# Climate Change Advisory Committee Meeting

Energy Programs Office December 17, 2024





#### Agenda

- Roll Call, Introduction
- Approval of October Minutes
- Public Comment
- Presentation/Discussion –
   DEP's Shared Energy Manager
   Program
- Break

- Presentation/Discussion –
   PA Home Energy Rebates
- DEP Updates
- Meeting Wrap Up
- Review February Agenda
- New Business



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### Public Comment (15 Min)

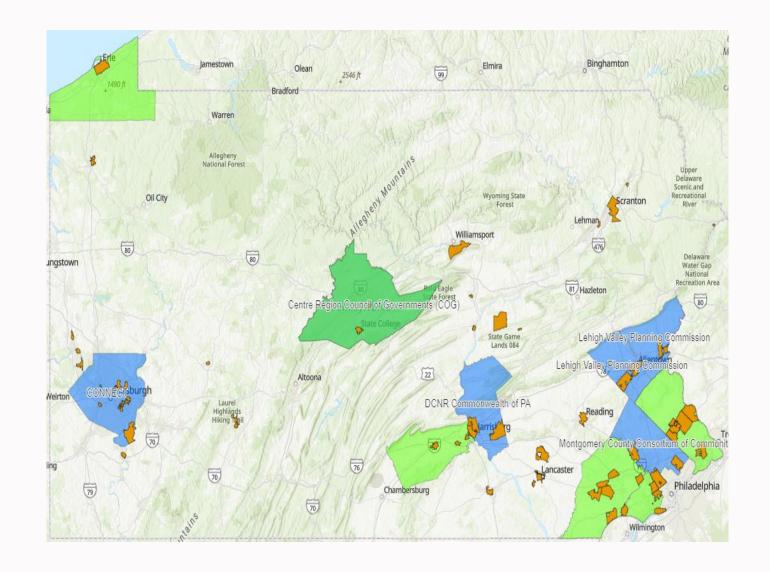
## Energy Programs Office: Shared Energy Manager

December Climate Change Advisory Committee Meeting

December 17, 2024

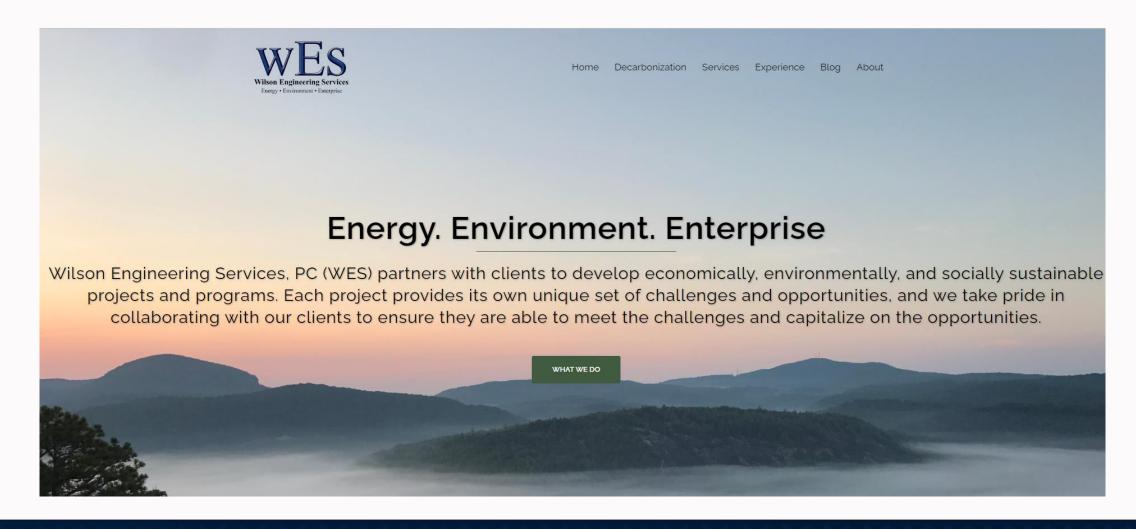








#### **Shared Energy Manager**





#### Municipalities and Scope of Work

#### **LED Street Light Upgrade Locations**

Estimated 1300 total City-owned street lights. Estimated 715 poles with 752 fixtures to be upgraded to LED. Estimated, of which estimated 408 are eligible for CDBG funding (Residential, LowMod, not Flood Plain). Currently, fixtures are a mix of High-Pressure Sodium Vapor, Mercury Vapor and Metal Halide.

