



CLEAN ENERGY TRANSITION PLAN

PART I – MUNICIPAL PLAN

West Pikeland Township



May 2023

Developed with the support of Practical Energy Solutions a division of Spotts, Stevens and McCoy

Clean Energy Transition Plan
West Pikeland Township



We are looking towards the future.

A future where we can breathe easier, knowing we've set the course to a quality, healthy, economical, and sustainable life in West Pikeland Township.

A Clean Energy Future.



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1.0 Introduction

West Pikeland Township committed to development of a Clean Energy Transition Plan (CETP) for municipal operations and for the community. These strategies will help our community reduce greenhouse gas (GHG) emissions, effectively deploy taxpayer dollars, and advance community goals for health and safety, economic vitality, and energy independence.

The report is designed to support public officials, community leaders, and residents in acting to:

- **increase efficiency** of energy use, reducing the amount needed and the costs of energy
- transition to **efficient electric energy** for heating buildings and operating vehicles
- use **renewable sources** for energy generation, transitioning from fossil fuels

The scale of intervention required to reduce and adapt to the effects of climate change will require action at all levels of government and society. International accords to limit overall carbon emissions will involve national governments. Across this country, there are now more than 160 municipalities, 10 counties, and 8 states with similar targets in line with the international agreement on climate change mitigation. In total, over 100 million people in the United States now live in a community with an official 100% renewable electricity target. West Pikeland was an early leader in the national municipal movement to set aggressive emissions reduction targets.

There is increasing unanimity from every level of government regarding the need for a transition to clean, efficient renewable energy:

- The **Paris Climate Agreement** signed by 197 countries pledges to achieve the emission reductions needed to limit the global temperature rise to less than 2.0 degrees Celsius and make every effort to keep the increase below 1.5 degrees Celsius.
- The **Biden administration** proposes to set the United States on a path to achieve net zero emissions of greenhouse gases by 2050 with interim dates for interim progress.
- **Pennsylvania** has set aggressive energy and climate goals, including meeting a 26% reduction in GHG emissions by 2025, and 80% reduction in GHG emissions by 2050.
- The **Delaware Valley Regional Planning Commission's** (DVRPC) long-range plan supports a goal to reduce regional GHG emissions by 60% by 2040, which will put our region on track to achieve an 80% reduction in GHG emissions by 2050. DVRPC's Office of Energy and Climate Change Initiatives proposes, supports, and coordinates efforts to reduce energy consumption and GHG emissions in our region.
- The **Chester County Climate Action Plan** advocates an 80% reduction in GHGs by 2050 in line with the state goal.

This Clean Energy Transition Plan addresses the challenges and opportunities of the coming decades related to public and private investment, jobs creation, public health concerns, energy reliability and independence, and climate disruption as it applies to our current energy consumption patterns. The CETP recommends changes that will support West Pikeland Township



and its residents, businesses, and other community stakeholders in recognizing the breadth of these challenges and then pursuing the steps outlined to enhance the economic, social, and environmental foundations of the community, and by extension the region, state, nation, and the world.

This Plan is Part I, focused on municipal operations and avenues to support this transition, and is sister to Part II, concentrated on the encouragement of community-wide transition to responsible energy sources.

The conversion to clean, renewable energy will provide direct and indirect benefits to West Pikeland Township. Early steps include energy efficiency measures to be assessed and implemented where the return on investment is within an acceptable range. Typically, these measures will provide net savings within a few years, savings that can then be rolled back into further efficiency improvements and renewable energy investments. It will create investments in local infrastructure that will improve sustainability and create jobs. And, at the national level, the transition to clean, renewable energy will save U.S. citizens hundreds of billions of dollars annually in reduced cost of air pollution¹, which will translate to billions of dollars annually and improve the health of residents in southeastern Pennsylvania.

The following sections of this report present:

- A statement of purpose (Section 2.0)
- Plan Implementation structure for municipal operations and policies (Section 3.0)
- The baseline for transition of municipal operations (Section 4.0)
- Objectives for the municipal transition to efficient, clean renewable energy (Section 5.0)
- A planning process to assist the community to transition to efficient, clean renewable energy (Section 6.0)

¹ How much does air pollution cost the U.S.?, Center for Air Quality, Climate, and Energy Solutions (CACES) at Carnegie Mellon University (CMU), 2016, <https://earth.stanford.edu/news/how-much-does-air-pollution-cost-us#gs.2xjx59>.



2.0 Scope of Work & Statement of Purpose

Although large-scale energy policy and regulation is made at national and state levels, municipalities have a leadership role to play in commitment to and promotion of responsible energy use and production. West Pikeland Township is committed to playing its local role to promote energy efficiency and the transition to renewable energy through the best means at our disposal.

- **Lead by example:** The municipality will implement energy efficiency measures and shift its energy sources to renewable energy as expeditiously as possible.
- **Support and guide:** The municipality will undertake changes to its planning, Subdivision and Land Development Ordinances, zoning code, road system, and other aspects of municipal governance that impact energy usage throughout the community.
- **Reduce roadblocks:** The municipality will consider implementing changes to reduce roadblocks for climate-positive investments and encourage adoption of energy transition programs and investments by residents, institutions, and businesses.
- **Public education:** The municipality will provide information and encouragement to all stakeholders in the community to increase energy efficiency and make the transition to the use of renewable energy.
- **Source funding:** Municipal governments can seek grants from state and federal programs or nonprofits that subsidize aspects of projects for energy transition.

2.1 Energy Transition Plan Focus

This plan focuses primarily on municipal operations as part of West Pikeland's commitment to lead by example and reduce roadblocks. It provides guidance and high-level recommendations for community emissions reduction, paired with a plan specific to community-wide options.

The framework for this plan is the need for active mitigation of GHG emissions related to fossil fuel use within municipal operations and the wider community. We recognize these are not the only contributors to GHG emissions. We also recognize there are other strategies which will need to be undertaken to complement those recommended in this plan, including those which are outside of the direct control of the local municipality, such as the electricity generation fuel mix of the great utility grid interconnection.

Although this plan addresses mitigation, we recognize the importance of adapting to climate disruption already affecting us. Adaptation—adjusting to a changing climate—is not addressed. We recommend planning to reduce our community vulnerability to the harmful effects of climate change (droughts, flooding, outages, and damages from more intense weather events). Efforts should coordinate with the Chester County Hazard Mitigation Plan.



2.2 Guiding Principles for Clean Energy Planning

The guiding principles and goals of this Clean Energy Transition Plan provide an integrated approach for planning and actions:

