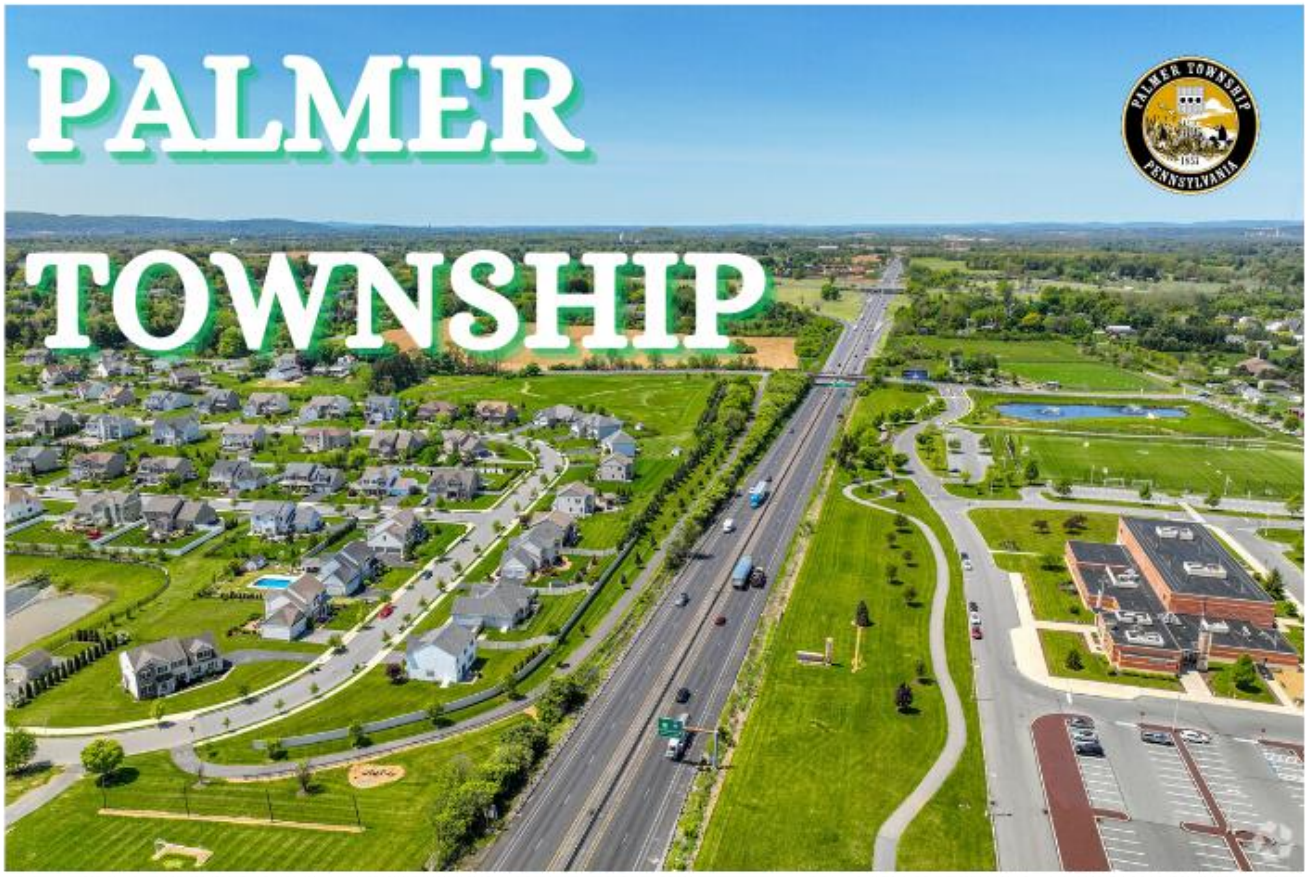


PALMER TOWNSHIP

MUNICIPAL CLIMATE ACTION PLAN

Credits and Acknowledgements

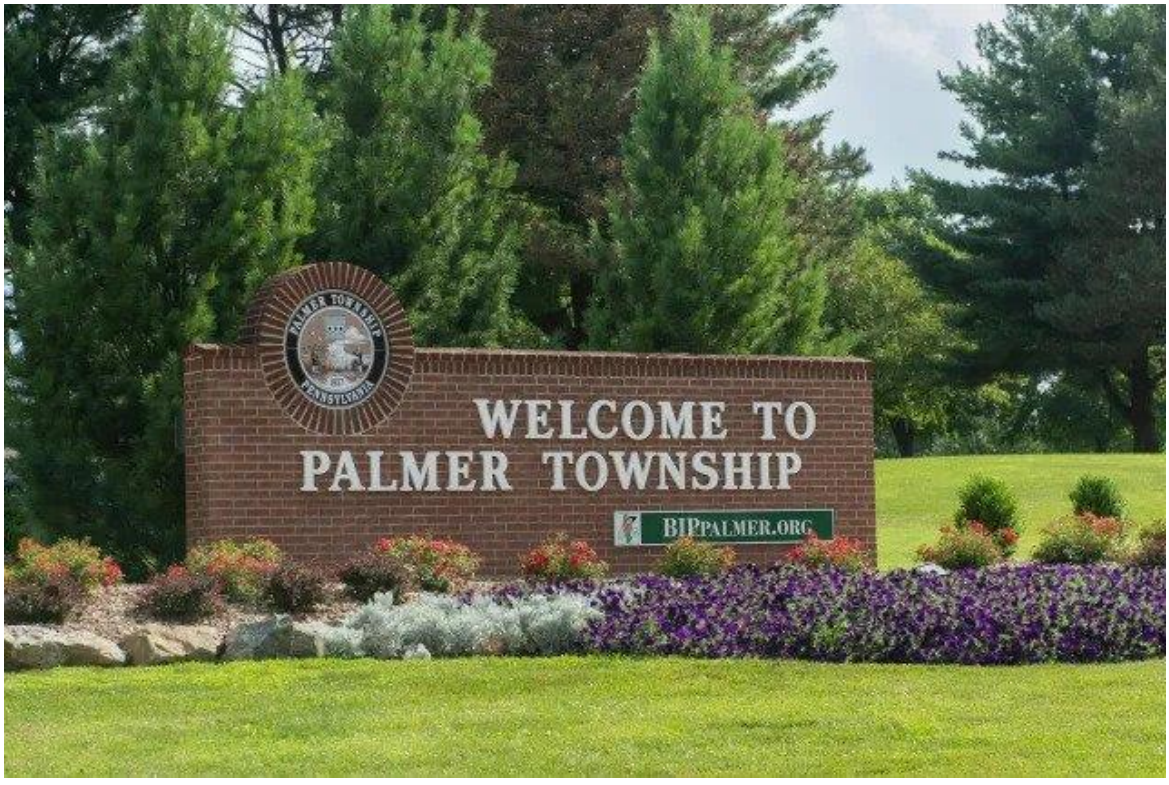
Paige Strasko- Palmer Township Environmental Administrator, MS4 Coordinator and Tree Coordinator, Municipal Climate Action Plan

Brandi J. Robinson- Director, Penn State Local Climate Action Program

Peter Buck- Director, Penn State Local Climate Action Program

Jadon Basilevac- ICLEI ClearPath Technical Assistance

Sean C. Nichols- Municipal Climate Action Plan



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EXECUTIVE SUMMARY

A community's health and well-being fundamentally depend on the surrounding environment comprised of the air we breathe, the water we drink, the weather we experience as well as the food we eat. Palmer Township has a burgeoning tradition of action in maintaining and improving its environment. The local recycling program has been in action for over a decade. Palmer has been a nationally recognized Tree City USA since 2022 and there are plans to enhance the riparian buffers along both Bushkill Creek and Lehigh River to prevent flooding.

In 2023, Palmer Township executed its first greenhouse gas inventory (summary in Appendix B) to better understand current and future areas of improvement and align itself with the state and national level climate goals. This inventory is the first step toward prioritizing sectors to target emissions reduction to both adapt to and mitigate human induced climate change.

Additionally, the recently passed Inflation Reduction Act (IRA) presents a unique opportunity for rapid adaptation and mitigation to be achieved with state and federal government assistance.

This Municipal Climate Action Plan (MCAP) creates an adaptable roadmap to identify and implement robust local climate action and invest in a sustainable future. The MCAP focuses in the short-term on residential and township government climate action. In the long-term, the MCAP addresses possible pathways to decrease emissions in the greater commercial and industrial sectors, for which more robust data and stakeholder support need to be