Prepared: 8/27/2020 by Kevin Lugo, SSW Manager



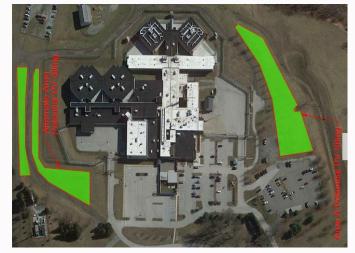




Table 7 – SUV Replacement Options Economic Comparison

Parameter	Parameter Toyota Rav4 (ICE)		Hyundai Ioniq 5 (BEV)	Chevy Bolt EUV (BEV)	
Dealer Price	\$28,190	\$41,015	\$41,245	\$34,495	
Gov. Incentives	\$0	\$0	\$7,500	\$7,500	
Purchase Price	\$28,190	\$41,015	\$33,745	\$26,995	
Annual Maintenance	\$1,000	\$800	\$500	\$500	
Annual Fuel	\$981	\$297	\$210	\$210	
Total Annual Cost	\$1,981	\$1,097	\$710	\$710	
5-year Cost	\$38,097	\$46,502	\$37,294	\$30,543	
10-year Cost	\$48,004	\$51,990	\$40,843	\$34,091	
Annual CO2e (metric ton)	2.1	1.0	0.6	0.6	



#### **Shared Energy Manager Results**

Table 1: Quantitative Totals for Identified Energy Management Opportunities<sup>1</sup>

#### Year 1

Municipality	Annual Cost Savings (\$)	Incentive Funding Potential <sup>2</sup> (\$)	Electric Savings (kWh)	Natural Gas Savings (MCF)	Annual GHG Emissions Reduction (MT CO <sub>2</sub> e) <sup>3</sup>
Bellefonte Borough	\$141,097	\$106,310	2,359,715	0	857
Chester County	\$82,210	\$57,381	1,426,581	0	272
City of Reading	\$17,378	\$16,949	182,783	632	34
Elizabeth Township	\$26,054	\$148,265	129,770	101	22
Indiana Borough	\$158,933	\$398,530	1,089,564	710	275

Table 1 - Quantitative Totals for Identified Energy Management Opportunities

Municipality	Estimated Savings (\$/yr)	Estimated Incentive Potential (\$)	Estimated Electric Savings (kWh/yr)	Estimated Estimated NG Savings Gasoline/Diesel (mmBtu/yr) Savings (gal/yr)		Estimated GHG Emissions Reduction (MT CO2e/yr)	
Abington Township	\$16,863	\$21,451	-139,126	23,764	-	136	
Ben Avon Borough	\$13,711	\$2,514	-101,220	2,030	-	54	
Cumberland County	\$31,792	\$266,070	258,102	-	2,428	98	
City of Easton	\$379,596	-	116,992	528	-	64	
City of Shamokin	-	-	-	-	-	-	

