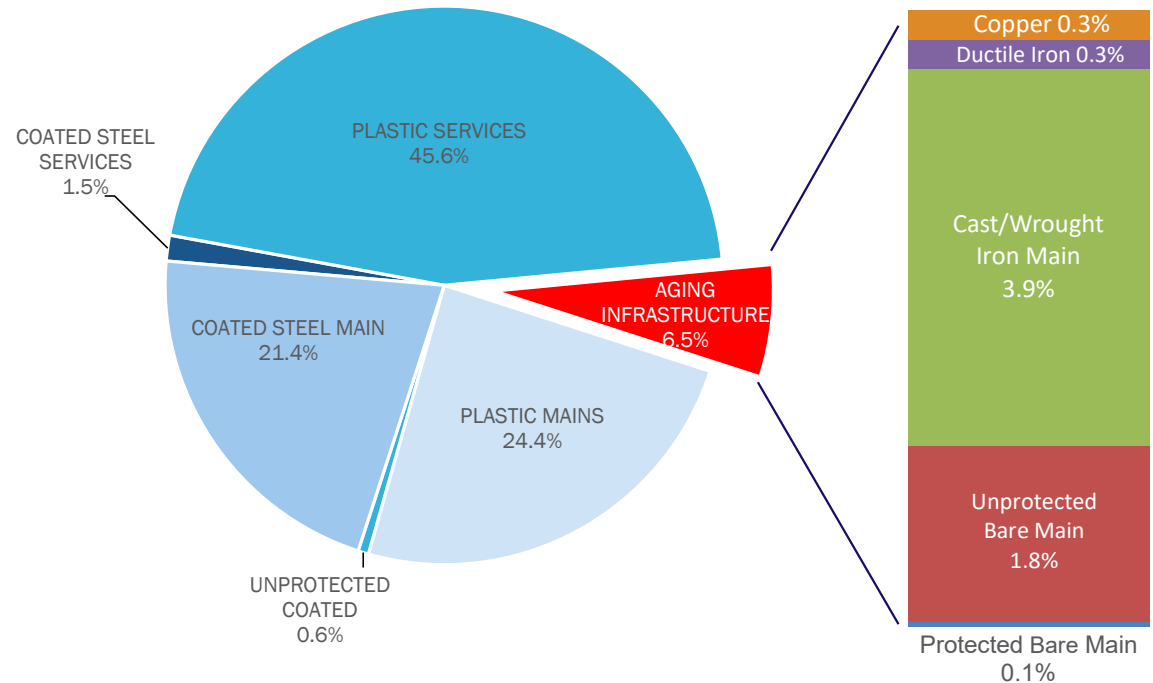
PECO Territory

- Servicing the Greater Philadelphia Area with Gas and Electricity.
- Philadelphia, and parts of York County with Electricity
- Approximately 550,000 Gas Utility Customers
- Headquarters in Center City Philadelphia




PECO Distribution Territory

- Approximately 6900 Miles of Distribution Main
- 8.5 Miles of Transmission Pipeline
- Distribution network is comprised of various pressure systems and materials
- Aging infrastructure, i.e., bare steel, cast and wrought iron, ductile iron, make up 7% of distribution system



Benefits of Hydrogen Blending


Addition of hydrogen, that is produced from lower-carbon energy sources, can reduce greenhouse gas emissions



Aid in the energy transformation to a greener lower-carbon energy system



Use of hydrogen blended natural gas does not require significant changes to end-use equipment



Existing infrastructure compatibility allows for greenhouse reductions with minimal infrastructure upgrades

Hydrogen Blending Pilot



Phase 1 – System Review

- Review of test facility
- Evaluate parameters of test facility



Phase 4 – Implementation Plan

- Development of the initial design, test, and implantation plan
- Complete in-depth design review



Phase 2 – Technology Review

- Review of state-of-the-art technology
- Identify gaps for successful implementation
- Identify blending parameters



Phase 5 – Procurement and Implementation

- Procurement of all components for blending pilot
- Installation and commissioning of pilot



Phase 3 – System Impact Study

- Review Injection System
- Analyze gas odorant effectiveness
- Evaluation of leak detection systems



Phase 6 – Distribution Impact Study

- Complete review of blending pilot learnings and data
- Evaluate scale up based on completion of study

Future of Hydrogen at PECO

- Participation in MACH2 – Mid Atlantic Clean Hydrogen Hub
 - Tri-state (PA, DE, NJ) application for \$800M DOE funding to create regional “Hydrogen Hub” to establish production, processing, delivery, and storage of clean Hydrogen fuel in Delaware Valley region
 - MACH2 incorporates multiple producers, distributors, and users that are internally connected via existing pipeline and right of way
 - Application filed with DOE in April 2023, with funding decision expected in Q3 2023
- Continued Development of Hydrogen Pilot
- Continue to aid in the transformation to Green Energy



“The Department of Energy's invitation is an exciting step forward toward realizing a Mid-Atlantic Clean Hydrogen Hub. Securing a Regional Hydrogen Hub will set us on the path toward a generational transformation in our regional energy economy where we focus on a clean energy future and create or retain thousands of high-quality jobs.” Jim Kenney – Mayor of Philadelphia



“Pennsylvania must embrace its role as an energy leader, and we should leverage our skilled workforce and abundance of natural resources to become a regional clean hydrogen hub that will benefit the entire region. The Mid-Atlantic Clean Hydrogen Hub will reduce carbon pollution, create good-paying jobs, and spur innovation, showing the rest of the country that Pennsylvania will lead the way to a cleaner and more prosperous future.” Josh Shapiro – PA Governor



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Thank you

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