developed. The proposed activities are aligned to Pennsylvania's 2021 Climate Action Plan goals of reducing GHG emissions by 26% by 2030 and 80% by 2050, from 2005 levels as the standard baseline. The development of the MCAP was led by the Palmer Township Environmental Steering Committee in conjunction with Penn State University and the DEP Local Climate Action Program.

THE MCAP RECOMMENDS PURSUIT OF THE OVERARCHING COMMUNITY CLIMATE AND SUSTAINABILITY GOALS:

GOAL 1

City-Owned Assets are Resilient, Sustainable and Efficient

GOAL 2

Sustainability and Climate Priorities are Embedded in City Operations, Participation and Decision Making

GOAL 3

Municipal Support for Sustainability and Resilience for Local Businesses and Residents

FOCUS AREAS FOR GOAL #1

- Achieve 100% renewable energy for township-owned facilities through retrofits and efficiency assessments of municipal run buildings and organizations
- Ensure proper grid integrity to withstand disruptions from extreme weather events
- Decarbonize fleet vehicles and fleet operations

FOCUS AREAS FOR GOAL #2

- Embed net-zero sustainability and efficiency goals in the planning of new township funded projects as well as incoming industrial and commercial construction
- Continue to identify opportunities and methods to increase efficiency

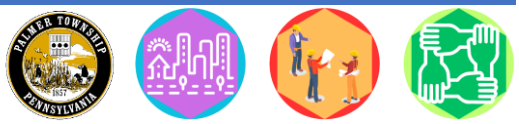
FOCUS AREAS FOR GOAL #3

- Provide community-based infrastructure improvements with an emphasis on facilitating projects that improve overall sustainability pathways and goals
- Facilitate inclusive and equitable adaptation and mitigation through community engagement, outreach, education and involvement

ACTIVITY PRIORITIZATION

Based on these goals and general framework, the Palmer Township is recommending to evaluate and prioritize the activities summarized below. These recommendations are evaluated based on degree of **impact, feasibility, affordability and equity advancement.**

Appendix A identifies funding opportunities available through the IRA on state and local levels. It is recommended these activities be phased in over the short-term and long-term based on the criteria above.