Year 2



#### SEM Expanded Scope & Size





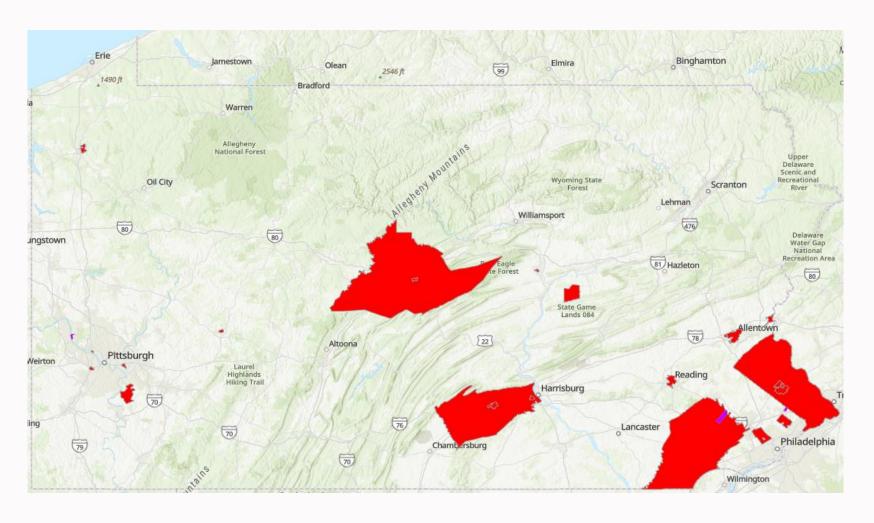
#### Energy Efficiency and Conservation Block Grant Program

#### Overview

OFFICE:	NEW PROGRAM:
State and Community Energy Program	No
FUNDING AMOUNT:	FUNDING MECHANISM:
\$550,000,000	Formula and Competitive Grants
RECIPIENTS:	PERIOD OF AVAILABILITY:
State/Local Government/Tribes	Available until expended



#### SEM Participants





#### **Abington Township**



- EECBG Application
- AFIG Application
- Fleet Transition Study
- Pilot EV/Charging Project Scope
   & Funding Guidance



#### City of Allentown



- EECBG Application
- AFIG Application
- Pilot EV/Charging Project Scope
   & Funding Guidance
- Public Works Solar Array Review
- EVSE Charging RFP
- GESA/Audit Guidance



#### **Bucks County**



- EECBG Scoping and Assistance
- Benchmarking of Facilities
- ACT 129 Incentive Assistance



#### **Camp Hill Borough**



- ASHRAE audit review and proforma assessment
- EV fleet assessment
- Solar PV Financial Analysis
- MORE Application



#### **Carlisle Borough**



- Municipal Operations Plan Review
- CPRG Application



#### Carnegie Borough



- Facility Benchmarking
- Building Lighting Analysis



#### **Centre County COG**



- EV Charging siting and feasibility
- EV Fleet Assistance
- Benchmarking Assistance



#### **Chester County**



- EECBG Application Technical Assistance
- Solar feasibility analysis for 313 & WWTP
- Pocopson Home Energy Benchmarking/GESA review
- Solar RFP Scope Assistance
- Energy Action Plan Scoping Assistance



#### **Cumberland County**



- Solar Project Scoping and RFP
- Cumberland County Fleet Study



## Cumberland County – Dickinson TWP



- Building Energy Assessment
- Benchmarking
- Solar Feasibility Analysis



## Cumberland County – Hampden TWP



- Building Energy Assessment
- Benchmarking
- Solar Feasibility Analysis



## Cumberland County – New Cumberland



- Building Energy Assessment
- Solar Feasibility Analysis
- Benchmarking



## Cumberland County – North Newton TWP



- Building Energy Assessment
- Benchmarking
- Solar Feasibility Analysis



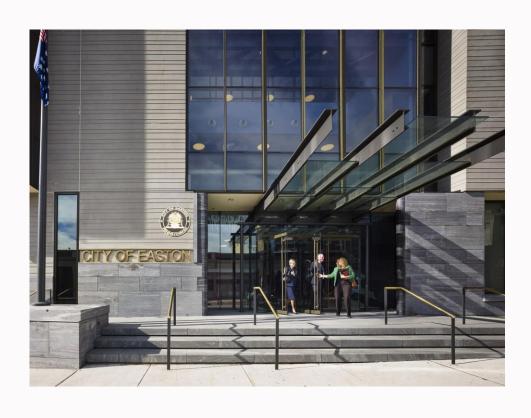
#### **Doylestown Township**



- Energy Benchmarking and Assessment of Admin Office and Police Station
- Fleet review
- Solar Feasibility Review



#### City of Easton



- Solar RFP Scope Assistance
- Solar PV Feasibility Assessment
- EV Community Charging Plan
- Lafayette College Energy Plan Review



