

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Energy Efficiency and Conservation Program	:	Docket No. M-2020-3015228
	:	
Petition of PPL Electric Utilities for Approval of its Act 129 Phase IV Energy Efficiency and Conservation Plan	:	Docket No. M-2020-3020824
	:	
Petition of PECO Energy Company for Approval of its Act 129 Phase IV Energy Efficiency and Conservation Plan	:	Docket No. M-2020-3020830
	:	
Petition of Duquesne Light Company for Approval of its Act 129 Phase IV Energy Efficiency and Conservation Plan	:	Docket No. M-2020-3020818
	:	
Joint Petition for Consolidation and Approval of the Act 129 Phase IV Energy Efficiency and Conservation Plan of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company	:	Docket No. M-2020-3020820
	:	Docket No. M-2020-3020821
	:	Docket No. M-2020-3020822
	:	Docket No. M-2020-3020823

**COMMENTS OF ENERGY EFFICIENCY FOR ALL PENNSYLVANIA COALITION
REGARDING ACT 129 PHASE IV ENERGY EFFICIENCY AND CONSERVATION
PLANS**

January 22, 2021

I. INTRODUCTION

Act 129 of 2008 (Act 129) charged the Commission with the task of developing an energy efficiency and conservation program (EE&C Program). The Act established energy efficiency (EE) and peak demand reduction (PDR or DR) targets that each electric distribution company (EDC) with at least 100,000 customers must meet. Pursuant to Section 2806.1(C)(3) of Act 129, the Commission was also charged with evaluating the costs and benefits of the EE&C Program by November 30, 2013 and every five years thereafter. On June 18, 2020, after receiving comments and reply comments from the Companies and other interested parties, the Commission issued its Energy Efficiency and Conservation Phase IV Implementation Order (Implementation Order), setting consumption reduction and demand reduction targets for each Electric Distribution Company (EDC) with at least 100,000 customers.

On November 30, 2020, Duquesne Light Company (DLC), PPL Electric Utilities, PECO Energy Company (PECO), and the four First Energy Companies (Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company) respectively filed Petitions for Approval of their proposed Act 129 Phase IV Energy Efficiency and Conservation Plan. On January 2, 2021, the EDCs' Act 129 Phase IV Energy Efficiency and Conservation Plans were published in the Pennsylvania Bulletin, establishing a 20-day period for interested parties to file Comments in response to the EDCs' proposed Plans.

The foregoing comments are submitted by the Energy Efficiency for All Coalition of Pennsylvania (PA-EEFA)¹ in response to the Commission's invitation for Comment in the

¹ The following members of PA-EEFA join in these Comments:

ACTION-Housing is a Pittsburgh-based nonprofit that provides affordable housing and related social services in Southwestern Pennsylvania. They have been active in single and multifamily energy efficiency efforts for over 40 years.

Pennsylvania Bulletin, and contain specific recommendations for the proposed Phase IV Plans.

PA-EEFA is a partnership of national and Pennsylvania-based organizations that share a common goal of ensuring that all Pennsylvanians, including low income families and owners and tenants of multifamily housing which are traditionally underserved by efficiency programming, can access energy efficiency services to reduce the energy consumption of these buildings and to preserve existing affordable housing for economically vulnerable households.

As explained below, PA-EEFA recommends that the Commission require the EDCs to adopt the following modifications and improvements to their proposed Phase IV Plans:

1. Improve Cross-Program Coordination to Address Health and Safety
2. Enhance Focus on Direct Installation
3. Improve Comprehensiveness of Programming to Provide Deeper, Long-term Savings
4. Improve Programming to Better Reach Multifamily Housing Providers
5. Track, Report, and Monitor Services to Government, Education, and Non-Profit Sectors
6. Form Working Groups and Invest in Pilot Programs that Service Public Interest Goals

The **Green & Healthy Homes Initiative** (GHHI) is the nation's leading voice in the efforts to advance energy efficiency and healthy housing, working in over 61 cities and over 20 states. In Pennsylvania, GHHI serves as an advisor to the State childhood lead poisoning prevention program and provides technical assistance to the cities of Pittsburgh and Philadelphia to align, braid and coordinate evidence-based healthy, safe and energy efficient housing intervention programs.

The **Keystone Energy Efficiency Alliance** (KEEA) is Pennsylvania's trade association for the energy efficiency industry. Our membership, comprised of seventy companies, ranges from small local firms to large multinational corporations and operates across the value chain of energy efficiency. We engage our membership and key policymakers in support of an industry that accounts for more than 68,000 Pennsylvania jobs. The policy we promote at the state and local level expands the market for energy efficiency.

The **National Housing Trust** protects and improves existing affordable rental homes so that low income individuals and families can live in quality neighborhoods with access to opportunities.

Regional Housing Legal Services (RHLS) is a nonprofit law firm with unique expertise in affordable, sustainable housing and its related components — community and economic development, utility matters and preservation of home ownership. RHLS provides innovative project and policy solutions that help create sustainable communities offering decent, safe and affordable housing for lower-income Pennsylvanians.

Sierra Club is a non-profit environmental organization whose mission is to explore, enjoy, and protect the wild places of the Earth and to practice and promote the responsible use of the Earth's resources and ecosystems. The Sierra Club currently has about 30,000 members in Pennsylvania, and these members have a strong interest in addressing the existential threat of climate change in an equitable and just way, which requires helping low income customers reduce their energy consumption and expenditures.

II. IDENTIFIED AREAS FOR PLAN IMPROVEMENTS

PA-EEFA recommends that the Commission require each EDC to improve their respective Phase IV Plans to better reach and serve low income populations, affordable multifamily housing providers, and other historically underserved groups. In short, PA-EEFA believes that every EDC must meaningfully improve their Phase IV programs to ensure that low income consumers are able to equitably access robust, deep savings measures that will reduce household energy costs and improve the health and safety of their home. Each of our recommendations are designed to achieve this overarching goal.

1. Improve Cross-Program Coordination to Address Health and Safety

PA-EEFA recommends that the Commission require each electric distribution company (EDC) to revise their respective proposed Phase IV Plans to specifically address the health and safety hazards that prevent those most in need from receiving comprehensive energy efficiency services. As explained, this should be accomplished both through inclusion of health and safety measures within each utilities' Act 129 Plans, and through greater coordination of other programs capable of remediating health and safety issues that prevent inefficient homes from receiving comprehensive energy efficiency services.

Inherently, the most inefficient homes in Pennsylvania have the greatest potential for energy use reduction, which can be achieved with the installation of comprehensive measures such as air sealing, insulation, and replacement or repair of windows and HVAC systems. Unfortunately, EDCs are often unable to install these measures because of health and safety hazards in the home, such as mold or moisture, knob and tube wiring, structural issues, pest infestation, and roof leaks. Without first remediating these hazards, the installation of comprehensive measures can exacerbate and worsen dangerous indoor environmental conditions

(e.g., installing insulation which would trap mold in the house and worsen indoor air quality) or threaten the effectiveness of the comprehensive measures (e.g., a roof leak which could lead to deficiencies in the building shell). Therefore, health and safety hazards must be addressed concurrently with comprehensive energy efficiency measures.