IMPLEMENTATION

This MCAP includes urgent activities that are congruent with municipal sustainability and climate goals. However, the Township will need to implement programs, policies and measures in phases as Palmer's budget and funding opportunities allow. It is understood that Palmer Township does not possess the capacity to implement all activities simultaneously. The MCAP positions the Township to articulate, modify and execute plans, policies and programs while remaining nimble and flexible to take advantage of new information, resource opportunities, funding and technology as it becomes known. Activities were divided into three phases based on hypothetical timeframes. Further scrutiny by local officials will be necessary to ensure maximum efficiency and execution of the phases.

Consideration was given to how different activity types have different resource requirements. The various recommended actions have been allocated based on perceived budget costs, logistical expenditure and allotted time frame, however, it is understood, especially with federal and state program funding, that the recommended actions can be shifted as needed to achieve the same long-term climate and sustainability goals.

Incorporating Social and Environmental justice practices will be essential to achieving long-term, sustained success.

The recommended actions within each phase are classified by three identifiers:

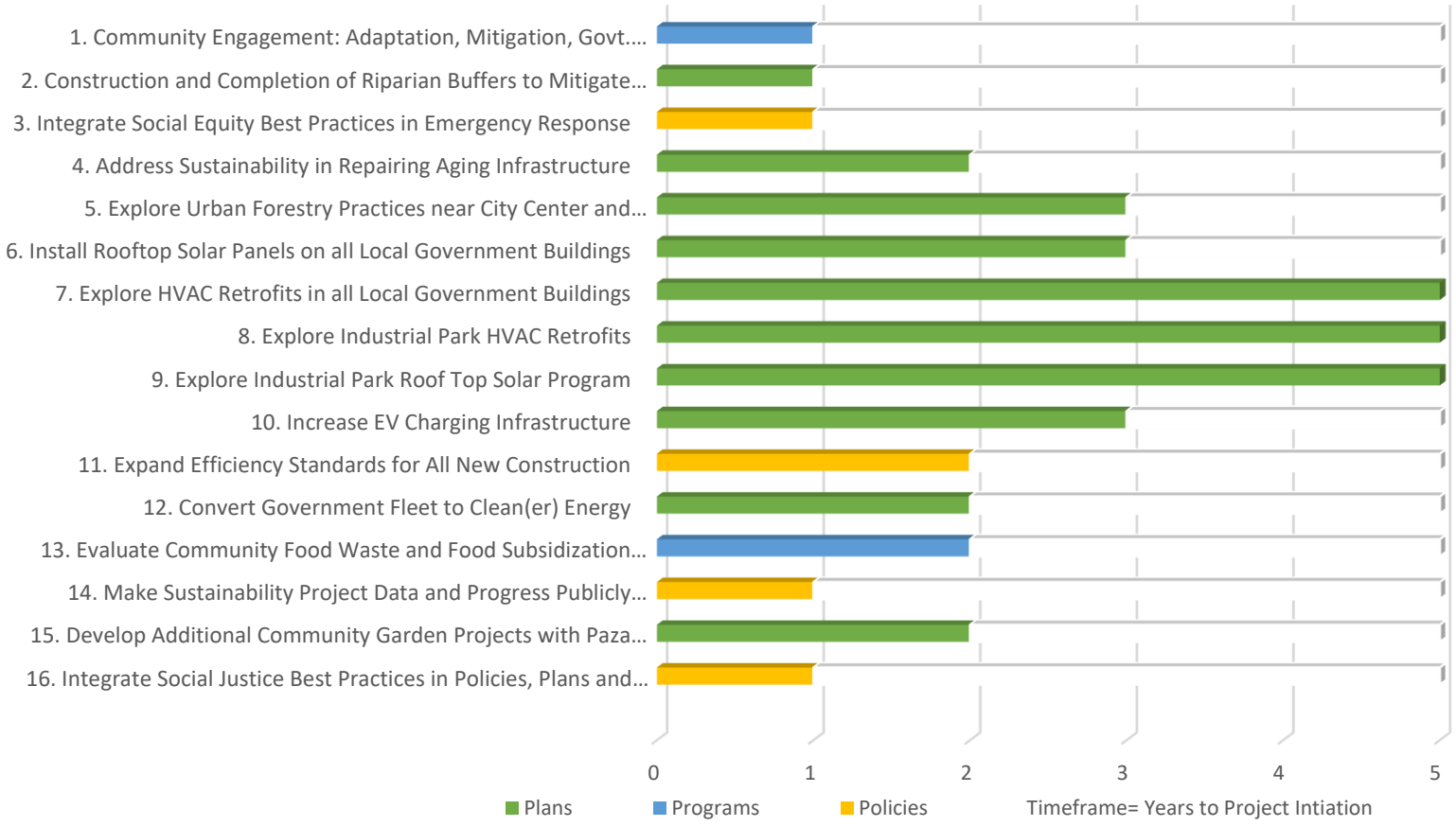
1. **Policies-** Legislation that will incorporate sustainability and climate goals in the present and future

2. **Plans-** Community-based climate adaptive or sustainability projects including but not limited to retrofits, solar projects, riparian buffers, reforestation, EV charging stations and green infrastructure

3. **Programs-** Community funded programs that will assist residents, organizations and schools with achieving increased energy efficiency and more sustainable inputs.