- Appropriate **stewardship** of energy resources, incorporating best practices in energy conservation and energy efficiency efforts, which are the most cost-effective ways of reducing energy consumption. They can significantly reduce energy use in our municipal buildings as well as buildings in the wider community and in our transportation systems. These strategies comprise the early steps of this CETP and are central to its structure.
- **Redirection** of capital investment: Residents and businesses of West Pikeland Township spend over \$10.8 million annually on electricity, natural gas, propane, heating oil, gasoline, and diesel fuel. This CETP recommends changes in our energy consumption to efficient, clean sources.
- Emphasis on stimulating new economic activity **job generation**: Renewable energy projects create good paying, stable, local jobs. This CETP factors job creation into the actions recommended by emphasizing efficiency and prioritizing renewable energy produced in Pennsylvania and our region.
- **Public health**: This CETP strives to maximize the health benefits provided by the transition from our fossil fuel-based economy to a renewable energy economy. Elimination of air contaminants by reducing and replacing polluting energy sources is one of the goals of this CETP. Decisions made in this decade will have a lasting impact on the health and well-being of current and future residents.
- **Social fairness**: This CETP considers the impacts of the energy transition on local economic and environmental conditions community-wide. Many people do not have the financial stability or resources to invest in home weatherization improvements and renewable energy installations. They will require support, which maintains the overall public good. Another group of citizens that will need fair treatment are those whose jobs are eliminated by the transition; training programs must be developed to smooth the transition to new industries.
- **Climate stabilization**: This CETP addresses the need to immediately reduce and ultimately eliminate human-generated greenhouse gases, enabling West Pikeland Township to do its part in the world-wide effort to rein in the continuing increase in average global temperature which has destabilized our climate.
- **Energy independence**: This CETP endeavors to make the municipality and the larger community more self-reliant through energy efficiency and conservation and on-site renewable energy development, reducing imported fuels.
- **Inclusion** of all stakeholders: This CETP invites and welcomes the participation of all sectors within the Township and is designed to integrate their input as part of the community-wide voluntary action development process.
- **Coordination** with other governments: This CETP has been prepared in a manner that will enable multiple communities in conjunction with West Pikeland Township, either individually or in groups at the county or regional levels, to develop aggregated planning strategies.



3.0 Implementation Structure

The Township will want to consider strategies that will be effective in managing township energy use, providing guidance and support through policy making, and reducing roadblocks that may exist in current policies. The following section describes one approach to implementing this plan.

3.1 Establishment of a Municipal Clean Energy Transition Team

A municipal Clean Energy Transition Team will oversee the development and subsequent implementation of this plan. West Pikeland Township has an Environmental Advisory Council (EAC), which advises the West Pikeland Board of Supervisors on environmental issues and policies. With the mission of implementing energy efficiency measures and transitioning to renewable energy, members from the EAC with representatives from the Township staff and Board of Supervisors have come together to form the Clean Energy Transition Team to create and enact this plan to evaluate current municipal and community energy use and create this roadmap for the transition.

The Clean Energy Transition Team's charge is to:

- Educate itself on the actions necessary to efficiently transition the municipality to renewable energy
- Provide advice, guidance, and recommendations to the Board of Supervisors on policies to achieve goals related to sustainable practices and initiatives
- Plan for and coordinate energy transition initiatives approved by management and/or Board of Supervisors
- Research and plan for new initiatives as the energy transition proceeds
- Educate and consult with energy users in the community regarding timely and cost-effective actions to increase energy efficiency and transition to clean renewable energy
- Monitor the implementation of adopted initiatives and progress in energy conservation and efficiency and transition to renewable energy
- Prepare and undertake procedures to maintain the effectiveness of changes made
- Coordinate funding and financing for related projects
- Work toward implementation alongside associated groups such as the Vision Partnership Program Grant team, Phoenixville Clean Energy Alliance, Phoenixville Regional Planning Committee, and West Chester Area Coalition of Governments
- Report to the municipal officials on a periodic basis
- Report progress of the Township's municipal progress to the community

Funding is an important part of the work of this team because it is often needed to enable implementation. Funding may come from the Township budget, the State of Pennsylvania and associated offices, and Federal funding programs including, but not limited to: PA & US Department of Environmental Protection (DEP), the US Department of Agriculture, federal government departments and programs, and the federal Inflation Reduction Act of 2022).



3.2 Consultation

West Pikeland Township through the Clean Energy Transition Team will consult and coordinate with:

- Township Board of Supervisors
- Township departments including Public Works, Code Enforcement and Zoning, Planning Commission, Historic Commission, Open Space Advisory Committee, and Police.
- The Environmental Advisory Council (EAC)
- PECO
- SEPTA (as appropriate)
- DVRPC
- Chester County departments

In preparation of this initial Plan, the West Pikeland Township Clean Energy Transition Team had the support of a grant from the Chester County's Vision Partnership Program, partnered with teams from Schuylkill, West Vincent, and East Pikeland Townships, and with planning consultant Practical Energy Solutions, a division of Spotts, Stevens and McCoy.



4.0 Achieving Energy Transition in Township Operations

4.1 Introduction

Pennsylvania has historically been a major producer and consumer of energy and is currently responsible for 0.5% of the entire global energy-related emissions of greenhouse gases². Pennsylvania accounts for 6.3% of the United States' total net electricity generation and 4.2% of total carbon dioxide emissions, with 3.9% of the population³. West Pikeland Township contributes 0.01% of Pennsylvania's total emissions⁴ with 0.03% of its population⁵.

All municipalities in the state need to contribute to the emissions reductions necessary to eliminate GHG emissions by 2050 or earlier. The identification of the GHG emissions in each municipality is a first step in this effort.

The purpose of creating an energy profile is to establish a municipal energy baseline, as well as to identify the significant energy users in the area. These baselines include all relevant sectors and serve as starting points for the analysis of potential program and policy recommendations. The data for this baseline was assembled from our municipal accounts with PECO and third party vendors, consultations with municipal staff, and the wealth of information available from the DVRPC.

As part of the Clean Energy Transition planning process, this section provides the energy use and GHG emissions of the municipal operations for calendar year 2019. This data serves as the baseline year for the Clean Energy Transition Plan for West Pikeland Township. The review includes energy usage and GHG emissions from electricity, natural gas, propane, fuel oil, gasoline, and diesel in the buildings, motor vehicles, and outdoor and traffic lighting.

4.2 Municipal Operations Baseline

As part of the Clean Energy Transition planning process, a snapshot of municipal energy use was assembled by looking at 2019 through 2021 data for electricity and 2019 data for propane and fuel oil and 2021 data for vehicles, due to data availability. This data serves as the baseline for the Clean Energy Transition Plan for West Pikeland Township.

² International Energy Agency, CO2 Emissions in 2022 [iea.org/reports/co2-emissions-in-2022](https://www.iea.org/reports/co2-emissions-in-2022)

³ U.S. Energy Information Administration [eia.gov/state/data.php?sid=PA](https://www.eia.gov/state/data.php?sid=PA)

⁴ DVRPC Energy and GHG Emissions Profiles [dvrpc.org/webmaps/municipalenergy/](https://www.dvrpc.org/webmaps/municipalenergy/)

⁵ U.S. Census Bureau [census.gov/quickfacts/fact/table/PA,eastpikelandtownshipchestercountypennsylvania/PST045222](https://www.census.gov/quickfacts/fact/table/PA,eastpikelandtownshipchestercountypennsylvania/PST045222)



4.2.1 Electricity

The electricity we use in West Pikeland is generated within the regional electricity grid, and several entities are collectively responsible for providing our electricity:

- PJM operates the regional electricity grid and wholesale electricity marketplace, ensures reliability of the electricity grid, and conducts long-term planning for the future of electricity generation and transmission across 13 states and the District of Columbia.
- Pennsylvania Public Utilities Commission (PUC): Electricity is regulated at the state level by the PA PUC. The PUC sets rates (which influence how much your electricity costs) and manages programs to improve energy efficiency and promote renewable electricity.
- PECO: PECO is the distribution company in our area. While all customers can choose electricity suppliers (papowerswitch.com), PECO is the sole distributor of electricity to area homes and businesses.
- Our current electricity generation supplier is Constellation NewEnergy.

4.2.2 West Pikeland's Municipal Operations Energy Profile

The township building energy use consists of electricity, propane and heating fuel; vehicles use both diesel and gasoline.

The largest energy use is for fueling of motor vehicles at 50% of total energy consumption. The five police vehicles use and the public works vehicles and machinery use diesel.