#### **East Pikeland Township**



- Solar Ready and EV Ready Best Practices and Ordinances
- Solar PV Case Study Educational Material Development
- Electric Lawn Equipment Information



#### Forest Hills Borough



- GESA Review and Assistance
- Incentive Identification and Application Assistance



#### Hatboro Borough



- Fleet Study & Funding Guidance
- EV Charging Ordinance Review
- Parking Ordinance Review



#### Lewisburg Borough



- Street Lighting Control Modification Review
- Energy Assessments & Benchmarking Guidance
- WWTP Energy Review
- Solar PV Feasibility Study
- MORE Application



#### Lower Merion Township



- Fleet Electrification and Charging Evaluation
- Tier II AEC Generation Review



#### City of Meadville



- Solar Financing Options
   Evaluation and Feasibility
- MORE application assistance



#### **Sharpsburg Borough**



- DLC Funding/Mosites Solar Project Technical Support
- Solar PV Site Selection Evaluation
- Solar Alternative Energy Credit
   Monetization Information
- AQD Application
- Benchmarking



#### **Program Results**

		\$ Savings	Identified	NG Savings Identified (therms)		Electric Savings Identified (kWh)		GHG Emissions Reductions Identified (MTCO2e)		Incentive Funding Identified		
Code	Municipalities	EJ	Tot	EJ	Tot	EJ	Tot	EJ	Tot	EJ	Tot	
ABT	Abington Township	-	\$12,129	-	-	-	-	-	35	-	\$223,250	
AT	Allentown	\$435,889	\$446,257	122,980	122,980	4,947,110	5,062,310	4,029	4,065	\$336,324	\$336,324	
AB	Ambridge Borough	-	-	-	-	-	-	•	-	-	-	
BC	Bucks County	-	-	-	-	-	-	-	-	-	\$515,880	
CHB	Camp Hill Borough	-	-	-	-	-	-	•	-	-	-	
CLB	Carlisle Borough	\$773,400	\$773,400	90,614	90,614	5,404,042	5,404,042	2,077	2,077	\$14,356,593	\$14,356,593	
CNB	Carnegie Borough	\$2,209	\$2,209	-	-	24,542	24,542	11	11	\$4,360	\$4,360	
CR	Centre Region	-	-	-	-	-	-	-	-	-	-	
CC	Chester County	•	\$23,723	-	-	-	244,571	ı	77	-	\$478,705	
CBC	Cumberland County	1	\$668,600	-	-	-	8,472,000	ı	2,674	-	-	
DT	Doylestown Township	-	-	-	-	-	-	-	-	-	-	
EPT	East Pikeland Township	-	-	-	-	-	-	-	-	-	-	
EC	Easton City	\$15,597	\$15,597	-	-	113,256	113,256	36	36	\$65,663	\$65,663	
FHB	Forest Hills Borough	-	-	-	-	-	-	-	-	-	-	
HB	Hatboro	-	\$4,753	-	-	-	-	-	4	-	\$45,000	
LB	Lewisburg	-	-	-	209	-	2,654	•	2	-	-	
LMT	Lower Merion Township	,	-	-	-	-	ı	ı	-	-	-	
MC	Meadville City	\$17,150	\$17,150	-	-	180,200	180,200	57	57	\$213,820	\$213,820	
MV	Millvale	-	-	-	-	-	-	-	-	-	-	
SB	Sharpsburg	\$27,830	\$27,830	-	-	231,913	231,913	112	112	\$1,000,000	\$1,000,000	
	Total	\$1,99	1,648	213	,803	19,735,488		9,149		\$17,239,595		
	EJ Total	\$1,27	\$1,272,074		213,594		10,901,063		6,321		\$15,976,760	



#### Thank you!

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The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water resources and to provide for the health and safety of its residents and visitors, consistent with the rights and duties established under the Environmental Rights Amendment (Article 1, Section 27 of the Pennsylvania Constitution).