   Below, one possible timeline scenario is presented pertaining to the planning and execution chapters for the recommended actions presented above. Activities listed in no particular order.

PROPOSED CLIMATE ACTION ACTIVITIES TIMELINE:



The following section will give a brief summary of each proposed activity in addition to cursory budgetary considerations and costs. The timeline above is meant to represent some possible activities and targets to pursue but the timeline is flexible based on fluctuations in the economy, weather, government and public opinion.

ACTIVITY SUMMARY

The following activities are possible strategies to help reduce GHG emissions. However, each needs to be evaluated in context of Palmer Township, and prioritized. They provide a sound basis of topics with which to engage further evaluation and discussion.

1. **Community Engagement: Adaptation, Mitigation, Govt. Transparency (Programs):** Establish and implement a process to engage township residents and businesses in a dialog about the need for climate mitigation, to identify areas of concern, and potential plans and activities.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Administration
   Timeframe: Short Term
   Funding: $

2. **Construction and Completion of Riparian Buffers to Mitigate Flooding (Plans):** Continue to build and develop riparian buffers to mitigate flooding from the Bushkill Creek and Lehigh River areas.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Planning, Zoning, Stormwater
   Timeframe: Short Term
   Funding: $$$

3. **Integrate Social Equity Best Practices in Emergency Response (Policies):** Review emergency response priorities to ensure the most vulnerable populations and sectors of the community are prioritized.
   Operational Resources
   Lead Implementers: Board of Supervisors, Public Works, Stormwater, Emergency Services
   Timeframe: Short Term
   Funding: $

4. **Address Sustainability in Repairing Aging Infrastructure (Plans):** Infrastructure projects should align as best as possible with the Township's sustainability goals.
   Operational Resources
   Lead Implementers: Board of Supervisors, Palmer Township Stormwater Authority, Public Works, Environmental Steering Committee, Planning, Zoning
   Timeframe: Short Term
   Funding: $$

5. **Explore Urban Forestry Practices Near Center of Town and Industrial Park (Plans):** Develop urban forestry practices in business, industrial and commercial districts as well as the industrial park to combat emissions and urban heat island effects.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning, Shade Tree Commission, Parks and Recreation
   Timeframe: Medium Term
   Funding: $$$
   USDA Forest Service Urban and Community Forestry Grant Program
   https://www.fs.usda.gov/sites/default/files/2024-national-ucf-grant-program-nofo.pdf

6. **Install Rooftop Solar Panels on all Local Government Buildings (Plans):** Install rooftop solar arrays on applicable government buildings such as the townhall, law enforcement buildings, schools and libraries.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning
   Timeframe: Medium Term
   Funding: $$$$ IRA: Energy Efficiency Formula Grants, Renewable Energy and Efficiency at Schools Grant, Solar for All Program (EPA); ***TAX CREDIT ELIGIBLE***
   Average rooftop solar panel system cost in PA: $2.98/W; 5Kw System: $14,921.00 before incentives (Energy Sage)

7. **Explore HVAC Retrofits in all Local Government Buildings (Plans):** Explore installation of more efficient, sustainable heating and cooling appliances and systems throughout municipal buildings such as the ***townhall*** and law enforcement buildings. Some possible solutions are heat pumps, geothermal and hydronic radiant heating as well as using solar power to power HVAC systems.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning
   Timeframe: Long Term
   Funding: $$$$ IRA: Energy Efficiency Formula Grants, Retrofits and Energy Efficiency Program, Renewable Energy and Efficiency at Schools Grant, Green and Resilient Retrofit Program; ***TAX CREDIT ELIGIBLE***
   Average installation costs have a broad variance and can be explored in greater detail should this activity be chosen. Currently, the range is $1,500.00-$20,000.00 (Forbes)

8. **Explore Industrial Park HVAC Retrofits (Plans):** Explore installation of more efficient, sustainable heating and cooling appliances and systems throughout industrial park warehouses. Some possible solutions are heat pumps, geothermal and hydronic radiant heating as well as using solar power to power HVAC systems.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning
   Timeframe: Long Term
   Funding: $$$$ IRA: Energy Efficiency Formula Grants, Retrofits and Energy Efficiency Program, Green and Resilient Retrofit Program; ***TAX CREDIT ELIGIBLE***
   Average installation costs have a broad variance and can be explored in greater detail should this activity be chosen. Currently, the range is $1,500.00 - $20,000.00 (Forbes)

9. **Explore Industrial Park Roof Top Solar Program (Plans):** Install rooftop solar arrays on industrial park warehouses that do not have solar panels.
   Operational Resources
   Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning
   Timeframe: Long Term
   Funding: $$$$ IRA: Energy Efficiency Formula Grants; ***TAX CREDIT ELIGIBLE***
   Average rooftop solar panel system cost in PA: $2.98/W; 5Kw System: $14,921.00 before incentives (Energy Sage)

10. **Increase EV Charging Infrastructure (Plans):** Increase EV charging stations in regards to township, grid resilience and coverage. Identify areas of need and fortify regular maintenance strategies.
    Operational Resources
    Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning, Public Works
    Timeframe: Medium Term
    Funding: $$$ IRA: National EV Infrastructure Program, Charging and Fueling Grant; ***TAX CREDIT ELIGIBLE***
    Average cost of a Tesla supercharger: $50,000.00 (Tesla.com)
    Average cost of 240v home EV charger: $250.00 - $800.00