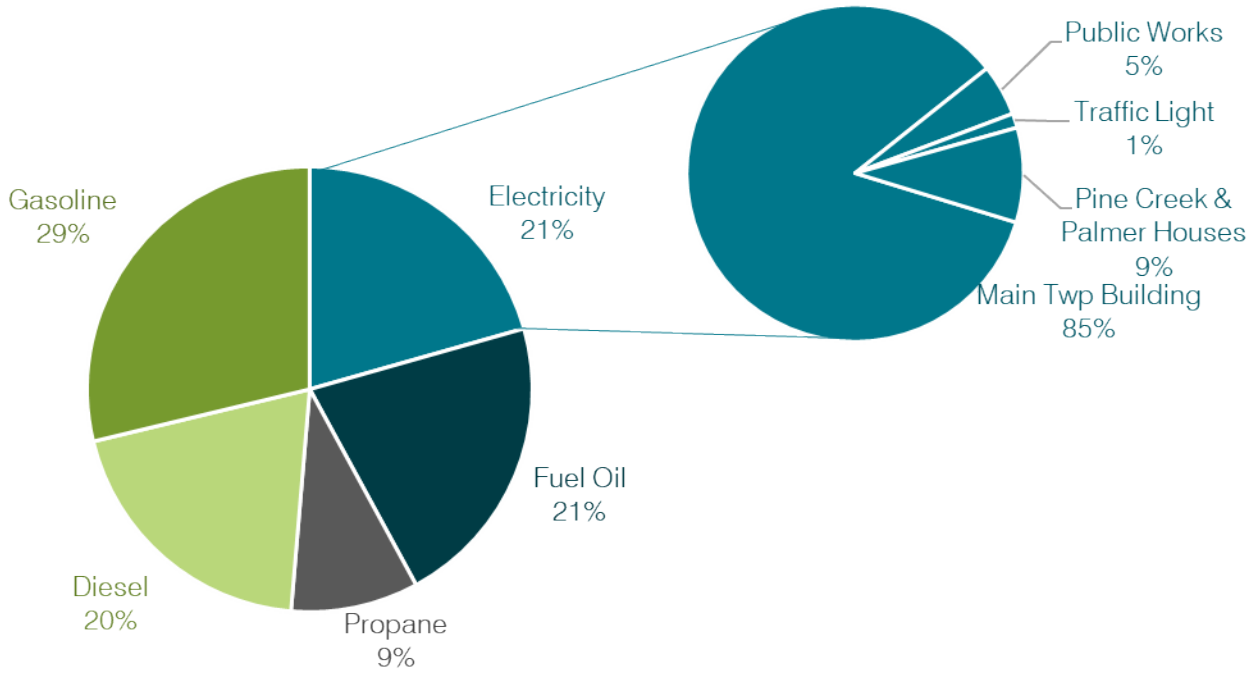
The next largest energy user is the main township office, including the police department, at about 40% of total energy use, with electricity and fuel oil. The facility is primarily heated by fuel oil furnaces. Part of this building's energy use is attributable to the theatre company which shares the space, but is not sub-metered.

The third largest energy user is the public works garage and office at 13% of total energy use. The office is heated with propane.

The GHG emissions from the municipal operations (170 metric tons CO₂e) are a relatively small percentage of the total GHG emissions within the municipality, 26,600 metric tons CO₂e, constituting 0.5% of the total township emissions. Nevertheless, the municipality can lead by example, providing direct experience of the decision-making process and emission reduction options, and acquiring the knowledge to support energy transition projects in other sectors of the economy within the municipality.



Annual municipal energy consumption by source, with breakout of electricity consumption by site.



Annual municipal greenhouse gas emissions from energy by source.

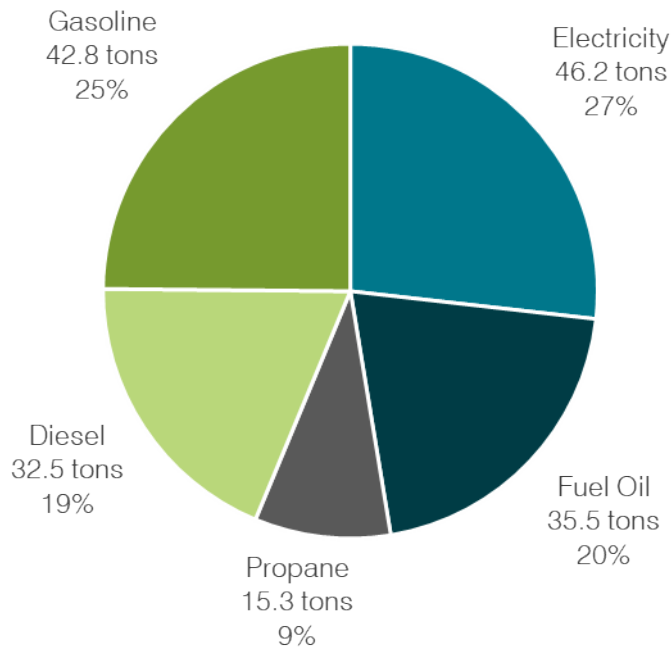




Table 1
Annual Municipal Energy Consumption & Associated Emissions – 2019

Facility / End Use	Electric (kWh)	Fuel Oil (gallons)	Propane (gallons)	Diesel (gallons)	Gasoline (gallons)	Total GHGs (tons CO ₂ e)
Vehicles				3,200	5,340	75.3
Main Township Office	114,000	3,457				74.5
Public Works Garage	6,670		2,2600			17.6
Traffic Light	1,870					0.6
Pine Creek & Palmer Houses	12,250					4.2
Total GHGs (tons CO₂e)	46.2	35.5	15.3	75.3		172.2



4.3 Energy Efficiency and Energy Management Practices

Current energy management practices were examined including benchmarking, audits, procurement practices, status of energy consuming systems (HVAC, lighting, etc.), and types of energy purchased. The results of this review are summarized below.

For complete information, see the *West Pikeland Township Facilities Energy Assessment Report* dated August 2022.

4.3.1 Benchmarking

West Pikeland Township has only recently begun to benchmark energy use for the municipal facilities. Energy benchmarking is considered a best practice because it establishes reference points for measuring energy performance, facilitating tracking and reporting energy use. It allows us to identify high-performing facilities and to prioritize poor performing facilities for immediate improvement.

The Clean Energy Transition Team shall coordinate with the Township to ensure the municipal facility energy use continues to be benchmarked, and include updates in their regular reporting.

4.3.2 Utility Bill Audit

The township has conducted an electric utility bill audit as part of the plan development process. Continued attention to billing rates, especially as generation procurement contract terms lapse (currently through Constellation NewEnergy).

The purpose of a bill audit is to find errors or overcharges in energy bills. If a bill is inaccurate, we may be overpaying. Some managers pay the utility bills without review or are unclear as to how to review bills for accuracy. An in-depth utility expense audit requires a consultant or someone with a moderate amount of experience to analyze bills and determine whether there are any incorrect charges (i.e.: classification, surcharges, tariffs, taxes, demand charges, etc.) which can be refunded. All utility bills—gas, water, and electric—can undergo an audit and potentially result in cost savings. Industry-wide it is estimated that invoices may be off an average of 10%.

4.3.3 Buildings

The Township has recently audited the main township building and public works garage and office as part of the development of this plan. The main results are summarized as part of the recommended municipal energy efficiency actions herein.

The municipality operates the township building, public works garage, two park houses, and one traffic light, all using electricity, the main township office also uses fuel oil, and the public works garage uses propane, as shown in Table 1. The vast majority of energy for these facilities is for the main township building. Therefore, analysis of this building offers the greatest opportunity for achieving energy reductions and cost savings in these facilities.



