Cherry Hill Township Community Energy Plan



Submitted To:

Cherry Hill Township 820 Mercer Street Cherry Hill, NJ 08002





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I. Introduction

Cherry Hill Township is committed to addressing climate change and reducing greenhouse gas emissions and has long been a leader in municipal sustainability in New Jersey. As part of the Sustainable Jersey community since 2009, Cherry Hill has maintained Silver status since 2010. Cherry Hill was among the first towns in the state to adopt its own municipal sustainability plan, The Roadmap to Our Future, in 2016. This roadmap is a blueprint for a sustainable future and is essential to maintaining the vitality of the Cherry Hill community for future generations.

Cherry Hill's Green Team, formed in 2008, serves as a resource, catalyst, and advocate for sustainability practices throughout the Cherry Hill community. Starting in July 2022, the Green Team began their review of the Sustainable Jersey <u>Guide for Sustainable Energy Communities</u> and the <u>Community Energy Plan Workplan Template</u> and met with municipal staff to determine how to prioritize and implement the high-impact initiatives. Relevant community data was gathered from the <u>Sustainable Jersey Data Center</u>.

The initiatives being pursued by Cherry Hill are organized to correspond with six of the seven strategies in the <u>New Jersey Energy Master Plan (EMP)</u>. For each strategy recommended initiatives appear roughly in order of municipal roles, starting with regulation and policy, followed by public services, then municipal operations strategies, then community-facing initiatives. For example, the State's EMP section "Reduce Energy Consumption and Emissions from the Transportation Sector." That strategy's primary goals are:

- 1.1 Decarbonize the transportation.
- 1.2 Improve connections between people, jobs, and services.
- 1.3 Reduce port and airport emissions.

Cherry Hill has adopted the following Community Energy Plan initiatives that target the primary goal of section 1.1 of the State's Energy Master Plan:

- 1.1 Adopt Supportive Zoning and Regulations for EV Infrastructure.
- 1.2 Train First Responders on EVs and EVSE
- 1.3 Train Non-Emergent Staff on EVs and EVSE
- 1.4 Purchase Alternative Fuel Vehicles
- 1.5 Improve Municipal Fleet Efficiency

This Community Energy Plan details the specific strategies Cherry Hill will pursue in the coming years to reduce greenhouse gas emissions from the local energy system. The Plan covers municipal operations such as the municipal vehicle fleet and buildings, as well as public policies and programs designed to support the community in reducing emissions.

Cherry Hill's Community Energy Plan establishes how the municipality will promote the transition to sustainable energy over the next several years. Initiatives were selected based on demonstrated effectiveness, unique local opportunities, and co-benefits for the community, such as improved local air quality, energy savings for residents, and workforce development. The Plan document is fluid as actions may change as other opportunity become more attainable due to changing market conditions and state incentives. Having a Community Energy Plan is a

prerequisite for many funding opportunities and therefore will open the door for Cherry Hill Township to tap additional resources to assist in its reduction goals.

Co-benefits of Sustainable Energy

The sustainable energy transition offers an opportunity to realize various cobenefits in our community and beyond. Besides reducing GHG emissions, implementing this plan will improve:

- Public health
 - Lower concentrations of groundlevel outdoor air pollutants
 - Removal of indoor air pollution sources
- Social equity
 - Better affordable transportation
 - More affordable renewable energy
- Resiliency
 - More dependable electric grid
 - Decreased reliance on imported

Climate change is one of the greatest threats to our future prosperity in Cherry Hill, and globally. New Jersey is both a significant source of greenhouse gas (GHG) emissions and a state particularly vulnerable to climate change. Increasing heat waves, intense storms, and sealevel rise caused by climate change will dramatically alter our coastal state for many years to come (NJDEP, Scientific Report on *Climate Change*). According to the New Jersey Department of Environmental Protection's NJ Greenhouse Gas Emissions Inventory Report, New Jersey adds almost 100 million metric tons of CO2e to the atmosphere annually. New Jersey can mitigate the local and global impacts of climate change with a rapid transition from the current GHG-intensive energy system to one that optimizes energy use and produces energy with minimal GHG emissions.

Recognizing New Jersey's role in climate change mitigation, the State of New Jersey has established a goal of 100% clean energy in the

state by 2050. <u>*The New Jersey Energy Master Plan: Pathway to 2050*</u> outlines the state's strategies for achieving that goal while also addressing issues of social and economic inequity.

II. Community Overview

Cherry Hill Township is a 24.2 square mile suburban community of 26,785 households located in Camden County. According to the 2020 US Census American Community Survey, the racial composition of Cherry Hill's 74,553 residents is 66% White, 7% Black, 14% Asian or Pacific Islander, and 10% multiracial or "other," and 9% of the population is Hispanic/Latinx. Cherry Hill's median household income is \$123,640 with 4.1% of households below the U.S. poverty threshold.