11. **Expand Efficiency Standards for All New Construction (Policies):** New construction projects within Palmer Township should adhere to and align with the Township's sustainability pathways and Net-Zero Emissions goals.
    Operational Resources

Lead Implementers: Environmental Steering Committee, Board of Supervisors, Zoning, Planning
Timeframe: Medium Term
Funding: $$$ IRA: ***TAX CREDIT ELIGIBLE***

12. **Convert Government Fleet to Clean(er) Energy (Plans):** Incrementally replace retired government fleet vehicles with vehicles that utilize more sustainable fuel sources. There are possibilities for electric and Liquified Natural Gas in the short term and hydrogen in the long term.
    Operational Resources
    Lead Implementers: Environmental Steering Committee, Board of Supervisors
    Timeframe: Medium Term
    Funding: $$$ IRA: National EV Infrastructure Program, Charging and Fueling Grant, Clean Bus Program (EPA); ***TAX CREDIT ELIGIBLE***
    Average cost of a Tesla supercharger: $50,000.00 (Tesla.com)

13. **Evaluate Community Food "Waste" and Food Subsidization Programs (Programs):** Re-evaluate efficiency, distribution range and usage possibilities for edible food "waste" that will go unused by grocery stores and markets but remains viable. Additionally, ensure food subsidies and nutrition outreach programs are acting in concert with Net-Zero targets. Enact township led compost program.
    Operational Resources
    Lead Implementers: Environmental Steering Committee, Board of Supervisors
    Timeframe: Short Term
    Funding: $$

14. **Make Sustainability Project Data and Progress Publicly Available (Policies):** Ensure government transparency, thorough reporting and community involvement regarding sustainability projects and the evolution of municipal Net-Zero targets by making project data and updates available to the public via social media and a website linked with Palmer Township's primary web page.
    Operational Resources
    Lead Implementers: Environmental Steering Committee
    Timeframe: Short Term
    Funding: $

15. **Develop Additional Community Garden Projects with Paza Tree of Life (Plans):** Continue to work in concert with Paza Tree of Life to further community garden projects

and additional green spaces celebrating and informing residents and visitors of the contributions of indigenous culture.

Operational Resources

Lead Implementers: Environmental Steering Committee, Board of Supervisors, Planning, Parks and Recreation, Shade Tree Commission

Timeframe: Short Term

Funding: $$

16. **Integrate Social Justice Best Practices in Policies, Plans and Programs (Policies):**
Integrate climate and social justice best practices as well as social equity considerations in the framework of future sustainability projects. These practices can consider, but are not limited to, relocation of residents, rents and home prices, insurance rates, access to green spaces, food security and access. Additionally, residents and businesses should have access and knowledge of rebates and tax credits related to the aforementioned sustainability measures.

Operational Resources

Lead Implementers: Environmental Steering Committee, Board of Supervisors

Timeframe: Short Term

Funding: $ IRA: Environmental and Climate Justice Community Change Guests

The activities referenced above are aligned in no particular order and implementation should be treated as flexible based on access to funding, shifting priorities, overall viability and residential, commercial and industrial approval and cooperation. This format allows for deletion of no longer viable plans, policies and programs as well as the addition of new, more accessible plans, policies and programs. These activities should be treated as scaffolding that will morph and evolve over time. As activities are planned and realized, more in depth information can be explored to pinpoint optimal efficiency and success of each activity. There are additional incentive programs and grants for employee training in the public and private sectors provided by the IRA. Palmer Township can utilize these grants and programs to train and maintain a workforce experienced in sustainability practices. Local businesses can also utilize these programs to train employees to increase energy efficiency and lower costs. Funding opportunities provided by the IRA are expanded upon in Appendix A.

Figure 1-"Paza Tree of Life Unity Garden Dedication"

FUNDING

Funding Models

MCAP activities will be funded through a combination of funding models. Available Township resources include both the operating and capital budgets. Other funding from partnerships and grant opportunities may also exist. Lastly, the IRA provides numerous opportunities for funding associated with the activities covered previously. IRA funding is extrapolated on in Appendix A.

Grants and Governmental Incentives

Grants and incentives will be explored for a number of MCAP activities. Recent federal legislation such as the Infrastructure Investment and Jobs Act (2021) (IIJA) and the Inflation Reduction Act (2022) (IRA) have provided new and expanding opportunities for climate and resilience funding.

The IIJA in particular has opened and expanded grant programs that are available to communities directly from the federal government and through state administered programs that pass- through federal funds to grant recipients, while the IRA has made certain tax incentives available to municipal entities. In addition to state and federal grants and incentives, utility rebates or other incentives may be available to fund some activities.

Public Private Partnerships

Another funding model which may be available to the Township for MCAP activities is a Public Private Partnership. Through these partnerships, which can take many different forms, a contractual agreement is made between a public body and private entity in which the private entity finances, constructs, and often operates a capital asset that provides services to residents and is paid to do so by the public body. For example, the Township could explore a partnership with small business owners who finance the construction of EV charging stations or a solar topped parking lot in the township business district(s). Public Private Partnerships can also be helpful by funding urban forestry and community garden projects in exchange for advertising. Public Private Partnerships are complex arrangements with many legal and tax requirements that would need to be thoroughly explored.