None of the municipal facilities have been commissioned or recommissioned. A new building is “commissioned” when it undergoes a quality assurance process. Ideally, this begins during design and continues through construction, occupancy, and operations. The purpose of commissioning is to ensure that a new building is operating as intended. It also confirms building staff are prepared to operate and maintain the building’s systems and equipment. Existing buildings are “recommissioned” when a consultant conducts a systematic process of improving an existing building’s performance by identifying and implementing low-cost operational and maintenance improvements. The goal is to ensure that the building’s performance meets expectations and the building’s operating system is optimized. Costly problems and inefficiencies are often detected in commissioning and recommissioning buildings.

Future actions to improve energy efficiency of the municipal operations are outlined in the energy audit report and include:

- Improving thermal efficiency of the building envelope by weather-stripping around exterior doors and windows. This will also reduce drafts and improve comfort.
- Maximizing lighting and equipment efficiency by upgrading to all LED lights and purchasing all ENERGY STAR-rated equipment, and ensuring that all lights and equipment are turned off during unoccupied times.
- Scheduling HVAC systems to ensure proper temperature setbacks during unoccupied times.
- Replacing aging fossil fuel heating systems with high-efficiency electric units.

Continued benchmarking will help the Township track the impacts of these actions on energy use.

4.3.4 Transportation

The municipality owns 8 vehicles. These vehicles are responsible for approximately 50% of the municipality’s energy use and over 44% of GHG emissions. An analysis of the energy, cost, and greenhouse gas savings opportunities for transitioning the entire fleet has been conducted under separate cover.

4.3.5 Procurement Policy

A municipal Energy Management & Procurement Policy has been introduced for review and adoption.



5.0 Leading by Example

West Pikeland Township invests in, owns, and manages physical infrastructure used to provide public services including buildings, a vehicle fleet, and outdoor lighting. These physical assets provide an opportunity for the township to lead by example through taking actions to improve the efficiency of energy use directly under its control. Such actions, if publicly communicated, can demonstrate the value of efficiency to private market stakeholders and catalyze additional private-sector action. Additionally, institutionalizing resource efficiency as a founding principle for how the township does business—through guidelines regarding procurement, investment, capital asset management, and operations—can stimulate the market for efficiency products and services and, as a result, help to develop local capacity to provide them.

This Plan provides objectives and actions to reduce energy use and transition to clean energy sources, reducing GHG emissions from the Township's operations and through community-wide engagement.

Cost & Impacts

While exact emissions reduction potential of each action is subject to variable degrees of implementation, coordination, technology, and individual behavioral change several years into the future, a general, relative reference for energy use or greenhouse gas emissions reduction potential is represented by a corresponding symbol.

- ↘ **Low impact**
- ↗ **Moderate impact**
- ↑ **High impact**

Actions are assigned a timeframe for initiation or completion to guide and prioritize action. Timeframes should be interpreted as follows:

Immediate

Start within one year or continue as an ongoing action if already underway

Short-term

Start within one to two years

Mid-term

Start within three to four years

Long-term

Start within five to ten years



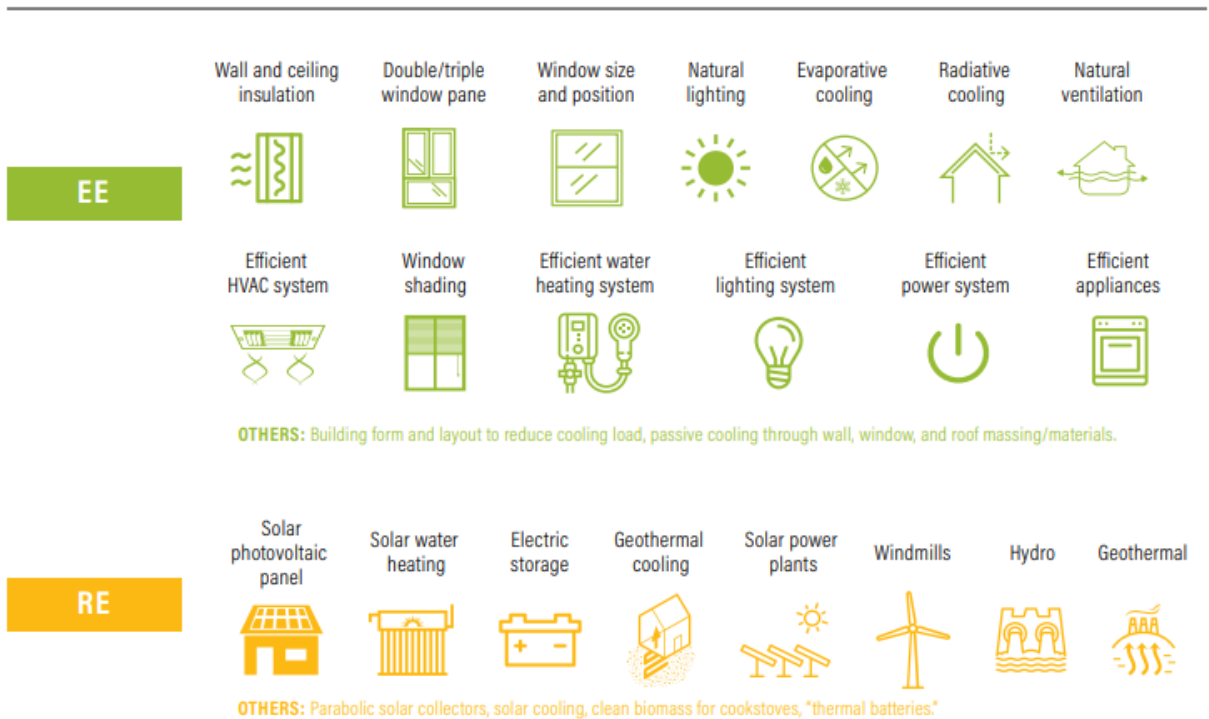
5.1 Energy Efficient Township Facilities and Operations

Committing to and acting on energy efficiency measures in township operations is essential to reducing township energy consumption and costs, and optimizing the effective use of taxpayers' money. These actions are the cornerstone of any plan.

Technologies are currently widely available to reduce energy usage and convert to renewable energy:

Graphic 1

Figure 4 | Widely Available Energy Efficiency (EE) and Renewable Energy (RE) Technologies That Support Zero Carbon Buildings



Source: WRI.

Areas to Concentrate on:

- Benchmarking
- ENERGY STAR equipment
- Building energy audits
- HVAC replacement policies
- Lighting replacement policies
- Weatherization
- On-site renewable energy
- Vehicle replacement policies



Objective A: Establish a baseline for municipal facility energy improvements.

Energy benchmarking is considered a best practice because it establishes reference points for measuring energy performance. It allows us to identify high-performing facilities and to prioritize poor performing facilities for immediate improvement.

A way to benchmark and measure progress is through ENERGY STAR’s Portfolio Manager, which summarizes facility energy consumption and provides a Score which indicated the relative performance of the facility compared to similar normalized facilities across the country.

A	Benchmark Baseline Energy Use	Timeline	Impact
A1	Consider enrolling as a municipality in the Better Building Challenge for guidance on benchmarking and disclosure.	Short-term	↘
A2	Benchmark, rate, and report energy use for all municipal facilities by using ENERGY STAR Portfolio Manager	Short-term	↗
A3	Set up connection with PECO for ENERGY STAR Portfolio Manager.	Immediate	↘
A4	Conduct an operational assessment of the township building and the public works garage.	Immediate	↘
A5	Compile an inventory of equipment type and age and expected service life of HVAC and other equipment.	Immediate	↘
A6	Consider joining in the Better Communities Alliance to set goals, partner with other communities, and be eligible for technical support and potential funding.	Short-term	↗



Objective B: Use cost effective upgrades for all municipal facilities to maximize energy efficiency and reduce unnecessary energy use in township operations.