While most EDCs have limited budgeted funds to address health and safety hazards in the context of the Low Income Usage Reduction Programs (LIURPs), those funds are often insufficient to fully remediate issues preventing the installation of deep, comprehensive energy efficiency measures. Further, these limited health and safety funds are not currently available in the context of delivering Act 129 energy efficiency and conservation services to low income consumers who do not otherwise qualify for LIURP due to minimum usage thresholds or income requirements. Instead, the EDCs are typically only able to provide limited efficiency measures in these situations, such as lighting or low-flow shower heads, because those measures are not impacted by the conditions of the home. Otherwise, they defer installation until the hazards can be addressed. These circumstances characterize a significant inequity that exists in the system, which prevents those most in need of assistance with energy efficiency remediation from accessing comprehensive energy saving programs.

The presence of health and safety hazards is frequently the result of historical disinvestment in the Commonwealth's housing stock, which has restricted many low-income homeowners and renters from acquiring the resources needed to maintain their homes. While this circumstance impacts many Pennsylvanians, Black families have the greatest likelihood of residing in older homes with compromised energy systems, aging or ineffective appliances, and other assorted structural deficiencies –all of which contribute to making the home energy inefficient.² The often

² See Hernández, D., Aratani, Y., & Jiang, Y., National Center for Children in Poverty, Energy insecurity among

substandard state of such homes, specifically considering those in historically residentially segregated areas³, typically contain compromised components directly related to a home’s energy inefficiency status. These include, but are not limited to, inadequately maintained and inefficient ventilation, cooling and heating systems, drafts or air leaks, and poor insulation. These structural conditions, contribute to significantly higher utility costs such as cooling, heating, and lighting through inefficient household energy usage.⁴ To promote greater energy equity in Pennsylvania, PA-EEFA believes that it is essential to eliminate health and safety issues as a barrier to comprehensive energy efficiency upgrades.

Proper coordination with other programs – both within and outside the utility – and the development of more holistic health and safety programming measures within the Act 129 programs are essential to addressing these inequities. Rightly, the Act declared that the EDCs are required to “coordinate measures under this clause with other programs administered by the

families with children (2014), [https://doi.org/10.1080/10796126.2016.1148672](https://www.nccp.org/publication/energy-insecurity-among-families-with-children/#:~:text=Energy%20insecurity%20(EI)%20reflects%20an,low%2Dincome%20families%20with%20childr en; see also Hernández, D., Jiang, Y., Carrión, D., Phillips, D., & Aratani, Y., <u>Housing hardship and energy insecurity among native-born and immigrant low-income families with children in the United States</u> (2016), Journal of Children and Poverty, <a href=).

³See Aalbers, M.B. ‘When the banks withdraw, slum landlords take over’: the structuration of neighbourhood decline through redlining, drug dealing, speculation and immigrant exploitation (2006). Urban Studies, 43(7), 1061–1086. <https://doi.org/10.1080/00420980600711365>; see also Blumgart, J. How redlining segregated Philadelphia (2017), <https://search-proquest-com.ezproxy.cul.columbia.edu/docview/1984343798?pqorigsite=summon&accountid=10226>
Woods, L. L. The Federal Home Loan Bank Board, redlining, and the national proliferation of racial lending discrimination, 1921–1950 (2012). Journal of Urban History, 38(6), 1036–1059. <https://doi.org/10.1177/0096144211435126>.

⁴ See Ariel Dreobl and Lauren A. Ross, ACEEE, Lifting the high energy burden in America’s largest cities: how energy efficiency can improve low income and underserved communities (2016); see also Diana Hernández D. Phillips, Exploring the housing and household energy pathways to stress: a mixed methods study (2016). International Journal of Environmental Research And Public Health, 13(916). <https://doi.org/10.3390/ijerph13090916>; T.G. Targeting energy justice: exploring spatial, racial/ethnic and socioeconomic disparities in urban residential heating energy efficiency (2016). Energy Policy, 97, 549–558. <https://doi.org/10.1016/j.enpol.2016.07.048>; Jamal Lewis, Diana Hernández, Energy efficiency as energy justice: addressing racial inequities through investments in people and places (2020). Energy Efficiency 13, 419–432. <https://doi.org/10.1007/s12053-019-09820-z>.

Commission or another federal or state agency.”⁵ Yet by and large, the EDCs’ current proposed Phase IV plans fail to set forth how their Act 129 programs will be coordinated with other programs or agencies.

Generally, with regard to each EDC Plan as it pertains to health and safety and cross-program coordination, PA-EEFA recommends that the Commission:

- Require EDCs to address health and safety hazards that prevent installation of deep, long-lasting energy efficiency measures, either directly – as a component of their Act 129 program – or through direct referrals to other programs. As discussed below in section 6, we recommend that each EDC establish a pilot Act 129 health and safety program to study the impact of health and safety remediation on achievable savings in low income homes.

We note that federal legislation was passed in late December authorizing the Department of Energy to “take into consideration improvements in the health and safety of occupants of dwelling units, and other non-energy benefits, from weatherization” in assessing the cost effectiveness of measures for the federal Weatherization Assistance Program.⁶

While the Commission did not include health and safety benefits in its current Total Resource Cost Test because of the difficulties associated with quantifying the associated savings potential, it has recognized that other jurisdictions are moving in that direction.⁷ It also explicitly recognized the potential for savings associated with reduced collections costs and universal service programs, and indicated its intent to direct the Phase IV Statewide Evaluator to study those economic impacts for possible inclusion in the TRC.⁸

A pilot program to address health and safety issues in low income homes that prevent the installation of comprehensive energy efficiency measures would be critical to help inform the Commission’s determinations on this critically important point.

- Require each EDC to establish a working group that can help the EDCs better coordinate Act 129 programming with healthy housing programs in their respective service territories and understand the resources that are available to perform health and safety repairs.
- Require EDCs to incorporate explicit provisions within their Phase IV Plans to address health and safety conditions that foster inequities. These provisions should include, at a minimum:

⁵ 66 Pa. C.S. § 2806.1(b)(1)(i)(G).

⁶ Consolidated Appropriations Act, 2021, HR 133-1261 (Weatherization Assistance Program), Section 1101, at 790, <https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf>.

⁷ 2021 Total Resource Cost (TRC) Test, Final Order, Docket M-2019-3006868, at 72-73 (Dec. 19, 2019).

⁸ *Id.* at 73.