## Break (10 Min)



# Agenda

- Roll Call, Introduction
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- Public Comment
- Presentation/Discussion –
   DEP's Shared Energy Manager
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- Presentation/Discussion PA
   Home Energy Rebates
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# Home Energy Rebates Overview

Department of Environmental Protection



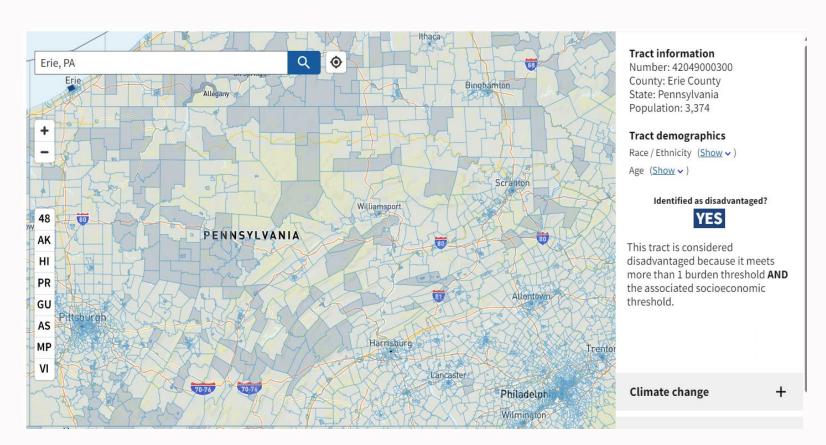


## IRA Home Energy Rebates

- Home Efficiency Rebates (HER)
  - Involves retrofitting households to enhance energy efficiency
  - PA allocated \$129,980,260
- Home Electrification and Appliance Rebates (HEAR)
  - Encourages adoption of appliances that are electric and consume less energy and lower costs
  - PA allocated \$129,226,380



#### **Justice 40 Initiative**



- Ensure at least 40% of investments flow to disadvantaged communities (DACs)
- Utilizing Federal CJEST map to define DACs
- \$200 contractor incentive for completing projects in DACs



#### Categorical Eligibility: Household Level

If households have information proving that they are part of one of these programs, they are categorially eligible for program funding assuming their building type is applicable to the program being applied to:

- Medicaid
- Supplemental Nutrition Assistance Program (SNAP)
- Head Start
- Lifeline Support for Affordable Communications (Lifeline)
- Food Distribution Program on Indian Reservations (FDPIR)
- National School Lunch Program Free (NSLP)
- Housing Improvement Program (HIP)
- Housing Opportunities for Persons with AIDS

- Supplemental Security Income (SSI)
- Weatherization Assistance Program (WAP)\*\*
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)\*\*
- Verified government or non-profit program serving Asset Limited Income Constrained Employed (ALICE) persons or households
- Section 8 housing choice voucher program
- Low Income Home Energy Assistance Program (LIHEAP)

NOTE: This information is subject to DOE approval. This chart indicates what DEP has stated in its application

<sup>\*\*</sup>For WIC and WAP, Pennsylvania will use PNNL's AMI/FPL comparison tool during the application income verification process to confirm if an applicant that uses WAP or WIC meets criteria for categorical eligibility and to determine the rebate amount based on the household's location.



## Categorical Eligibility: Building Level

If building owners have information proving that their building is part of one of these programs, they are categorially eligible for program funding:

- Public Housing (housing owned and operated by Public Housing Authorities)
- Privately owned multifamily buildings receiving project-based assistance (Section 8, Section 202, Section 811)
- Privately-owned multifamily buildings that house residents receiving tenantbased assistance
- Section 42 Low Income Housing Tax Credit (LIHTC)

NOTE: This information is subject to DOE approval. This chart indicates what DEP has stated in its application



## HEAR Overview

- A point-of-sale rebate program limited to households below 150% AMI
- Incentivizes electric appliances and enabling measures with up to \$14,000 in total rebates for a given household
- Applies to both single and multifamily applicants



#### **HEAR Rebates**

- Low-and Moderate-Income households (earning 150% or less of AMI)
- Covers labor and material costs for the qualified products