B	Maximize Energy Efficiency	Timeline	Impact
B1	Use the Baseline established in Objective A to report on ongoing changes to energy use , for example through ENERGY STAR’s Portfolio Manager	Ongoing	↘
B2	Implement short term operational changes per assessment recommendations.	Immediate	↘
B3	Create an Energy Efficiency Master Plan for building upgrades and retrofits including: <ul style="list-style-type: none"> • Complete the upgrade and retrofit of facilities to highest efficiency office lighting. • Use energy management systems to control heating and cooling in buildings. • Upgrade or retrofit facilities to highest efficiency heating and cooling, prioritizing electrification. • Upgrade and install insulation, as appropriate. 	Short-term	↗
B4	Convert traffic, street, field, parking, and all lighting to LED: <ul style="list-style-type: none"> • Take advantage of PECO conversion programs and DVRPC's Regional Streetlight Procurement Program • Assure new outdoor lights meet the highest health and safety standards by requiring they meet The International Dark Sky Association's Fixture Seal of Approval or equivalent dark sky compliant standard. 	Near- to mid-term	↘
B5	Identify potential capital upgrades , incorporate into annual budget at reasonable intervals, at equipment end-of-life.	Short-term	↗
B6	Develop timeline for a phase out plan for non-electric HVAC in township facilities	Mid-term	↗
B7	Develop a Financing Plan <ul style="list-style-type: none"> • Consult with state agencies for federal and state incentives and programs • Communicate with PECO staff regularly regarding rebates, incentives and other efficiency opportunities • Conduct a utility bill audit and commit to using any refunds or savings for efficiency projects 	Short-term	↗
B8	Develop an Energy Savings Reinvestment Plan: Allows future projects to be internally self-funded. Up to 80% of a project’s savings goes to the energy fund to pay for future energy projects, the remaining amount is returns to the general fund.	Short-term	↑



Objective C: Ensure energy management is a priority in all township operations.

C	Prioritize energy management	Timeline	Impact
C1	Periodically audit utility bills for deviations in classifications, charges, etc. (see 4.3.2), and contract timelines	Annually	↘
C2	Create energy management systems plan for township building across all facilities and training for staff.	Immediate	↘
C3	Establish metrics for measuring annual energy performance for buildings, operations, and public reporting	Immediate	↘
C4	Assign energy management to a specific department/staff	Immediate	↘
C5	Provide training regarding building and other energy-related codes for relevant municipal staff on a regular basis.	Short-term	↘
C6	Promote employee energy conservation through education on the township's efforts toward energy efficiency	Short-term	↘

Objective D: Modify policies to promote efficiency and reduce emissions

Energy-efficiency procurement policies achieve environmental and economic benefits. Energy-efficient products often have a lower life-cycle cost and lower GHG emissions than the inefficient alternatives.

D	Policies for municipal operations	Timeline	Impact
D1	Adopt ENERGY STAR® compliant appliances and equipment policy. Purchase or lease all energy-using equipment based on lifecycle cost-effectiveness rather than lowest first cost.	Short-term	↘
D2	Require all new municipal buildings to be solar and EV ready (including roof and electrical work, parking canopies, etc.)	Short-term	↑
D3	Require all new municipal parking be EV ready (see also Objective Q : Reduce roadblocks to Electric Vehicle Transition)	Immediate	↗
D4	Require a life-cycle evaluation of energy savings and emission reduction options during capital improvement request process	Immediate	↗
D5	Establish municipal building policy to ensure new township buildings achieve high performance green building standards (e.g., Net Zero, LEED, or comparable standard). (Graphic 2)	Short-term	↘
D6	Develop energy conservation policies for new and replacement outdoor lighting	Short-term	↘
D7	Develop policies that prioritize energy efficiency for renovations and retrofits for existing municipal facilities	Short-term	↘
D8	Plan to require electric new landscaping equipment	Short-term	↘



Graphic 2

Table 1 | Overview of Commonly Applied Zero Building Concepts and What They Entail

	<p>Nearly zero energy building</p>	<p>An energy efficient building that supplies most (but not all) of its annual energy use through on- or near-site renewable energy sources.</p>
	<p>Net zero energy building</p>	<p>An energy efficient building that produces enough on-site or nearby renewable energy to meet building operations' energy consumption annually on a net basis (the building delivers at least the same amount of renewable energy to the grid than is used from the grid over the course of a year).</p> <p>Note: Not all renewable energy is considered to be carbon-free in its generation.</p>
	<p>(Net) zero carbon building (ZCB)</p>	<p>An energy efficient building that produces on-site, or procures, enough carbon-free renewable energy to meet building operations' energy consumption annually.</p> <p>Note: Zero carbon is often used interchangeably with net zero carbon, whether or not the building uses potentially fossil fuel-derived grid electricity to make up for temporary gaps in on-site renewable energy generation to meet demand or uses carbon offsets. If it does, it is usually called a "net" zero building.</p>
	<p>(Net) zero carbon building, including embodied carbon</p>	<p>An energy efficient building that produces on-site, or procures, enough carbon-free renewable energy to meet building operations' energy consumption annually and also over its life cycle, compensating for the carbon embodied in the building's construction.</p> <p>Note: An emerging goal is to also include embodied carbon arising from the materials, machinery, and equipment used in building construction, maintenance, and repair into the net zero definition. Preferably, these embodied emissions are reduced during the design and construction phase rather than compensated during the operational building phase.</p>
	<p>(Net) zero carbon building portfolio</p>	<p>A group of energy efficient buildings sharing a similar characteristic and usually under the same ownership or management, with carbon-free renewable energy demands mainly provided for within the boundaries of the portfolio rather than at the level of individual buildings.</p>
	<p>(Net) zero carbon district</p>	<p>A group of energy efficient buildings within a geographically defined urban area, with carbon-free renewable energy mainly supplied through nearby off-site sources, generating clean energy at the district level.</p>

Source: WRI.



5.2 Municipal Transportation Recommendations

Many municipalities are switching over to hybrid electric vehicles and fully electric vehicles for both police vehicles and other vehicles. The municipal vehicle fleet is responsible for 50% of the energy use and 44% of the emissions of GHGs from municipal operations. The township can reduce these fuel costs and GHG emissions by gradually transitioning to electric vehicles (EVs). West Pikeland is committed to a vehicle procurement policy that requires all future vehicles to meet an energy efficiency standard aligned with our long-term energy goals.