Electricity and Natural Gas Usage Data

Most electricity and natural gas use is currently associated with buildings. Utility companies generally organize electricity and natural gas use into four sectors – residential, commercial, industrial, and street lighting. The commercial sector includes nonprofits and government entities such as schools and municipal buildings, as well as businesses.

As illustrated in the charts on the next page, Cherry Hill's commercial sector accounts for the majority of electricity use and the residential sector accounts for the majority of natural gas use. In other words, both commercial buildings and residential buildings are the greatest opportunity for energy use reductions in Cherry Hill.



Chart 1. Amount of Electricity Purchased by Sector (kWh)

Source: Sustainable Jersey. Aggregated Community-Scale Utility Energy Data Note: electricity values represent purchased electricity and do not include customer-generated electricity, such as from

Note: electricity values represent purchased electricity and do not include customer-generated electricity, such as from rooftop solar.

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Chart 2. Amount of Natural Gas Purchased by Sector (Therms) Source: Sustainable Jersey. Aggregated Community-Scale Utility Energy Data

Community GHG Emissions from Energy Use

In 2020, the total community-wide greenhouse gas emissions from electricity, natural gas/heating fuel, and transportation energy use in Cherry Hill Township was **700,920 metric tons CO_2e.** The largest share of community emissions came from On-Road Vehicles, followed by Residential Natural Gas Use.



Chart 3. Overall GHG Emissions of Cherry Hill Township by Subsector Source: Sustainable Jersey. Community-Scale Greenhouse Gas (GHG) Emissions Data.

III. Work Plan

The Cherry Hill Community Energy Plan is primarily an implementation and action plan. This section details all the initiatives selected as township priorities for the next six years (2024-2030). These initiatives will generate significant greenhouse gas emissions reductions for both municipal operations and the wider community while providing numerous local co-benefits, such as improved air quality and creation of local jobs.

The initiatives are organized by the Strategies of the <u>New Jersey Energy Master Plan: Pathway to</u> <u>2050</u>. Each Strategy section includes one or more initiatives. Implementation details are provided for each initiative, including the initiative lead person/entity, the time frame for implementation, and any significant obstacles to successful implementation.

Strategy 1: Reduce Energy Consumption and Emissions from the Transportation Sector 1.1 Adopt Supportive Zoning and Regulations for EV Infrastructure

- 1.2 Train First Responders on EVs and EVSE
- 1.3 Train Non-Emergent Staff on EVs and EVSE
- 1.4 Purchase Alternative Fuel Vehicles
- 1.5 Improve Municipal Fleet Efficiency

Strategy 2: Accelerate Deployment of Renewable Energy and Distributed Energy Resources

- 2.1 Adopt Supportive Zoning and Permitting for Solar
- 2.2 Post Solar Permitting Checklist
- 2.4 Train First Responders on Solar
- 2.5 Train Non-Emergency Staff on Solar
- 2.6 Install On-Site Municipal Renewable Generation
- 2.7 Buy Renewable Electricity for Municipal Facilities

Strategy 3: Maximize Energy Efficiency and Conservation and Reduce Peak Demand

- 3.1 Upgrade Energy Efficiency for Municipal Facilities
- 3.2 Residential Energy Efficiency Outreach Campaign
- 3.3 Commercial Energy Efficiency Outreach Campaign

Strategy 4: Reduce Energy Consumption and Emissions from the Building Sector 4.2 Encourage Benchmarking & Commissioning for Existing Buildings

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Strategy 6: Support Community Energy Planning and Action with an Emphasis on Encouraging and Supporting Participation by Low- and Moderate-Income and Environmental Justice Communities

6.3 Support Shared Mobility Programs

Strategy 1: Reduce Energy Consumption and Emissions from the Transportation Sector

Transportation accounts for over 40% of New Jersey's greenhouse gas emissions, primarily due to on-road gasoline consumption (NJDEP, "Transportation & Emissions"). Fossil fuel-powered transportation also produces local air pollution that significantly harms the health and quality of life of residents. Cherry Hill Township can electrify municipal fleet vehicles and promote transportation electrification in the community to lessen the negative impact of our transportation system on our community and the world.



Initiative 1.1: Adopt Supportive Zoning and Regulations for EV Infrastructure

Description: Pass NJDCA's Model Statewide Municipal EV Ordinance specifying electric vehicle charging stations as a permitted accessory use, establishing the permitting process for charging stations, and requiring Make-Ready and EVSE (Electric Vehicle Supply Equipment) parking in new multifamily developments and parking lots. Modify the model ordinance standards for safety, signage, etc. as needed.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Community Development	September 2022	High	Complete	N/A

Departments involved:

Code Enforcement

Municipal attorney

Obstacles/Barriers:

No significant barriers were identified.