- Training for energy auditors to identify health and safety hazards during in-home assessment, requiring auditors to conduct a health and safety assessment, and communicating presence and impact of hazards to the occupant.
- Clearly listing the allowable health and safety measures that each EDC will support through Act 129 programming, or which are available through the EDC’s Low Income Usage Reduction Program (LIURP). This would require improved coordination between the utilities’ LIURP and Act 129 programming to ensure that households with health and safety issues will be remediated through an appropriate program.
- Coordinating with, providing referrals to, and leveraging resources from federal, state, and local healthy homes programs that can help customers address health and safety hazards that are preventing the customer from receiving comprehensive energy efficiency measures. Examples include, but are not limited to, lead remediation programs, asthma trigger reduction programs, and aging-in-place programs. A list of programs in Pennsylvania that provide healthy housing services is included below.
 - *HUD Lead Hazard Control and Grant Program*⁹ - The U.S. Department of Housing and Urban Development releases funding every year through the Office of Lead Hazard Control and Healthy Homes to support remediation of lead and other residential health hazards. States and localities can apply for these funding opportunities, which represent the single largest funding opportunity to support the improvement of substandard housing conditions. For FY 2020, the OLHCHH received a historic amount of funding totaling \$290 million from Congress; still, the need for funding remains greater than the resources available. There are currently five cities (Allentown, Harrisburg, Lancaster, Philadelphia, and Erie), six counties (Westmoreland, Allegheny, Lawrence, Delaware, Montgomery, and Bucks), and the State that administer HUD Lead Hazard Control and Healthy Homes grants. Pennsylvania is among the top five states in the country in terms of the number HUD grants currently being administered.

Grantee and Year Awarded	Lead Hazard Reduction Funding	Healthy Homes Supplemental Funding	Total
Westmoreland County (2020)	\$3,000,000	\$400,000	\$3,400,000
City of Allentown (2020)	\$5,000,000	\$700,000	\$5,700,000
Redevelopment Authority of the City of Erie (PA) (2020)	\$3,011,446	\$0	\$3,011,446
Allegheny County (2020)	\$5,000,000	\$600,000	\$5,600,000
County of Delaware (2019)	\$1,000,000	\$0	\$1,000,000

⁹ See US Dep’t of Housing & Urban Development, Programs Division – Lead-Based Paint and Lead Hazard Reduction Demonstration Grant Programs, https://www.hud.gov/program_offices/healthy_homes/lbp/lhc.

County of Montgomery (2019)	\$1,500,000	\$300,000	\$1,800,000
City of Lancaster (2019)	\$9,100,000	\$600,000	\$9,700,000
County of Bucks (2019)	\$1,563,106	\$0	\$1,563,106
City of Harrisburg (2019)	\$5,000,000	\$600,000	\$5,600,000
State of Pennsylvania (2019)	\$2,500,000	\$400,000	\$2,900,000
City of Philadelphia (2018)	\$3,500,000	\$600,000	\$4,100,000
County of Lawrence (2018)	\$3,000,000	\$300,000	\$3,300,000

- *Community Asthma Prevention Program Plus (CAPP+) Home Repairs Program* - Administered by the Children’s Hospital of Philadelphia in partnership with Philadelphia Housing Development Corporation (PHDC), CAPP+ addresses issues in the home that may be contributing to a child’s asthma, such as mold or mildew.¹⁰ The program also partners with the Enterprise Center to provide training for contractors to perform asthma trigger remediation work.¹¹
- *Built to Last*- Built to Last braids existing housing resources with grants and microfinancing resources to maximize the impact different, previously siloed housing repair interventions can have in a home. The Philadelphia Energy Authority, along with a coalition of utilities, housing providers, legal services advocates, and healthcare entities, will begin two pilots in 2021. Each pilot will serve 40-50 homes of low income families living in neighborhoods with high poverty rates.¹²
- Tracking the health benefits of comprehensive energy efficiency programming. Comprehensive energy efficiency measures can improve occupant health and well-being. Studies have shown that energy efficiency and weatherization can improve home environmental conditions relating to thermal comfort, indoor air quality, pest management, and fire safety.¹³ EDCs can conduct a pre- and post-assessment of home environmental conditions with the goal of better understanding the impact of their programming on occupant health and perceived comfort.

¹⁰ See Children’s Hospital of Philadelphia Expands Community Asthma Prevention Program in Partnership with Philadelphia Housing Development Corporation (2018). <https://www.chop.edu/news/children-s-hospital-philadelphia-expands-community-asthma-prevention-program-partnership>.

¹¹ See Children's Hospital of Philadelphia Expands CAPP+ Program, Partners With The Enterprise Center to Provide Resources, Training for Small Contractors (2019). Newswire. <https://www.prnewswire.com/news-releases/childrens-hospital-of-philadelphia-expands-capp-program-partners-with-the-enterprise-center-to-provide-resources-training-for-small-contractors-300970316.html>.

¹² See Built to Last: An Initiative to Restore Safe, Healthy, and Affordable Homes (2020). Retrieved from: <https://philaenergy.org/wp-content/uploads/2020/08/8-2020-PEA-Built-to-Last-Overview.pdf>

¹³ See Norton, R. A., Brown, B. W., & Malomo-Paris, K., Weatherization and its impact on occupant health outcomes.pdf. Green & Healthy Homes Initiative, (2017). http://www.greenandhealthyhomes.org/sites/default/files/Weatherization%20and%20its%20Impact%20on%20Occupant%20Health_Final_5_23_2017_online.pdf; see also Norton, R. A., Brown, B. W., Lee, C., Malomo-Paris, K., & Lewis, J. Achieving health and social equity: understanding the impact of non energy benefits in the United States (2018). Green & Healthy Homes Initiative. http://www.greenandhealthyhomes.org/sites/default/files/AchievingHealth%26SocialEquity_final-lo_0.pdf.

Specific Comments regarding DLC'S Proposed Phase IV Plan:

DLC's proposed Phase IV Plan generally notes that it "will refer confirmed low income customers who participate in any of its general residential programs Act 129 low income programs" and coordinate with NGDCs by inviting them to attend Act 129 Stakeholder meetings. (DLC Proposed Plan at 40).

Consistent with our general recommendations above, PA-EEFA recommends that DLC set forth a comprehensive plan for coordination, including more details related to how low income customers will be matched with (not just referred to) other programs, and how DLC will follow up with participants to provide energy efficiency services following remediation of health and safety measures.

PA-EEFA notes also that DLC's budget contains nearly \$2 million for pilot programming with which to test experimental equipment or devices. (DLC Proposed Plan at 113 & 183 T.10). We recommend that DLC implement a pilot health and safety programming, consistent with our general recommendations above, to provide health and safety remediation in homes that would otherwise be deferred from receiving comprehensive energy efficiency measures as a result of conditions in the home. Savings achieved should be carefully tracked to help inform the Commission in determining the savings potential – both in terms of energy reduction and reduced universal service costs.

PA-EEFA appreciates the multipronged approach to marketing proposed by DLC in its Plan; however, this approach remains the same from Phase III. Before approving DLC's proposed Phase IV Plan, DLC should be required to provide additional details, specifically about "educational assets", "community events", and "outreach" plans. In doing so, DLC should explain how its marketing plan is improved from the previous phase.

Specific Comments regarding FirstEnergy's Proposed Phase IV Plan:

FirstEnergy includes some references to addressing health and safety concerns through cross-program coordination. The Plan states that "[t]he Companies will work with the CSP to ensure efficient program referrals and coordination with the Companies' LIURP, DCED, WAP, and NGDC Programs," (p. 61). The plan offers some specificity with regard to coordination with LIURP, outlining that (1) Act 129 direct install programs and LIURP use the same website and conduct joint marketing; (2) LIURP contractors are engaged to install Act 129 funded measures; (3) customers above 150% of the Federal Poverty Level (FPL) are referred to LIURP (4) customers with electric usage below LIURP thresholds, or otherwise not eligible for LIURP, are referred to Act 129 programs; (5) the program will be coordinated with external programs (e.g. PA Weatherization Advisory Council). (FE Proposed Plan at 138).