Objective E: Accelerate the electrification of the township Fleet Procurement Policy

E	Efficient transportation	Timeline	Impact
E1	Develop a 10-year fleet decarbonization plan and process	Short-term	↑
E2	Conduct fleet-wide inventory of vehicles that could be replaced with Zero Emissions Vehicles (ZEV), quantifying fuel and maintenance cost savings and encouraging vehicle selection based on total cost of ownership and assessing opportunities to secure the benefit of the federal electric vehicle tax credit through leasing or other means	Short-term	↗
E3	Establish municipal procurement policies to purchase low GHG emitting vehicles to replace existing or “retiring” conventional, fossil-fuel vehicles	Short-term	↗
E4	Encourage workplace charging by installing workplace chargers for fulltime employees at Township offices. Workplace chargers significantly increase EV miles travelled (eVMT). Employees are 20 times more likely to drive EV if they can charge EVs at work.	Mid-term	↘
E5	Raise awareness and acceptance of ZEVs among employees by offering information; maintenance training; opportunities for test drives; and direct conversations with municipalities that have purchased EVs and hybrid EVs.	On-going	↘
E6	Consider working with the school districts to make aggregated EV purchases or leases for a reduced price.	Mid- to Long-term	↘
E7	Consider working with other municipalities to make aggregated EV purchases or leases for a reduced price.	Mid- to Long-term	↗
E8	Advocate for continued availability of state funded subsidies for charging stations and federal EV and ZEV tax credits for all automakers	On-going	↘
E9	Stay informed regarding the availability of hybrids and EVs for heavy use (trucks, trash haulers, street sweepers, etc.).	On-going	↗



Objective F: Lead by example by providing electric vehicle charging at township-owned parking facilities and parks

F	Leadership in EV charging	Timeline	Impact
F1	Identify municipally-owned parking lots and parks to assess the feasibility of installing EV chargers for residents' use	Short-term	↑
F2	Discuss power availability with PECO to assess location feasibility.	Short-term	↗
F3	Develop a timeline to install charging infrastructure at all public parking and frequently used parks in the township	Short-term	↗
F4	Participate in state & federal funding to subsidize charging infrastructure or other financing plans	Immediate	↘
F5	Coordinate EV charging infrastructure with neighboring municipalities to provide ready access to charging across the region	Mid-term	↗



5.3 Energy Procurement and Production

In the short-term, continue to purchase renewable electricity through a competitive retail supplier or broker while assessing options for a renewable power purchase agreement and production from township locations.

Objective G: Plan to procure renewable electricity for all municipal operations by 2035.

G	Transition to Renewable Electricity Procurement	Timeline	Impact
G1	Assess the township's electricity purchasing contracts to determine appropriate renewable energy buying policy changes, accounting for reductions from efficiency measures, increases from EVs, and on-site renewable production projections.	Short-term	↑
G2	Purchase renewable energy from your utility supplier.	Immediate	↑
G3	Compare future electricity procurement options in line with goals and budget parameters based on overall energy targets. This includes comparing procurement through: <ul style="list-style-type: none"> • joint-municipal renewable procurement • PECO or broker, bundled or unbundled RECs • a third party - independent renewable electricity producer to directly procure electricity • a Power Purchase Agreement (PPA) for on-site or off-site production, or a financial/virtual PPA. 	Short-term	↑

Objective H: Lead by example by installing solar electricity on municipal properties

H	Local Electricity Procurement	Timeline	Impact
H1	Conduct a study to assess the potential capacity and feasibility of solar electricity on municipal properties. Take advantage of south-facing open roof areas, parking lots, and underutilized ground space to install photovoltaic solar arrays serving Township facilities. Utilize Virtual Meter Aggregation to apply energy to other nearby Township facilities.	Short-term	↑
H2	Develop a goal to self-generate a given percentage of the electricity based on H1's potential capacity and create a plan to install the corresponding renewable capacity.	Short-term	↑
H3	Compare costs and benefits of solar financial arrangements (Installing solar or on-site or off-site lease agreement).	Short-term	↗
H4	Develop a financing plan	Short-term	↗



6.0 Enabling Policies and Regulatory Mechanisms

The township will undertake changes to its planning, zoning code, road system, and other aspects of municipal governance that impact energy usage throughout the community.

6.1 Building Efficiency

West Pikeland Township has the capability to adopt and enforce building efficiency regulations and other policies through a combination of updated ordinances and incentives. Land-use planning and zoning, business and building permitting, and other codes for new development are among the main regulatory mechanisms. Specific mechanisms often used to promote building efficiency include:

- Implement the highest performance building codes allowed by the state
- Update existing building codes to include energy efficiency, update permitting policies and zoning to remove barriers to electrification, solar, or EV installation
- Expedite permitting
- Steer residents and businesses towards financial incentives
- Leverage municipal finance programs for private buildings
- Require energy benchmarking, labeling and rating energy of commercial and multifamily buildings, audits, retro-commissioning, or equipment upgrades.

The right combination of policies can help transform buildings to be far more energy efficient over time.

Given the wide choice of available policies, West Pikeland should seek to prioritize those policy actions which provide the greatest environmental and social benefits. Recommended are policies which will help achieve West Pikeland's goals, including reducing community-wide GHG emissions, addressing access to energy efficiency, electrification of HVAC systems, and curbing air pollution through vehicle electrification.

While West Pikeland, as a local government, is not authorized to set building energy efficiency codes and standards, it is essential that the most recent, most impactful codes are incorporated in our local bylaws and enforcement. West Pikeland can work with state agencies to advance the energy code at triennial revisions and introduce net-zero stretch energy code options.

The township staff and the Board of Supervisors can initiate policies that enable and encourage community-wide energy efficiency, electrification, and renewable energy production.

The following are the goals and actions to assist the community in moving toward the use of efficient, clean renewable energy:



Objective I: Promote advanced building codes and standards for new and existing buildings.

I	Codes for New and Existing Buildings	Timeline	Impact
11	Expedite permits and reduce permit fees (sliding scale) for on-site solar, commitment to carbon neutral, Net Zero Standards, or LEED Gold performance standard or better.	Short-term	↘
12	Incentivize above-code buildings similar to the West Chester Sustainable certification program which recognizes developers who integrate sustainable features into new commercial developments and rehabilitation projects. Consider incentives like additional density, height, or lot coverage allowances.	Short-term	↗
13	Explore requirements or incentives for new green buildings , such as encouraging those over a certain square footage to obtain certification or providing monetary or policy incentives to building owners who earn green buildings labels.	Mid-term	↗
14	Create policies to encourage adoption of building automation systems and building commissioning on buildings of a certain size.	Immediate	↘
15	Pass municipal ordinance to require cool roofs on new buildings and cool reroofs of existing buildings (when retrofitted) to reduce heating and cooling needs.	Immediate	↘
16	Promote and incentivize new buildings and major remodels to be net-zero energy or net-zero energy ready (deep efficiency without renewable energy on site) building codes with higher standards than the state base code.	Mid-term	↑
17	Create a process of consultation with developers to encourage: <ul style="list-style-type: none"> • make all new buildings solar ready • make all new buildings EV ready • install all-electric systems for appliances and HVAC systems, such as geothermal and high-efficiency air-source heat pumps consider white and/ or green roofs 	Short-term	↗
18	Explore creating and incentivizing an above-code buildings district. By creating a special district (with special incentives built in) trade benefits in exchange for these above-code requirements. Similar to using the conditional use process to enforce higher energy efficiency criteria.	Long-term	↘



Resource:

[Clean Energy Financing Toolkit for Decisionmakers | US EPA](#)







Making a building net-zero energy ready at the point of construction is cost-effective. The U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) is an example of sustainability standards for “green buildings”. LEED certification is based on a system of points, awarded for improvements ranging from certain types of plumbing features (such as faucets that turn themselves off) to energy-efficient appliances and HVAC systems. Building to LEED or similar standards reduces operating costs and minimizes strain on municipal infrastructure needed to support it, such as wastewater treatment. Building to standards can be undertaken for local government facilities and encouraged for new commercial and large-scale residential buildings.

New Buildings Institute presents building code options to prepare for the transition to renewable energy in ascending order of effectiveness:

Graphic 3

Several dozen communities across the U.S. have accelerated the trend towards all-electric homes and buildings to meet their climate goals by amending their building codes and policies.