Community notes:

The Model Statewide Municipal EV Ordinance went into effect in September 2021 as specified by state law. Cherry Hill passed Ordinance 2022-4 adopting the policies in the Model Statewide Municipal EV Ordinance into Cherry Hill's Land Use municipal code. Code Enforcement currently requires applications for new developments to comply with the Model Ordinance

As of 2019, there were 531 passenger electric vehicles in Cherry Hill; the number of EVs in town has since then increased significantly (Sustainable Jersey, Electric Vehicle Ownership Data). As EV adoption accelerates, demand for charging infrastructure will also accelerate.



Vehicles and Electric Vehicles in Cherry Hill						
Year Updated Estimated Total Passenger Vehicles		# of EVs	% Electric			
2015	46,741	59	.13%			
2019	49,528	531	1.07%			

Table 1. Vehicles and Electric Vehicles inCherry Hill

Source: Sustainable Jersey. Community Profile Data by Municipality.

Cherry Hill has 58 public charging station ports (Level 2 and Level 3) within 15 km.

Cherry Hill is working with various private vendors to connect available properties to electric charging infrastructure companies. Cherry Hill is helping to form public private partnerships to bring vehicle charging infrastructure to all locations throughout the Township. In addition, given the township's

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location close to multiple highways, Cherry Hill is encouraging its businesses, especially those near intersections, to use electric vehicle charging as a marketing tool to help attract shoppers.

Map 1. Public EV Charging Stations in Cherry Hill Area

Source: NJDEP Public EV Charging Locator Map

Measures of Success:

- "Reasonable Standards" language modified and finalized.
- Ordinance passed.
- Make-Ready and EV charging parking minimums posted to municipal website.

- Continue to promote the instillation of EV infrastructure in new construction.
- Publish additional EV resources on the Township website.

Initiative 1.2: Train First Responders on EVs and EVSE

Description: Require training for local first responders on electric vehicles and associated infrastructure, furthering public confidence and maintaining emergency preparedness.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	June 2023	High	12 Months	Operation Budget

Departments involved:

Operations Fire Department Police Department Construction

Obstacles/Barriers:

Scheduling/Coordinating first responders is challenging given that they do not have set schedules.

Community notes:

50% of first responders have undergone training specific to electric vehicles and EV charging equipment. As of 2019, there were 531 passenger electric vehicles in Cherry Hill; the number of EVs in town has likely increased since then (Sustainable Jersey, Electric Vehicle Ownership Data). Cherry Hill has 58 public charging station ports (Level 2 and Level 3) within 15 km.

Measures of Success:

The goal of this initiative is that all first responders will be regularly trained in how to deal with emergencies involving electric vehicles and EV infrastructure.

- 1. Police department incorporates National Fire Protection Association online electric vehicle training for emergency responders. (Additional training sources include the Electric Vehicle Infrastructure Training Program and Department of Energy Clean Cities program).
- 2. The Police Chief will build support for EV safety training by creating awareness that EVs have unique first-response protocols.
- 3. Police Chief distributes training to Police Department, Fire Department, and EMS, and works with department heads to determine deadline for all staff to complete it. Messaging emphasizes the unique danger presented by EV and EVSE emergencies.

Initiative 1.3: Train Non-Emergency Staff on EVs and EVSE

Description: Initiate training on electric vehicles and associated infrastructure for municipal code officials, etc.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	June 2023	High	12 Months	Operating Budget

Departments involved:

OperationsPoliFire DepartmentCorr

Police Department Construction

Obstacles/Barriers:

Scheduling/Coordinating inspectors is challenging.

Community notes:

As of 2019, there were 531 passenger electric vehicles in Cherry Hill; the number of EVs in town has likely increased since then (Sustainable Jersey, Electric Vehicle Ownership Data). Cherry Hill has 58 public charging station ports (Level 2 and Level 3) within 15 km.

Measures of Success:

- The goal of this initiative is that Inspectors and zoning-related staff can be trained on EV's and EV infrastructure to help them enforce regulations and promote electric vehicles in their work.
- Establish policy for ongoing training.

- 1. Identify a list of all non-emergency personnel/positions to participate in program.
- 2. Utilize first-responder training for non-emergency personnel.
- 3. Work with the Uniform Construction Code (UCC) to develop appropriate training.