FirstEnergy's Plan also mentions an intention to increase awareness of their "whole house" approach to energy efficiency within their LIEEP program by "noting that the program includes health and safety testing and repairs to allow energy saving measures to be installed." FirstEnergy's Plan also contained a list of sub-measures available to residential low income

customers, which includes the broad category of health and safety measures. (FE Proposed Plan at Table 14). The Company included health and safety information in its customer engagement section as well. (FE Proposed Plan at 61).

We applaud FirstEnergy for including specific mention of health and safety in various parts of its Plan. However, we note that FirstEnergy's Plan still lacks critical details to ensure holistic service delivery. Specifically, the Company does not address how health and safety impediments will be addressed for customers who do not qualify for LIURP. PA-EEFA therefore recommends that FirstEnergy develop a more detailed, clear, and comprehensive plan based in the above recommendations to address household health and safety concerns and alleviate the inequities to access they create.

FirstEnergy's Plan allows it to use up to 2% of its total budget for research, demonstrations, and/or pilot programs. (FE Proposed Plan at 139). Again, consistent with our recommendations above, PA-EEFA recommends that this budget be used to launch a health and safety pilot to remediate health and safety issues in low income homes that would otherwise be deferred from receiving comprehensive energy efficiency measures as a result of conditions in the home. Savings achieved should be carefully tracked to help inform the Commission in determining the savings potential – both in terms of energy reduction and reduced universal service costs.

Specific Comments regarding PECO's Phase IV Plan:

PECO fails to include information in their plan explaining how Act 129 will be coordinated with other programs, other than stating generally that its CSP will “continue collaborating with other programs coordinate and deliver comprehensive efficiency services.”¹⁴ (PECO Proposed Plan at 51).

PECO notes in its Plan that “complementary programs include the Low Income Usage Reduction Program, Philadelphia Gas Works, and Philadelphia Water Department.” (PECO Proposed Plan at 51). But it does not elaborate on *how* it intends to coordinate with these programs, and fails to indicate any intention to coordinate with any other weatherization programs (such as WAP) or the many healthy housing programs in PECO's service territory – some of which are mentioned above.

To adequately address health and safety concerns and inequities, the Company should be required to develop a comprehensive, cross-program plan to address health and safety issues in low income homes that prevent delivery of comprehensive energy efficiency programming, consistent with the above recommendations. The plan should include specific steps PECO will take to streamline enrollment with these “complementary” programs to reduce duplication of services and measures, and to ensure that low income households receive holistic energy reduction services.

PECO's proposed Phase IV Plan includes up to 5% of its total budget for “research and development.” (PECO Energy Co. Statement 2 at 10; PECO Proposed Plan at 119, 134, 142). While it is unclear from PECO's proposed Plan how much is included in its research and development budget, it appears the budget could be as high as \$13.5 million.

¹⁴ PECO EE&C Plan at 51.

Consistent with our above recommendations, PA-EEFA recommends that PECO use a portion of this substantial research and development budget to establish a health and safety pilot to remediate health and safety issues in low income homes that would otherwise be deferred from receiving comprehensive energy efficiency measures as a result of conditions in the home. Savings achieved should be carefully tracked to help inform the Commission in determining the savings potential – both in terms of energy reduction and reduced universal service costs.

Specific Comments regarding PPL’s Phase IV Plan:

PPL fails to include information in their Plan about how Act 129 will be coordinated with other programs and does not adequately address health and safety concerns or the inequities in access they create. In fact, the Company explicitly *prohibits* service where health or safety issues are identified in the household.

PPL should be required to integrate a comprehensive plan to address health and safety in households to eliminate this barrier to access, consistent with our above recommendations.

PA-EEFA notes that PPL’s proposed Plan includes \$6 million in funding for experimental projects. (PPL Proposed Plan at 152). We recommend that the Commission require PPL to establish a pilot program to remediate health and safety issues in low income homes that would otherwise be deferred from receiving comprehensive energy efficiency measures as a result of conditions in the home. Savings achieved should be carefully tracked to help inform the Commission in determining the savings potential – both in terms of energy reduction and reduced universal service costs.

2. Improve Focus on Direct Installation

PA-EEFA submits that the Act 129 Phase IV Plans should include a greater focus on direct installation components (i.e., installers go to a home and install equipment). Direct install measures are important for all customers, but especially for low income customers, as these programs allow for easier customer adoption and participation. Direct installation programs often serve as a customer’s introduction to energy efficiency and can be used as a first step toward more comprehensive, expensive measures that have a greater long-term impact (e.g., HVAC systems). Most customers are unable to perform simple but impactful usage-reducing actions, such as reducing fan speed, changing filters, wrapping pipes, and improving building shells without a direct installation component. Direct install programs are especially important for low income

customers who lack the resources to hire someone to install equipment, even if the equipment itself is free.

EDCs rely on the implementation of energy efficiency measures in homes and buildings to achieve their Act 129 savings. The most meaningful and long-lasting savings will come from direct install measures, rather than behavioral, lighting, or other self-installed measures which – by comparison – are relatively short lived and do not result in meaningful bill reductions that help improve energy affordability. PA-EEFA submits that direct installation of the measures should be part of the portfolio for residential *and* commercial customers (especially for multifamily commercial buildings) to ensure the proposed savings targets are achieved and Act 129 is implemented as envisioned.

To achieve greater focus on direct installation programming, PA-EEFA generally recommends the Commission require each of the EDCs to amend their Phase IV Plans as follows:

- Direct each EDC to revise their Phase IV Plans to achieve an average expected useful life of measures within a target range for each completed job to balance the reach of shorter-lived measures (such as lighting) with the benefits of longer-term measures (e.g. HVAC, weatherization, and water heating).
- Direct EDCs to utilize short-lived measures to prompt the adoption of long-lived measures (i.e. home energy reports that drive adoption of deeper usage savings through targeted monitoring and marketing).

Specific Comments regarding DLC's Phase IV Plan:

DLC lists a number of direct install measures that are available under LIEEP. Program participants will first be scheduled for a virtual assessment or in-home energy audit that will include direct install measures. When virtual, the measures will be drop-shipped to customers in the form of an energy efficient kit and customers may be referred to direct installation of eligible HVAC, water health, health & safety, and insulation/air sealing measures (DLC Proposed Plan at 41).

PA-EEFA is concerned that DLC's list of measures available for low income consumers includes many lighting/power strip measures and few deep savings measures, and does not prioritize or indicate that measures will be implemented in a comprehensive manner.

Consistent with our general recommendations above, PA-EEFA submits that DLC should be required to adjust its mix of measures to rely less on lighting and power strips, and more on building shell measures, appliance replacement, and HVAC repairs or replacement. In turn, DLC should increase the number of direct installations, and reduce the number of virtual kits sent to homes for self-installation.