A SPECTRUM OF BUILDING CODE OPTIONS

- 
INCENTIVES: Rebates, expedited permitting, reduced permit fees
- 
ELECTRIC READY: Pre-wiring and panel capacity for future electric systems
- 
ELECTRIC-PREFERRED: Extra efficiency or renewable requirements for new construction with natural gas
- 
BUILDING TYPE SPECIFIC: All electric for certain types of buildings
- 
ELECTRIC-ONLY WITH EXCEPTIONS: Requiring, for instance, electric heating and water heating but allowing gas stoves
- 
ELECTRIC-ONLY: No fossil fuels allowed in new construction



Objective J: Support residential energy efficiency

The residents of the community are critical to the success of the plan and, as constituents of their municipal officials, can exert influence over this process. The operation of homes and activities within the community represent a significant portion of the energy consumed by the community as a whole, giving them the opportunity to reduce that consumption, emphasizing the major role they all can play in providing a safe, healthy, progressive, and forward-looking community.

J	Residential Efficiency Support	Timeline	Impact
J1	Promote residential energy efficiency PECO audits for all households	Short-term	↘
J2	Promote energy efficiency improvements such as: <ul style="list-style-type: none"> • A complete transition to high efficiency LED lights • Weatherization and insulation: see PA's Weatherization Assistance Program⁶ • Building controls (programmable thermostats) • Replacing appliances with ENERGY STAR appliances when old appliances are replaced • Electric lawn equipment (e.g. mowers, blowers, chainsaws) 	Short-term, ongoing	↗
J3	Promote energy efficiency opportunities through outreach, workshops, and neighborhood challenges	Short-term, ongoing	↘
J4	Collaborate with PECO to identify and provide free audits for low income households	Short-term	↘
J5	Collaborate with PECO to share information for residential rebates and incentives		↗
J6	Promote auxiliary activities such as tree planting which can help shade home and reduce cooling requirements, with the added benefit of carbon sequestration	Mid-term	↘

⁶ dced.pa.gov/programs/weatherization-assistance-program-wap/



Objective K: Support residential HVAC efficiency, electrification, and renewables

In cooperation with PECO and local energy professionals, encourage renewable heating and cooling upgrades.

K	Residential HVAC Support	Timeline	Impact
K1	Establish/strengthen marketing and educational campaigns to raise awareness and understanding of building electrification technologies	Short-term	↘
K2	Renewable heating and cooling group purchasing campaigns: Host or support a community group purchasing campaign to raise awareness, educate, and connect prospective customers with qualified contractors that may be able to offer heat pump installations at a discounted rate	Mid-term	↗
K3	Renewable heating and cooling financial incentives: Identify incentives to reduce the upfront costs of building electrification technologies	Long-term	↗

Objective L: Develop Education and Voluntary Programs Specific to Renters

L	Residential Efficiency Support	Timeline	Impact
L1	Create policies or voluntary compliance programs to implement phased energy efficiency upgrades for rental units	Mid-term	↘
L2	Encourage and incentivize energy efficiency retrofits in rental housing	Short-term	↗
L3	Provide technical support to help large building owners to begin benchmarking, leveraging state and local programs (e.g. DVRPC, PADEP)	Mid-term	↘
L4	Encourage enrollment in the Better Building Challenge for Multi-family Units⁷	Short-term	↘
L5	Require energy disclosure for rental properties or sponsor a voluntary disclosure program	Mid-term	↘
L6	Pilot green leasing strategies to address the landlord and tenant split initiative	Mid-term	↘
L7	Create a targeted outreach strategy to engage renters	Short-term	↘
L8	Partner with PECO to improve tenants' access to energy-usage data, energy audits and rebates	Short-term	↘

⁷ hudexchange.info/programs/better-buildings-challenge/



Objective M: Promote Commercial Energy Use Transparency and Benchmarking

Commercial buildings and industrial plants are responsible for nearly half of U.S. energy use and greenhouse gas emissions. West Pikeland’s commercial sector represents approximately 21% of our GHG emissions, associated with the use of electricity (80%), natural gas (2%), oil (10%), and propane (8%). Businesses are often in the forefront of energy efficiency efforts because these actions demonstrate favorable financial returns on investments, saving money while burnishing their image as companies that run sustainable operations, while enhancing the health, safety, and comfort within the built environment. Opportunities to reduce GHG emissions are tied to consuming less energy in the buildings and decarbonizing the supply of energy flowing to them. The municipality can provide support and guidance through requirements and voluntary guidance.

M	Commercial Sector Transparency and Benchmarking	Timeline	Impact
M1	Adopt regional (DVRPC) building energy performance policy.	Short-term	↗
M2	Leverage the business license renewal process to increase benchmarking participation and performance.	Short-term	↗
M3	Assess the township’s ability to set requirements for energy disclosure based on milestones such as compliance periods for benchmarking polices for buildings of a certain size.	Mid-term	↗
M4	Consider an energy efficiency challenge program. Challenge building owners—for example, commercial offices—to voluntarily reduce energy use to meet a predefined target.	Short-term	↘
M5	Promote the use of ENERGY STAR Portfolio Manager and ENERGY STAR Building Certification through coordinated outreach for stakeholder groups within the commercial sector. Provide technical support to help large building owners to begin benchmarking and building certification.	Short-term	↘
M6	Familiarize code enforcement officers with any changes or updates to the code related to energy.	Immediate, ongoing	↘
M7	Provide regular, up-to-date support and training for code inspectors, and require it for contracted inspectors. Ensure code officials are fully trained to enforce current energy building codes; insufficient enforcement is a primary reason why new construction may not be as efficient as it should be.	Immediate, ongoing	↘
M8	Budget for sufficient staff to support code compliance.	Mid-term	↘
M8	Encourage local businesses and business associations (Chambers of Commerce, etc.) to enroll in the Better Building Challenge for the commercial sector ⁸	Short-term	↗

⁸ betterbuildingsolutioncenter.energy.gov/challenge/sector/commercial



Objective N: Promote Energy Efficiency and Electrification in Commercial Buildings

N	Commercial Sector Efficiency and Electrification	Timeline	Impact
N1	Promote energy efficiency opportunities through outreach, workshops, and block or specific commercial sector challenges	Short-term	↘
N2	Identify incentives for energy efficiency retrofits	Mid-term	↘
N3	Promote PECO rebates and incentives to replace old or inefficient boilers and furnaces with air-source and geothermal heat pumps	Short-term	↗
N4	Inform local businesses about Commercial Property Assessed Clean Energy (CPACE) to fund renewable installations and energy efficiency	Short-term	↗
N5	Promote energy efficiency improvements such as adding insulation and pipe wrap to water heaters for businesses	Short-term	↘
N6	Educate regarding the benefits of cool roofs to reduce heating and cooling needs	Short-term	↘
N7	Promote workshops and programs offered by regional Green Building United and other organizations ⁹	Mid-term	↘

Objective O: Promote clean energy commitments and target setting in schools.

West Pikeland Township is part of the Downingtown Area School District and is home to many students and teachers who attend Lionville & Pickering Valley Elementary Schools and other nearby public & private schools. Schools provide a valuable function in educating and engaging their staff, students, and their families to take a leadership role in promoting energy conservation and efficiency and the implementation of renewable energy systems.