Upgrade Type	Qualified Product	Rebate Amount Not to Exceed
Appliance	Heat Pump Water Heater	\$1,750
	Heat Pump for Space Heating or Cooling	\$8,000
	Electric Stove, Cooktop, Range, Oven	\$840
	Heat Pump Clothes Dryer	\$840
Building Material	Electric Load Service Center	\$4,000
	Insulation, Air Sealing, and Ventilation	\$1,600
	Electric Wiring	\$2,500
Maximum Rebate		\$14,000

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#### **HEAR Rebates**

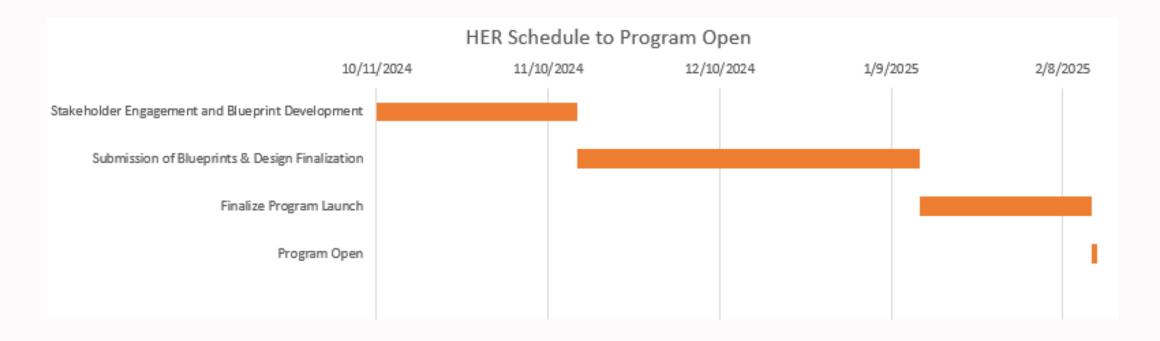
 Rebates limited to dollar cap or percentage of project cost, which ever is less

Eligible Rebate Recipient	Income Level	Rebate Amount Not to Exceed	
Low- or Moderate-Income (LMI) Household or Eligible entity	Less than 80% AMI	100% of qualified project cost	
representative representing LMI household	81%-150% AMI	50% of qualified project cost	
Owner of multifamily building or Eligible entity representative	At Least 50% of residents with income less than 80% AMI	100% of qualified project cost	
representing owner of multifamily building	At least 50% of residents with income of 81%-150% AMI	50% of qualified project cost	

NOTE: This information is subject to DOE approval. This chart indicates what DEP has stated in its application



#### **HEAR Gantt Schedule**



NOTE: This schedule is subject to change based off the various approval windows the Home Energy Rebate Programs must go through



## HER Overview

- A rebate program focused on modeling energy savings; any ECM is eligible if it saves energy
- Rebate values depend on energy savings, more energy savings unlock more rebate value
- This program will be a multifamily exclusive program upon program open
- An ASHRAE Level II audit will be required to determine modeled savings calculations



#### **HER Rebates**

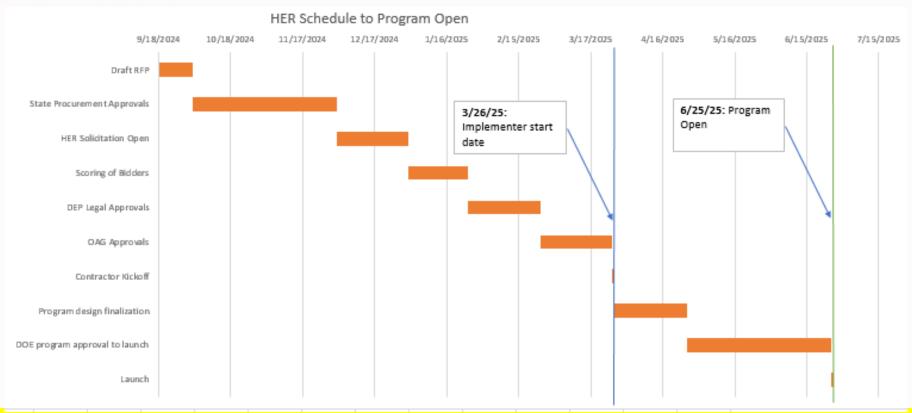
- Rebates limited to dollar cap or percentage of project cost, which ever is less
- Whole building is eligible, not just the eligible units, if at least 50% of the building is of a qualifying income level
- Rebate levels are on a per unit basis, buildings can qualify for more