Specific Comments regarding FirstEnergy's Phase IV Plans:

FirstEnergy indicates that its general residential Energy Efficient Homes Program includes direct install measures; however, the Companies fail to delineate these measures or set forth a comprehensive plan related to the same. (FirstEnergy Proposed Plan at 36). It appears as though FirstEnergy's Plan also fails to include direct install measures through its low income program.

Moreover, while FirstEnergy's Plan appears to include some (limited) deeper savings measures within its low income program, the Plan includes a customer contribution for many of these deeper savings measures. Given the very low level of household income required to qualify for low income programming, it is unlikely that low income households will be able to access these deeper savings measures.

FirstEnergy should be required to revised its Phase IV Plan to include direct installation for low income households that emphasizes comprehensive measures that maximize usage reduction available to participating households. FirstEnergy should also be required to improve the availability of deeper, longer lasting efficiency measures that will produce meaningful bill savings, and should eliminate the customer cost contribution for all available low income measures.

Specific Comments regarding PECO's Phase IV Plan:

In its proposed Plan, PECO acknowledges that “[t]he foundational element of the [low-income eligible] Program is a direct install whole home solution... which provides direct installation of EE measures at no charge,” but does not adequately outline its plans to implement direct installation measures. (PECO Proposed Plan at 10). Additionally, the program participation for deeper savings measures is unacceptably low compared to its number of low income customers. (PECO Proposed Plan at 59).

PA-EEFA submits that PECO should be required to set forth a detailed plan related to direct installation that emphasizes comprehensive, deeper savings measures that maximize both usage reduction available to households and participation for eligible households.

Specific Comments regarding PPL's Plan:

PPL indicates that they provide “a variety” of direct install measures such as lighting, water aeration, and weatherization for low income customers, and describes how in-home assessments

provide education and lead to direct-install energy efficient measures at no cost to low income customers. (PPL Proposed Plan at 8, 11, 57). However, the Company does not adequately outline its plans to implement direct installation measures, and appears to rely heavily on the delivery of kits and virtual home audits.

It also appears as though PPL's low income program is primarily reliant on lighting and low-flow water devices to achieve its low income savings requirements (again, through the delivery of kits). (PPL Proposed Plan at T.35). These devices have a minimal impact on bill savings compared to building shell and HVAC measures that produce deeper, longer-lasting savings. In fact, it does not appear as though PPL's Plan includes any building shell measures at all. (PPL Proposed Plan at T.35).

Consistent with our above recommendations, PPL should be required to revise its proposed Plan to include a greater emphasis on direct installation of comprehensive measures that maximize usage reduction and bill savings to low income program participants.

3. Improve Comprehensiveness of Programming to Provide Deeper, Long-term Savings

The most inefficient homes in Pennsylvania inherently have the greatest potential for energy use reduction, which can be achieved with the provision of comprehensive, long-lasting, deep-savings measures such as air sealing, insulation, and repair or replacement of windows and HVAC systems. EDCs must offer more comprehensive programs that center on whole-home and whole-building solutions, rather than focus on low-cost, low-savings measures like light bulbs and faucet aerators.

Simply presenting a mix of baseload measures, as the EDCs have done in their Phase IV plans, is not adequate to achieving truly comprehensive programs. *Comprehensive* should be defined as whole-home and whole-building solutions, which “seek to maximize the installation of energy efficiency measures in existing homes while also assuring that building durability and occupant health and safety are fully addressed.”¹⁵ To be truly comprehensive, a utility cannot simply offer a list of available measures – it must offer and provide them in an actionable and

¹⁵ ACEEE, Grevatt, Hoffman, Hoffmeyer & Neme, Keys to the House: Unlocking Residential Savings with Program Models for Home Energy Upgrades (2016), https://www.aceee.org/files/proceedings/2016/data/papers/2_693.pdf.

approachable format that encourages adoption by a program participant. A genuinely comprehensive program will look at all aspects of the building, include a mix of shell improvements with other efficiency measures, and build upon measures as they are implemented to deliver meaningful and measurable usage reduction and bill savings.

Many residential customers are unaware of the connection between improved efficiency and improved home comfort as it relates to their energy usage. As a guiding principle, direct installation should act as a gateway to the customer's house, at which point the EDCs should provide the customer a full list of cost-effective measures and implement all that are available and appropriate for the household.

By comparison, the New Jersey BPU Energy Efficiency Order, released in June 2020, required utility programs to assess whole building structures and systems and encourage customers to consider a holistic approach to energy efficiency as well as provide opportunities for customers who are "unwilling" or "unable" to do so.¹⁶ This Order required NJ Companies to center their programs on holistic measures that build off customer interactions, such as using a Quick Home Energy Check Up (QHEC) or Home Performance with Energy Star and Home Energy Reports to identify other issues in the building. Following this model, Pennsylvania Companies should be required to offer one program per customer segment that centers on comprehensive savings and deeper energy-saving measures.

The PUC allows for flexibility in the cost effectiveness test by requiring EDCs to apply it only at the portfolio level to allow inclusion of deeper measures and widely accessible

¹⁶ See In The Matter Of The Implementation Of P.L. 2018, c. 17 Regarding The Establishment Of Energy Efficiency And Peak Demand Reduction Programs, et al; Order Directing The Utilities To Establish Energy Efficiency And Peak Demand Reduction Programs ("CEA Order"), BPU Docket Nos. QO19010040; QO19060748; and QO17091004. (June 10, 2020), page 10. ("The program(s) should provide comprehensive EE opportunities for existing residential buildings; at a minimum, the program(s) should include EE incentives for whole home EE solutions, prescriptive incentives, and efficient products (including retail products, with a midstream product component and appliance rebates")

programming capable of reaching populations that would not otherwise have access to energy efficiency programming. In its Phase IV Implementation Order, the Commission emphasized its expectation that EDCs adopt more comprehensive programs, and set lower overall savings requirements compared to Phase III to enable EDCs to fulfill this expectation. The Commission explained that its Phase IV potential study included higher acquisition costs to account for increased reliance on deeper, more comprehensive measures:

Though the Commission recognizes that the Phase IV acquisition costs are indeed higher than past acquisition costs, this is driven by two well-justified elements of the EEPDR MPS. First, a sizable share of low-cost savings in prior phases have been driven by residential lighting measures, *which are expected to play a very limited role in Phase IV* and were modeled as such. Second, though the Commission acknowledges it is possible to design programs that capture savings at a lower average acquisition cost in Phase IV than modeled by the results of the EEPDR MPS, *directing the EDCs to do so would be in contravention of the Commission's stated encouragement for EDCs to pursue comprehensive portfolios with a greater focus on longer-lived, deeper-savings measures*. The EEPDR MPS included a comprehensive mix of measures to reflect this Commission position.¹⁷

The Commission was explicit in its Implementation Order that it expected EDC Phase IV Plans to adhere to its preference for more comprehensive programs offering deeper, long-lasting savings, and “encourage[d] stakeholders to engage in proceedings related to those plans.”¹⁸ PA-EEFA is engaged in this proceeding for this very reason: To ensure that Phase IV Act 129 programming is truly comprehensive, offering long-lived, deep-savings measures.