NEXT STEPS

1. Add relevant or subtract irrelevant activities from the Activity Summary to create an MCAP that suits Palmer Township as specifically as possible.
2. Ascertain an approximate timeframe to implementation for the remaining activities: short term (1-2 years), medium term (2-4 years) or long term (5+ years).
3. Perform additional in-depth cost-benefit analysis of the proposed activities using relevant cost and budget data for Palmer Township as well as specific local costs and stakeholder involvement (Sean Nichols can help with this step in fall of 2024).
4. Compose sub-committees comprised of activity specific operational resource representatives who will formulate climate action activity policy and budgets based on the current timeline.
5. Begin the implementation process of approved activities including but not limited to permitting, contractor bidding, community engagement and materials/equipment acquisition.
6. As the Township's climate adaptation and mitigation goals fluctuate, so to should the MCAP. New activities can be added when viable and timelines can be adjusted based on new availability of funding or other resources.

Figure 2: Old Orchard Park

Appendix A: Programs, Grants and Tax Credits under the Bipartisan Infrastructure Law

ENERGY EFFICIENCY FORMULA GRANTS

Energy Efficiency Revolving Loan Fund

- $3.3 million in new funding to capitalize or support a revolving loan fund for commercial (includes local government and nonprofits) and residential energy efficiency loans. Anticipated winter 2023/2024

Energy Efficiency and Conservation Block Grant Program

- $3.0 million to support small local governments and nonprofit programs with grants/rebates/financing for energy efficiency, renewable energy and zero-emission transportation. Anticipated winter 2023/2024

MUNICIPAL OPPORTUNITIES FOR RETROFITS AND ENERGY EFFICIENCY (MORE)

- Total Program Funding: $6.3 million
- Period of funding: Available until expended
- Eligible Recipients: Municipal governments that did not receive direct funding
- Project Examples: On-site solar when paired w/ energy efficiency measures

GRANTS FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY IMPROVEMENTS AT PUBLIC SCHOOL FACILITIES

- Total Program Funding: $500 million
- Period of funding: Available until expended
- Eligible Recipients: Educational Institutions, Private Entities, Nonprofits, Community-based Organizations
- Project Examples: On-site solar and storage

NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE

- Provides PA $171.5 million over next 5 years for electric vehicle (EV) infrastructure
- Build out Alternative Fuel Corridors
- Round 1 Conditional Awards Announced – August 14, 2023
- 56 projects within 37 counties totaling $34.8 million

CHARGING AND FUELING GRANT

Charging and Fueling Infrastructure (CFI) Discretionary Grant Program

- Provides $2.5 billion over 5 years for alternative fueling projects

- $700 million available in first round of funding (FY 22' and 23') – Closed in June 2023
- Awardees must provide 20% of total project cost

Funding is split between two categories

- Community Charging and Fueling Grants (Community Program)
- Alternative Fuel Corridor Grants (Corridor Program)

Project Merit Criteria (Applicable to both categories above)

- Safety
- Climate Change, Resiliency, and Sustainability
- Equity, Community Engagement, and Justice40
- Workforce development, job quality, and wealth creation
- CFI Program Vision

CLEAN BUS PROGRAM-EPA

$5 billion over 5 years (FY 2022-2026)

- $2.5 billion for "zero-emission school buses"
- $2.5 billion for "clean school buses" (i.e., low-emission)

Eligible applicants

- State or local governmental entities that are responsible for providing school bus service
- Eligible contractors
- Nonprofit school transportation associations

2023 Rebate currently open for applications

- Due January 31, 2024
- Review guidelines for eligibility

More information available at https://www.epa.gov/cleanschoolbus

GREEN AND RESILIENT RETROFIT PROGRAM

- Total Program Funding: $837.5 million
- Period of Funding Availability: Through September 30, 2028
- Eligible Recipients: Private Entities, Nonprofits, Community-based Organizations
- Project Examples: Solar and storage on HUD-assisted multifamily housing

ENVIRONMENTAL AND CLIMATE JUSTICE COMMUNITY CHANGE GUESTS

- Total Program Funding: $2 billion
- Period of Funding Availability: Rolling through November 21, 2024

- Eligible Recipients: Partnership between two Community-based nonprofit organizations; Partnership between Community-based nonprofit organizations & local government or institution of higher education
- Project Examples: Microgrid with solar & storage for community resilience hub

EPA

GREENHOUSE GAS REDUCTION FUND

	National Clean Investment Fund	Clean Communities Investment Accelerator	Solar for All
Competition description	**Fund 2-3 national nonprofits to partner with private capital providers** to deliver financing at scale catalyzing tens of thousands of clean technology projects	**Fund hub nonprofits to rapidly build clean financing capacity of networks of community lenders** to finance pollution-reducing projects in low-income & disadvantaged communities	**Support states, territories, Tribal & municipal governments, & nonprofits** to expand access to solar for low-income & disadvantaged communities by priming markets for investment
Number and type of grantees	**2-3** national nonprofits	**2-7** hub nonprofits	**Up to 60** states, Tribal & municipal governments, & eligible non-profit entities
Funding available	**Nearly $14B**	**$6B**	**$7B**
Expected impacts	**Historic public sector investment with the scale to attract private capital leverage in clean projects,** supporting the 2030, 2035, & 2050 climate goals of the United States and catalyzing tens of thousands of clean technology projects	**Robust pipeline of thousands of community-led clean projects with meaningful benefits**, generated by hundreds of community lenders capitalized by GGRF to start or expand clean lending in underserved communities	**Energy bill savings and energy resiliency for millions of underserved American households** via states, Tribal & municipal governments, & other recipients creating new or expanding existing low-income solar programs across the country

(Tax Credits on next page)

TAX CREDITS!!!!
UNCAPPED!!!!