Eligible Rebate Recipient	Income Level	Modeled Energy Savings	Rebate Amount Not to Exceed (%)	Rebate Amount Not to Exceed (\$)
Owner of multifamily building or Eligible entity representative representing owner of multifamily building	At Least 50% of	20-34%	100% of qualified project cost	10,000
	residents with income less than 80% AMI	35%+		16,000
	At least 50% of residents with income of 81%+ AMI	20-34%	50% of qualified project cost	2,000
		35%+		4,000

NOTE: This information is subject to DOE approval. This chart indicates what DEP has stated in its application



#### **HER Gantt Schedule**



NOTE: This schedule is subject to change based off the various approval windows the Home Energy Rebate Programs must go through



# Thank you!

With questions, email: RA-EPHomeEngRebates@pa.gov



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### When Disaster Strikes Training



The Energy Programs Office has been working with PEMA using FEMA's Building Resilient and Efficient Communities (BRIC) funding to educate municipal staff including elected officials, township and borough managers and secretaries, disaster and facilities managers about energy efficiency and building energy codes as a mitigation strategy. Webinars, flyers and articles have been produced and will culminate in three WDS trainings: Allegheny Co EMA January 9, Location TBD February 12 and PEMA HQ March 25.



# **Energy Auditor Training (EAT)**

#### **Project Status:**

DEP submitted a grant application to the U.S. Department of Energy in July 2024 for \$1.78 Million under the Bipartisan Infrastructure Law Energy Auditor Training (EAT) funding opportunity.

DOE awarded the grant to Pennsylvania DEP on October 24, 2024.



## Why energy auditor training?

The 2023 Pennsylvania Energy Efficiency Workforce Needs Report showed a gap in available energy auditors in the Commonwealth and an aging workforce.

Disbursement of IRA funds for home energy rebates will lead to a growing demand for residential energy audits, spurring a need to train energy auditors to conduct energy audits in residential buildings.



#### **EAT Grant Goals**

#### **Proposed Project Goals:**

- Provide training for residential energy auditors and mentorships
- Provide training and mentoring to 150 individuals as part of this workforce development project
- It is expected that the majority of participants will receive Building Performance Institute (BPI) Home Energy Professional Energy Auditor certification.



## **EAT Project Partners**

#### **Training Partners/Exam Proctors:**

The Clean Energy Center (CEC) at the Pennsylvania College of Technology

Energy Coordinating Agency (ECA) of Philly Action Housing, Inc. of Pittsburgh

#### **Recruitment/Marketing Partners:**

Keystone Energy Efficiency Alliance (KEEA)

Building Performance Assoc. (BPA)



## **EAT Next Steps**

A contract with DOE is anticipated to be negotiated by January 2025.

DEP will be working with the Clean Energy Center as a grant subrecipient to manage the project.

Trainee recruitment and training will commence in 2025.



#### **Get In Touch**

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# **Meeting Wrap-Up**

# How do today's topics tie back to the CAP?

- Shared Energy Manager: Local implementation of energy efficiency and renewable energy measures.
- BRIC: Increasing resilience to extreme weather events.

- Home Energy Rebates: Implementation of energy efficiency and renewable energy measures for low/mid-income residents.
- Energy Auditor Training:
   Workforce building to
   implement building energy
   efficiency measures.



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# **2025 Meeting Planning**

#### **Upcoming Meetings:**

- Tuesday, February 18th, 2025
- Tuesday, April 22nd, 2025
- Tuesday, June 24th, 2025
- Thursday, August 21st, 2025
- Tuesday, October 21st, 2025
- Tuesday, December 16th, 2025



# **Proposed Agenda**

#### February 18, 2025:

- Introduction
- Approval of December Minutes
- Public Comment
- Presentation/Discussion –
   Update on CAP+
- Break

- Presentation/Discussion RISE
   PA Update
- DEP Updates
- Meeting Wrap Up
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