To improve the comprehensiveness of Act 129 programs, PA-EEFA recommends that the Commission require each of the EDCs to amend their proposed Phase IV Plans in the following ways:

¹⁷ Phase IV Implementation Order at 15.

¹⁸ Phase IV Implementation Order at 15.

- For low income programs, incorporate a standard that dictates all appropriate measures be installed, as opposed to the current practice of merely listing available measures and allowing the EDCs to install limited measures based on ease of implementation.
- Require the EDCs to offer more than just upstream incentives. Midstream incentives and worker training programs are essential to provide the workforce needed to ensure successful implementation of comprehensive programs. Comprehensive programs need to simultaneously incentivize customers and build the workforce to perform and install these measures.
- Require that EDCs to adjust their Plans to more appropriately prioritize direct installation, as discussed in the prior section, and to ensure a balance between basic short-lived measures and deeper, more impactful measures. Comprehensive programs should focus less on measures such as installing light bulbs and home energy reports, and should instead emphasize measures such as the improvement of building shells and HVAC. Utilities in Pennsylvania have historically *overinvested* in short-lived measures with lower first-year savings costs compared to potential, and conversely *underinvested* in long-lived measures with higher first-year savings costs compared to potential.¹⁹

Specific Comments regarding DLC’s Phase IV Plan:

DLC indicates that their upstream, downstream, and midstream incentives and their Residential sector programs as a whole “demonstrate [DLC’s] commitment to providing comprehensive measures to under-served markets.” (DLC Statement 1 at 11). While DLC indicates that they provide downstream and midstream incentives, it is unclear whether and to what extent program participants will receive a comprehensive mix of measures capable of achieving deep, long-lasting savings - especially within its low income program.

Consistent with our general recommendations, and the specific recommendations in the last section, PA-EEFA recommends that the Commission require DLC to adopt an explicit standard that it will install all appropriate energy saving measures in a given home. We also recommend that DLC improve its mix of measures to rely less on savings driven by lighting and water measures, and more on savings driven by appliance replacements, building shell measures, and HVAC repair and replacements.

Specific Comments regarding FirstEnergy’s Phase IV Plan:

FirstEnergy indicates that they provide upstream, downstream, and midstream incentives and offers a comprehensive list of measures (FE Proposed Plan at 49). However, the Companies fails to prioritize more comprehensive and deeper, long-lived measures or clarify the extent to which it will provide such incentives for low-income customers.

¹⁹ See KEEA Comment on Act 129 Phase IV plans, page 11, Table 4 and Table 5.

In addition to the general recommendations addressed above, FirstEnergy should draw upon the example set by JCP&L, a FirstEnergy Company in New Jersey, which offers a QHEC and Home Performance with Energy Star Program that offers consumers immediate audits and savings and an energy efficient savings plan for their whole home. The Company should consider this and the above recommendations to make improvements to its Plan to emphasize deeper, long-lived measures, and should explain how it will continue to grow the workforce needed for successful comprehensive programs.

Specific Comments regarding PECO's Phase IV Plan:

PECO indicates that it provides upstream, downstream, and midstream incentives, including trade ally and distributor coordination (see Section 3.2). However, PECO fails to prioritize more comprehensive and deeper, long-lived measures or clarify the extent to which it will provide such incentives for low-income customers.

PA-EEFA recommends that PECO make improvements to its Plan to prioritize deeper, long-lived measures, especially within its low income programs, and explain how it will continue to grow the workforce needed for successful comprehensive programs - consistent with the recommendations addressed above.

Specific Comments regarding PPL's Phase IV Plan:

PPL indicates that it provides comprehensive measures and midstream/downstream incentives, including rebates for a range of measures for both residential and low income consumers. (PPL Proposed Plan at 41, 64). However, the Company fails to prioritize more comprehensive and deeper, long-lived measures or the extent to which it will provide such incentives for low-income customers. As noted in the last section, it appears most of the savings from PPL's low income programs will come from very basic, low savings measures like light bulbs and water flow devices. The Company should be required to revise its Plan to place a greater emphasis on deeper, long-lived measures and explain how it will continue to grow the workforce needed for successful comprehensive programs.

4. Improved Multifamily Housing Provisions

Multifamily residential buildings provide subsidized affordable housing to 181,390 families in Pennsylvania, and new multifamily buildings are one of the fastest growing commercial real estate sectors in the state.²⁰ As shown in Attachment A to these Comments, there are tens of thousands of multifamily apartments in every service territory across the state.

²⁰ Data from National Housing Preservation Database (NHPD), <https://nhpd.preservationdatabase.org/Account/Login?ReturnUrl=%2FAccount>.

The National Association of State Energy Officials succinctly explains the importance of providing comprehensive energy efficiency programming for affordable multifamily buildings to achieve a number of critical public policy goals:

Nearly 40 million people live in multifamily rental housing in the United States. Multifamily properties, many of which were built decades ago, are significantly more likely than single-family, owner-occupied homes to be energy inefficient, leading to higher bills and energy cost burdens for residents. Even as multifamily housing starts grow, only a small fraction of units - approximately 1 in 10 - would be considered affordable for most U.S. renters. For low-income and minority tenants, the share of their income devoted to energy bills can be as high as 7.2%, which can have negative effects on physical and mental health, housing stability, and productivity.

Energy efficiency programs tailored for multifamily affordable housing could cut energy usage drastically and reap enormous benefits supporting equitable access to energy efficiency programs, resident health, and the preservation of affordable housing. A 2017 report by the American Council for an Energy-Efficient Economy (ACEEE) estimates that multifamily energy efficiency has the potential to result in \$3.4 billion in savings per year.

Despite this enormous opportunity and potential, programs advancing multifamily energy efficiency receives a disproportionately low share of utility ratepayer and state program investment, and lower participation and adoption rates than single family households.²¹

Multifamily energy efficiency programs represent a significant area for usage reduction in Pennsylvania, and an important component of Phase IV programs. A common barrier to fully serving the multifamily housing sector is the ability to provide meaningful incentives, which is further complicated when accounting for the need to split incentives between building owners and

²¹ National Association of State Energy Officials, Energy Efficiency in Multifamily Buildings, <https://www.naseo.org/issues/buildings/multifamily#:~:text=A%202017%20report%20by%20the,billion%20in%20savings%20per%20year>.

tenants. Without adequate incentives, building owners and tenants are unlikely to adopt energy efficiency measures. This is particularly problematic for low-income tenants, who may lack the means to implement energy saving measures on their own. If building owners decline to install energy saving measures, low-income tenants may be further disadvantaged by denial of the improved energy affordability and home comfort that would be provided by those measures. It is also a problem for affordable housing owners, which often operate with marginal budgets that do not allow for capital expenditures necessary for adoption of building-wide energy efficiency improvements.

To improve multifamily housing programs in Phase IV, EFFA PA recommends that the Commission require EDCs to revise their Phase IV Plans as follows:

- Include a specific budget line and projected participation rates for both individually metered and master-metered multifamily buildings.
- Improve cost sharing for low income multifamily building owners and operators to ensure that this unique and underserved housing type is able to participate in comprehensive efficiency programming that serves both common areas and tenant units.