Bonus Credits
RA = Registered Apprenticeship
PW = Prevailing Wage
DC = Domestic Content
LI = Low Income or Tribal Communities
EC = Energy Communities

Tax Credits: Electricity

Credit	Eligible Projects	Eligible Recipients	Period of Availability	Base Credit Amount	Bonus Credits	Direct Pay
Production Tax Credit for Electricity from Renewables	Production of electricity from renewable sources	Facilities generating electricity from wind, biomass, geothermal, solar, small irrigation, landfill and trash, hydropower, and marine and hydrokinetic renewable energy	Projects beginning before 1/1/25	0.3 cents/kW*	RA, PW, DC, EC	Yes
Clean Electricity Production Tax Credit**	Production of clean electricity	Facilities generating electricity with no greenhouse gas emission	12/31/32	0.3 cents/kW*	RA, PW, DC, EC	Yes
Investment Tax Credit for Energy Property	Infrastructure investments in renewable projects	Fuel cell, solar, geothermal, small wind, energy storage, biogas, microgrid controllers, and combined heat and power properties	Projects beginning before 1/1/25	6% of qualified investment	RA, PW, DC, LI, EC	Yes
Clean Electricity Investment Tax Credit**	Infrastructure investments in facilities that generate clean electricity	Facilities generating electricity with no greenhouse gas emission and qualified energy storage tech	12/31/32	6% of qualified investment	PW, LI, EC	Yes
45U: Zero-Emission Nuclear Power Production Credit	Electricity from qualified nuclear power facilities and sold after 2023	Existing nuclear power plants at time of enactment	12/31/23-12/31/32	0.3 cents/kWh, inflation adjusted after 2024	PW	Yes

* Base credit will be inflation adjusted.
** Technology-neutral tax credit. Replaces the preceding tax credit listed for all property placed in service in 2025 and later. Additional tax credits available for facilities related to accelerated depreciation under item 168(e)(3)(B).

INVESTMENT TAX CREDIT & PRODUCTION TAX CREDITS

Eligible for ITC or PTC	Eligible for ITC	Eligible for PTC
multiple solar and wind technologies, municipal solid waste, geothermal (electric), and tidal	energy storage technologies, microgrid controllers, fuel cells, geothermal (heat pump and direct use), combined heat & power, microturbines, and interconnection costs	biomass, landfill gas, hydroelectric, marine and hydrokinetic

Category	Amount* for Projects less than $1MW_{AC}$ (Cumulative)	Amount* for Projects greater than or equal to $1MW_{AC}$ (Cumulative)
Base Tax Credit	ITC: 30% PTC:2.75¢/kWh	ITC: 6% PTC: 0.5¢/kWh
Wage & Apprenticeship Requirements (Requires a percentage of total labor hours performed by qualified apprentices)	ITC: N/A PTC: N/A	ITC: +24% PTC:+2.25¢/kWh

ELECTIVE PAY

Key Provision: Direct Pay

Direct pay (also called "elective pay") allows tax-exempt entities — **local governments**, **state governments**, **rural electric cooperatives**, and **nonprofits** — to receive the full value of 12 IRA tax credits. Funds are available on a non-competitive basis and can be accessed by filing tax returns with the IRS.

How to use direct pay:

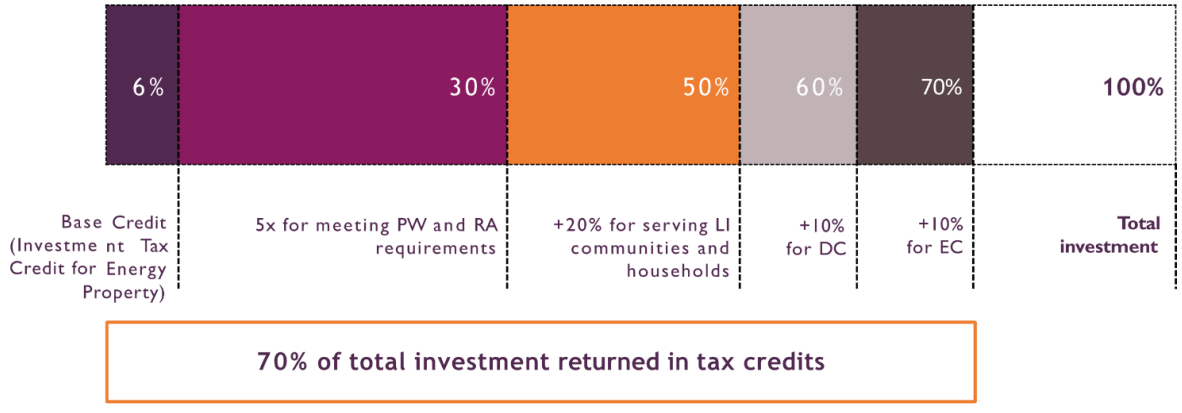
STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Identify a project that qualifies for direct pay	**Complete the project** and put it into service	**Determine what tax year to use** and when the tax return is due	**Register with the IRS** before the tax return is due and filed	**File the tax return** using the registration number by due date and **receive $$**
For example: A nonprofit wants to build a $1 million rooftop solar & storage system	The nonprofit buys and installs the equipment, which comes online in 2024	The nonprofit puts its purchase on its 2024 return, due on April 15, 2025	Before filing the return, the nonprofit registers its project with the IRS	The nonprofit files its return by April 15, 2025 and receives a check for $300-$700,000