O	Education Clean Energy Support	Timeline	Impact
O1	Coordinate with schools and school districts on energy awareness of benchmarking, efficiency, and renewable energy sources	Short-term	↗
O2	Coordinate with schools and school districts on township-wide anti-idling campaigns	Mid-term	↗
O3	Facilitate purchase of renewable electricity through power purchase agreements in coordination with other school districts and other large institutions	Long-term	↑

⁹ greenbuildingunited.org/



Objective P: Promote energy efficiency, electrification of buildings and vehicles, and renewable electricity procurement among non-profits and other local institutions.

Owners and operators of institutions—such as religious organizations, community centers, health centers, and retirement homes and continuing care facilities—are medium to large energy users and have a stake in reducing their energy costs since they often operate on limited funding. They often have productive relationships with their municipal officials that may be leveraged to obtain their interest and cooperation. As with large institutions and businesses, it is in their interest to work with their municipality to reduce their energy use and costs, while contributing to the long-term sustainability of the community.

P	Non-Profit Clean Energy Support	Timeline	Impact
P1	Promote the use of ENERGY STAR Portfolio Manager through a coordinated outreach program for specific sectors	Short-term	↘
P2	Promote ride-sharing and carpooling, including pooled delivery service (pharmacy, grocery), ridesharing parking.	Mid-term	↗
P3	Facilitate purchase of renewable electricity through power purchase agreements in coordination with other school districts and other large institutions	Long-term	↑
P4	Encourage houses of worship to register for programs such as Cool Congregations , GreenFaith Stewardship Circles .	Mid-term	↘



6.2 Transportation

“State and local governments nationwide are paving the way for plug-in electric vehicles (PEVs) by allowing, incentivizing, and even requiring electric vehicle supply equipment (EVSE) infrastructure in their communities. While there is no ‘ideal’ or one-size-fits-all deployment strategy, zoning, codes (including permitting), and parking ordinances are three particularly powerful tools to encourage PEV and EVSE adoption.

“It is important to understand how zoning, codes, and parking ordinances can further the PEV readiness of communities and regions, whether implemented individually or in combination with one another. State and local jurisdictions can then assess their unique objectives and identify the best of these approaches to support PEV industry growth and innovation. Just as important, they can do so while ensuring that no individual, organization, or adjacent industry is overburdened with any requirements that are intended to facilitate the deployment of PEVs and EVSE.”

Source: [AFDC Plug-In Electric Vehicle Deployment Policy Tools: Zoning, Codes, and Parking Ordinances¹⁰](#)

¹⁰ afdc.energy.gov/bulletins/technology-bulletin-2015-08.html



Objective Q: Reduce roadblocks to Electric Vehicle Transition

Q	Transportation	Timeline	Impact
Q1	Leverage zoning ordinances to formally define electric vehicle supply equipment (EVSE) and ensure that installation is permissible in single- and multi-family dwellings as well as commercial or industrial zones.	Short-term	↗
Q2	Incentivize the installation of EVSE by providing a bonus, such as additional floor area or reduced parking requirements, for including EVSE in new construction.	Short-term	↗
Q3	Review parking ordinances to encourage EV: direct parking incentives or charging access in high-density areas.	Immediate	↗
Q4	<p>Stay up to date on national EV codes and standards. This includes the two key bodies (and relevant codes) that govern EVSE installation and inspection:</p> <ul style="list-style-type: none"> • National Fire Protection Association (NFPA) <ul style="list-style-type: none"> ◦ National Electrical Code (NEC) • International Code Council (ICC) <ul style="list-style-type: none"> ◦ International Building Code (IBC) ◦ International Residential Code (IRC) <p>For current PEV and EVSE-related codes and standards, see the NREL's Electric Vehicle and Infrastructure Codes and Standards Citations (PDF) and Electric Vehicle and Infrastructure Codes and Standards Chart (PDF).</p>	Immediate	↘
Q5	<p>Include mandatory min. requirements for future EVSE. EV-ready requirements may include installation, pre-wiring, or space reservation. Follow PennDOT's EV Model Ordinance Toolkit. Country-wide examples:</p> <ul style="list-style-type: none"> • new construction must provide EVSE charging; • provide EVSE charging infrastructure in all new detached single-family dwellings and new multi-family residential and non-residential construction; • new and upgraded parking garages and lots include EVSE hardware in at least 20% of spaces. 	Mid-term	↑
Q6	Establish a flat, consistent fee for residential and commercial EVSE installation.	Mid-term	↘
Q7	Pass an anti-idling policy township-wide.	Short-term	↗
Q8	Support trip reduction with carpooling: Share-A-Ride	Short-term	↗
Q9	Incorporate safe bike lanes & sidewalks/trails in traffic planning to encourage viability of biking as a transportation option. Support connectivity in Master Planning.	Long-term	↘



6.3 Renewable Electricity Procurement and Production

Purchase of electricity, especially for larger customers, is likely to be done through energy brokers or electricity services companies (ESCOs), who increasingly provide renewable energy products. In addition, there are many rooftops and areas within the township that could be equipped with solar arrays.

Objective R: Facilitate expansion of renewable energy generation

R	Renewable Energy Procurement and Production	Timeline	Impact
R1	Help to aggregate energy demand from a group of public and/or private buildings in order to engage in a PPA for off-site renewable energy. This approach is becoming increasingly popular because it allows building owners with smaller energy loads to benefit from PPA options and generally lowers the cost of energy provision for participants.	Mid-term	↗
R2	Promote Solarize campaigns for collective PV purchasing	Mid-term	↗
R3	Explore programs to incentivize buildings with rooftop space —such as warehouses, factories, and parking garages—to install rooftop renewables and become net energy producers. By feeding the excess generated energy into the grid, they can provide for part of the renewable energy demand of nearby buildings with limited on-site generation opportunities.	Mid-term	↑

PECO is the utility which distributes electricity and gas to West Pikeland and the surrounding communities. It must be heavily involved in the transition to renewable energy. In a PECO/PJM’s deregulated system, any customer within the distribution utility’s service area may purchase electricity directly from any electrical generation company or from the distribution utility. This allows for direct purchase of renewable electricity by the customer. The electricity is delivered through the distribution utility’s electric grid and that particular utility is compensated for the distribution service.

PECO can assist in energy conservation and the conversion to renewable energy. They can:

- Participate in rebate programs for energy efficiency measures and energy efficient equipment. ENERGY STAR is one of those rebate program
- Facilitate easy and fast approval of connection of solar arrays to their system
- Use influence with the PA PUC to implement change to purchasing of renewable electricity
- Upgrade their system to accommodate and take advantage of distributed energy resources
- In conjunction with regional planning initiatives, facilitate the development of regional microgrids and storage applications.



6.4 Reducing Roadblocks

The township will consider implementing changes to reduce roadblocks for climate-positive investments and encourage adoption of energy transition programs and investments by residents, institutions, and businesses.

Objective S: Reduce roadblocks to transitioning to clean energy

S	Reducing Roadblocks and Providing Guidance	Timeline	Impact
S1	Register for the Solsmart designation in order to streamline the solar permitting process and use their guidance.	Immediate	↗
S2	Review policies related to solar access in local Home Owners Associations (HOAs); support resident advocacy of solar to HOA boards.	Mid-term	↘
S3	Screen township permitting and zoning policies and processes for any clauses which impair building and vehicle electrification, and update language to remove any barriers	Immediate	↗
S4	Review whether current zoning or ordinances prohibit or preclude EVSE under existing regulations. Level 1 and 2 EVSE and DC fast charging (which is useful in roadside or commercial applications) may require different zoning considerations.	Immediate	↗



A Clean Energy Future, for all.

Prioritizing the health, safety, livability, prosperity, independence, and security of the Township and its residents by setting a trajectory to a future of clean energy for electricity, heat, and transportation.