Specific Comments regarding DLC's Phase IV Plan:

DLC's proposed Plan indicates that its low income program (LIEEP) is available to low income customers who reside in multi-family housing. (DLC Proposed Plan at 31.) Multifamily property owners/managers are eligible for cost-share common area lighting and management-owned appliance recycling/replacement measures. (DLC Proposed Plan at 39.) DLC's multifamily housing audit/retrofit program provides services that includes energy efficiency audits, technical assistance for measure level project review and bundling, property aggregation, contractor negotiation and equipment bulk purchasing. (DLC Proposed Plan at 114.)

DLC notes that cost sharing for MF owners and managers is not standardized, but assessed on a case by case basis. DLC should work towards eliminating cost sharing for all eligible owners and managers with eligible property, and should set a maximum threshold for cost-sharing that is no greater than 20% of the measure cost. This will reduce existing barriers to access for low income housing providers, which in turn will help preserve the integrity and availability of low income housing over the longer term.

Specific Comments regarding FirstEnergy's Plan:

FirstEnergy's multifamily subprogram provides energy efficiency education to both multifamily building owners and building tenants while completing energy assessments, installing standard energy savings measures, and recommending energy efficiency improvements. This subprogram may provide financial incentives towards the installation of audit-recommended comprehensive energy savings opportunities, including prescriptive equipment replacement and custom retrofit projects (FE Proposed Plan at 49). To ensure the success of its multifamily programs, the Companies should provide a separate budget line for these programs and should develop an integrated plan for increased cost sharing, as per above recommendations.

Additionally, the Companies' propose to achieve almost no savings from master metered multifamily properties. (FE Proposed Plan at Appendix B, Table 8). The Companies need to place a greater focus on specifically addressing this subgroup of multifamily properties as they are disproportionately occupied by low income tenants and are largely underserved by energy efficiency programs due to landlord permission and cost sharing issues.

Specific Comments regarding PECO's Phase IV Plan:

PECO's Income-Eligible Program includes opportunities for income-eligible customers living in multifamily buildings, including measures designed for both customers' residences and common areas, whether master metered or individually metered. (PECO Proposed Plan at 10). PECO anticipates that 97,421 MWh of the overall forecasted savings will come from LI-targeted programs and LI-verified participants in multifamily housing programs, representing approximately 7.1% of PECO's Phase IV target. (PECO Statement 3 at 3-4). PECO's multifamily component includes collaboration with program managers, building owners, and building management; direct install measures; and educational materials. It targets high impact, income eligible multifamily sites. In addition to these measures, PECO should develop an integrated plan for increased cost sharing, as per above recommendations.

Specific Comments regarding PPL's Phase IV Plan:

PPL indicates that it has "designed many of its program components to address energy efficiency within multifamily housing units for owners and renters, including those units that are master-metered and individually metered and that have low-income and non-low-income residents." (PPL Proposed Plan at 14). Low income residents in individually metered multifamily units will be eligible for all measures provided in low income assessments (though some measures may require landlord approval). Common space in multifamily building will be treated separately through PPL Electric Utilities' Non-Residential Program. To ensure the success of its multifamily programs, the Company should provide a separate budget line for these programs and should develop an integrated plan for increased cost sharing, as per above recommendations.

5. Provisions for Government, Education, and Non-Profit Sectors

As the Implementation Plan for Phase IV eliminates the carve-out for the government, education, and non-profit sectors, PA-EEFA is concerned that some entities - especially smaller non-profits, schools in low income communities, and public housing authorities - will not be able to access meaningful assistance.

To ensure access for the GNI sectors, PA-EEFA recommends that the Commission require each of the EDCs to amend their Plans as follows:

- Require the EDCs to provide specific, detailed information in its quarterly reports to ensure that these sectors, especially smaller non-profits, are served by and able to meaningfully access programs. These reports should include, but not be limited to, the number, types, and geographic locations of GNI being served. In the event that reported data suggests that elimination of this carve-out has produced barriers so that GNI are no longer being sufficiently served, the Commission should set forth measures mid-plan to allow for meaningful access.

Specific Comments regarding DLC's Phase IV Plan:

DLC's proposed Plan provides: "Pursuant to the Commission's Implementation Order for Phase IV, Duquesne Light will not offer a specialized program, but will report the savings associated with the GNI customers participating in the Non-Residential programs." (DLC Proposed Plan at 10). PA-EEFA is supportive of DLC's decision to continue tracking and reporting savings. Nevertheless, we note that DLC's Plan does not include sufficient specificity in the reporting details to identify whether smaller non-profits, public housing, and low income schools are able to participate without specific, targeted programming. Thus, we recommend that DLC revise its Plan to report on additional data consistent with our above recommendation.

Specific Comments regarding FirstEnergy's Plan:

FirstEnergy states that the Companies are removing the non-profit class in accordance with the Phase IV Implementation Order" (See, e.g., p. 5). The Company does not provide adequate assurance of GNIs' continuity of access in lieu of carve-outs. FirstEnergy should develop a plan for tracking and reporting of GNIs' access to services.

Specific Comments regarding PECO's Plan:

PECO does not indicate a specific GNI savings target nor provide adequate assurance of GNIs' continuity of access in lieu of carve-outs. The Company should develop a plan for tracking and reporting of GNIs' access to services.

Specific Comments regarding PPL's Plan:

PPL's plan declares that "[p]er the Implementation Order, there are no government, non-profit, and institutional ("GNI") compliance targets for Phase IV, page 5. PPL Electric Utilities will continue to serve the GNI sector through the Non-Residential Program" (p. 2). The Company does not provide adequate assurance of continuity of GNIs' access in lieu of carve-outs and should develop a plan for tracking and reporting of GNIs' access to services.

6. Form Working Groups and Invest in Pilot Programs

PA-EEFA recommends that each EDC be required to form a working group to develop pilot programs that could allow for more comprehensive energy efficiency programs and lead to more meaningful savings that fulfill other public interest goals and provide critical experience and data to help inform future advancements in Act 129 policy and programming.

Specifically, PA-EEFA suggests that EDCs specifically explore adoption of pilot programs that will (1) address and remediate health and safety issues with a home that otherwise prevent a household from receiving energy efficiency services, consistent with our recommendations in section 1, above; and (2) promote beneficial electrification measures that can help reduce reliance on expensive deliverable fuels which can have a negative impact on households who rely on those fuels. These types of pilot programs can also help accomplish a variety of public policy goals for the Commonwealth, including economic development, energy affordability, reduction of greenhouse gases and other air pollution, improved occupant health, improved access to safe and affordable housing, and increased comfort using a variety of fuel sources. In addition to cost-

savings, beneficial electrification may provide co-benefits of improved occupant health and pollution reduction.²²

Pilot programs are essential to accurately assessing and planning for the learning curve for measures like heat pump installation, which may entail funding contractor training to prepare the workforce. Further, pilot programs offer a unique opportunity to target underserved and historically disinvested communities burdened with poor air quality – electrifying and weatherizing these homes, and addressing compounding health and safety issues that contribute greatly to energy inefficiency.