TAX CREDITS ARE STACKABLE AND TRANSFERABLE

Bonus Credits
RA = Registered Apprenticeship
PW = Prevailing Wage
DC = Domestic Content
LI = Low Income or Tribal Communities
EC = Energy Communities

Key Provision: Stackability

The IRA's bonus credits are **stackable** for certain base credits, meaning that they can be combined with one another. This allows projects to massively amplify the amount of money they receive. At the high end, some small-scale solar and wind projects claiming the IRA's Investment Tax Credit for Energy Property could qualify for all five bonus credits and receive 70% of the total investment back in tax credits.*



*Eligibility depends on the project type and specifics. Most of the IRA's base credits only are not eligible for multiple bonus credits.

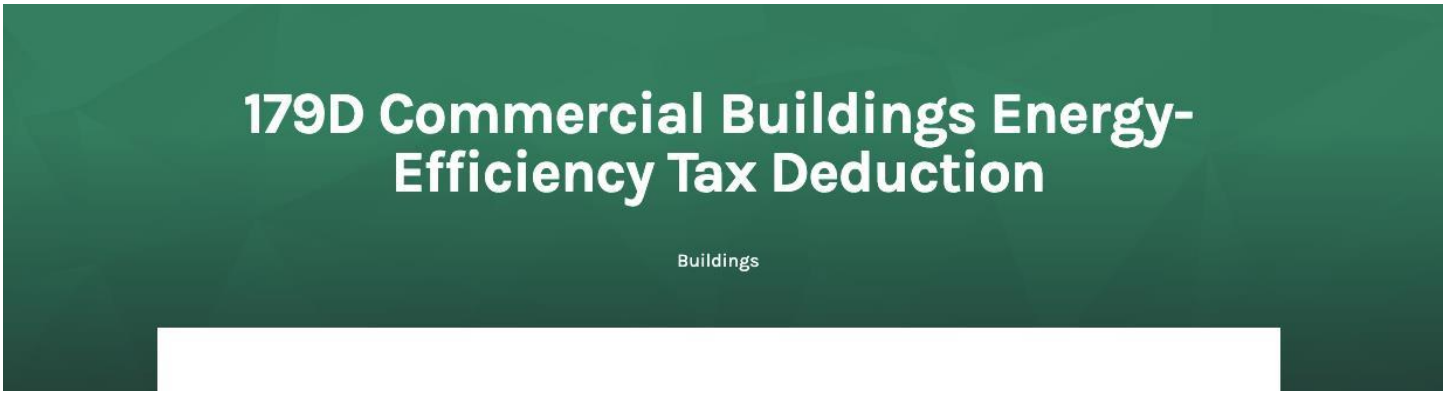
13

Key Provision: Bonus Credits

Bonus credits can be applied to some of the IRA's base tax credits for clean energy projects that meet goals related to workforce, labor, priority communities, and domestic industries. The appendix lists which bonus credits can be applied to each base credit.

Bonus Credit	Eligible Projects	Maximum Bonus Amount
Registered Apprenticeship	Projects that **employ apprentices from registered apprenticeship programs** for a certain number of hours	Up to **5 times** base credit*
Prevailing Wage	Projects that **pay laborers and mechanics employed in construction, alteration, or repair at least the prevailing wage rate** in their area	Up to **5 times** base credit*
Domestic Content	Facilities **built using required amounts of domestically produced steel, iron, and manufactured products**	**10 percent** or **10 percentage points**, depending on base credit**
Low Income or Tribal Communities	Facilities in **low-income communities and tribal communities**, including facilities that are **part of affordable housing developments or benefit low-income households**	**10 percentage points** or **20 percentage points**** (if part of LI residential buildings or providing service to LI households)
Energy Communities	Projects located in communities **historically dependent on fossil energy jobs and tax revenues**, including areas with closed coal mines or coal-fired power plants, and on **brownfields**	**10 percent** or **10 percentage points**, depending on base credit**

*Most (but not all) tax credits eligible for RA and PW bonus credits must meet both bonus credits' requirements at the same time, resulting in a total of 5 times the base credit for both bonuses combined.
**There is a difference between percent and percentage point increases; a 10 percentage point increase is worth more than a 10% increase.



Energy Efficient Commercial Buildings Tax Deduction

- Authorized by the Inflation Reduction Act
- If the system or building is installed on federal, state, or local government property, the 179D tax deduction may be taken by the person primarily responsible for the system's design.
- An increased deduction may be available for increased energy savings or meeting prevailing wage and apprenticeship requirements.
- Qualified investments include the interior lighting systems, the heating, cooling, ventilation, and hot water systems, or the building envelope and must reduce energy costs by 25% or more

Appendix B: Palmer Township 2022 GHG Inventory Summary