As explained in section 1, each EDC has a substantial budget for research and pilot programming within their Phase IV Plans – devoting several million dollars of ratepayer funds to study various technologies and assess the feasibility of deployment. PA-EEFA submits that this funding should be leveraged to study technology and programmatic approaches that accomplish a multitude of public policy goals.

Typically, EDCs develop pilot programs with little to no input from ratepayers regarding how pilot funding could or should be spent. PA-EEFA recommends that each EDC be required to create a working group to assist in developing pilot programs that will serve these deeper policy goals and will provide critical insight into the coextensive benefits of pilots such as those discussed above. From these pilot programs, the EDCs will gain valuable experience for how to design and deliver programs in an equitable manner that leaves no communities behind. We recommend that the working groups be required to meet at least quarterly to help develop, implement, and evaluate effective pilot programs throughout the five-year Phase IV Plan period.

²² The Economics of Electrifying Buildings, Rocky Mountain Institute, 2018, available at <http://www.rmi.org/insights/reports/economics-electrifying-buildings/>

III. CONCLUSION

PA-EEFA appreciates the opportunity to comment on the Act 129 Phase IV Energy Efficiency and Conservation plans and urges the Commission to consider these comments as the Plans are finalized.

Respectfully submitted,

/s/ Lawrence Swanson

Lawrence Swanson
Executive Director
ACTION-Housing, Inc.
611 William Penn Place, Suite 800
Pittsburgh, PA 15219-6927
lswanson@actionhousing.org

/s/ Ruth Ann Norton

Ruth Ann Norton
President & CEO
Green & Health Homes Initiative
1612 K Street, N.W., Suite 902
Washington, DC, 20006
ranorton@ghhi.org

/s/ Matt Elliott

Matt Elliott
Executive Director
Keystone Energy Efficiency Alliance
14 S. 3rd Street
Philadelphia, PA 19106
melliott@keealliance.org

/s/ Raymond Nevo

Raymond Nevo
State Policy and Equity Advocate
National Housing Trust
1101 30th Street NW
Washington, DC 20007
rnevo@nhtinc.org
www.nhtinc.org

/s/ Rachel Blake

Rachel Blake, Esq.
Associate Director
Regional Housing Legal Services
2 South Easton Road
Glenside, PA 19038
rachel.blake@rhls.org

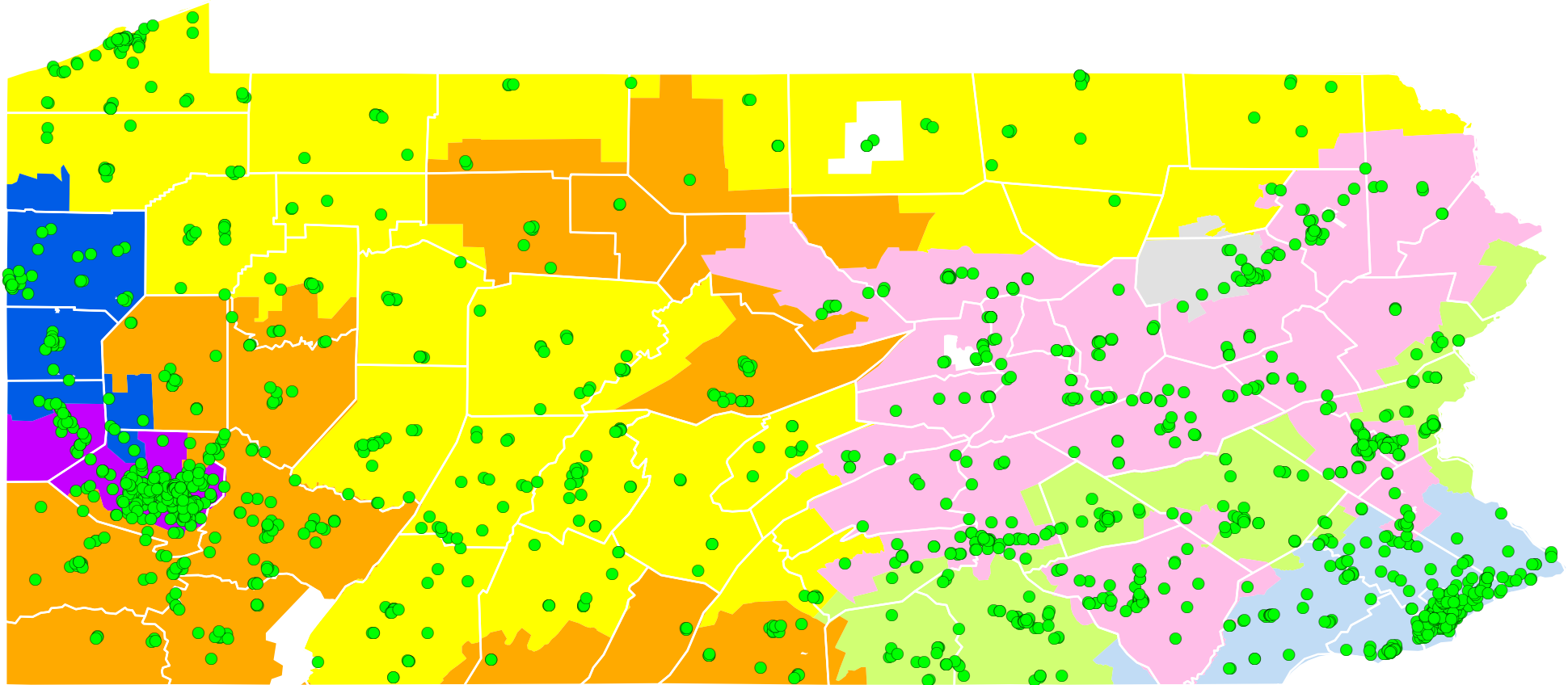
/s/ Thomas Schuster

Thomas Schuster
Clean Energy Program Director
Sierra Club, Pennsylvania Chapter
PO Box 1621
Johnstown, PA 15907
tom.schuster@sierraclub.org

Multifamily Affordable Apartments in Pennsylvania Utility Service Territories



There are more than **90,000** affordable multifamily apartments throughout the state of Pennsylvania. These apartments are financed through various federal housing programs and are home to families and elderly individuals with incomes less than 60% of the area median income. Owners of these properties have a contractual obligation to maintain the property as affordable.



Number of MF Affordable Apts. in Utility Service Territories:

- PECO Energy Co.: 26,700
- PPL Electric Utilities Corp.: 19,800
- Duquesne Light Co.: 16,900
- Pennsylvania Electric Co.: 11,600
- West Penn Power Co.: 9,900
- Metropolitan Edison Co.: 8,200
- Pennsylvania Power Co.: 2,700
- UGI Utilities, Inc.: 1,300

Legend

- Location of MF Affordable Apt. Bldg.
- Duquesne Light Co.
- Metropolitan Edison Co.
- PECO Energy Co.
- Pennsylvania Electric Co.
- Pennsylvania Power Co.
- PPL Electric Utilities Corp.
- UGI Utilities, Inc.
- West Penn Power Co.