Initiative 1.4: Purchase Alternative Fuel Vehicles

Description: Strategically replace gasoline/diesel municipal vehicles with EVs or other alternative fuel vehicles.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	Jan 2024	Medium	2-5 years	NJBPU Clean Fleets Electric
				Vehicle Incentive Program;
				NJEDA Zero-Emission
				Incentive Program; Capital
				Budget; Operating Budget

Departments involved:

All departments operating fleet vehicles	Purchasing Department
Police	Public Works
Operations	Code Enforcement

Obstacles/Barriers:

- Some vehicle users may be concerned that EVs don't have enough range for their needs.
- Many of the vehicles travel less than 10,000 miles per year with some traveling under 5,000 per year, making the cost savings created with the elimination of gas less impactful.
- Availability of vehicles.
- Not enough capacity on EV vehicles to meet functions, i.e., plow package, police equipment.
- Not enough infrastructure for charging.

Community notes:

Cherry Hill's municipal fleet currently consists of 20 hybrid vehicles (15 Police and 5 other), 187 gas powered vehicles (97 Police and 91 other), 34 diesel trucks and 4 motorcycles.

Cherry Hill is working on an electric vehicle conversion plan and will be making its first purchases beginning in fiscal year 2024. The vehicles purchased were as recommended by Cherry Hill's Sustainability consultant and the state vendor list and programs.

Beginning this year Cherry Hill updated its fleet inventory and worked with its public works and Police Department as well as others to help determine charging infrastructure needs and availability and pricing of electric cars.

Cherry Hill has been working with PSE&G on the placement of multiple charging stations for Township vehicle use including at the public works facility and Police Department. Final designs and purchase orders are forthcoming for the first wave of charging infrastructure. In addition, the Township has engaged in determining which vehicles on the state purchasing list meet its goals and will be budgeted for purchase beginning in fiscal year 2024.

Measures of Success:

- Strategic plan prioritizing vehicles in fleet to replace with AFVs.
- Fleet charging infrastructure installed for municipal vehicles.
- First battery electric vehicle added to municipal fleet.
- Increase percentage of AFVs in municipal fleet.

- 1. Develop specifications for EV replacement vehicles based on use type.
- 2. Implement pilot program to determine proper integration of EVs in different fleet scenarios.
- 3. Develop procurement plan for EV integration.
- 4. Identify specific vehicles for replacement.

Initiative 1.5: Improve Municipal Fleet Efficiency

Description: Coordinate the strategic replacement (or retirement) of vehicles, scheduling of preventative maintenance, and improvement of driver efficiency to reduce the GHG footprint of all municipal fleets – public works, police, fire, etc. Requires tracking of fleet data such as age of vehicles, duty cycle, and use patterns.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	Jan 2024	High	Ongoing	NJBPU Clean Fleets Electric Vehicle Incentive Program;
				NJEDA Zero-Emission
				Incentive Program; Capital
				Budget; Operating Budget

Departments involved:

All departments operating fleet vehicles

Finance Department

Obstacles/Barriers:

- Some vehicle users may be concerned that EVs don't have enough range for their needs.
- Many of the vehicles travel less than 10,000 miles per year with some traveling under 5,000 per year, making the cost savings created with the elimination of gas less impactful.

Community notes:

Fleet Management Software

Cherry Hill utilizes a fleet management system, Collective Fleet, and has extensive maintenance practices that establish a process for annual fleet inventory, including tracking system for fuel usage and mileage of every vehicle in the municipal fleet. This enables the Auto division to keep an accurate accounting of what units are due for PM work which has led to more preventive maintenance than reactive (unscheduled breakdown repairs) maintenance. The amount of reactive maintenance repairs and road calls has declined substantially over the last 3-4 years.

Pilot Programs

Sustainable Jersey - In 2019 Cherry Hill participated in a pilot program with Sustainable Jersey to conduct an EV Fleet analysis through vehicle telematics. As a result, Cherry Hill was provided a datadriven fleet electrification plans, which will help Cherry Hill put EVs into the best applications to optimize the economic and environmental savings while ensuring the needs of drivers are met. A sample of 18 vehicles were reviewed under the pilot and 11 of the 18 were recommended for EV replacement. Using this information, the township is looking to run a conversion pilot over the next 2 years. In addition to procuring fully electric vehicles, the township will lay the infrastructure for charging.

Cherry Hill Police Department - In 2019 the department conducted a Pilot program to replace their patrol vehicles with the new Ford Hybrid Police Interceptors. Due their long idle times, this use should realize the largest fuel saving and therefore resulting in the largest environmental impact. Based on the numbers, the township should see up to a 41% savings in fuel consumption. In 2019 the Department procured 8

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Hybrid Interceptors as part of the pilot. This represents half of the annual replacement vehicles purchased that year. Due to the Covid pandemic, Ford halted production which resulted in the delay of delivery. In February of 2021, the Township took delivery on the first 5 of new hybrids. With a successful pilot, the Township hopes to replace all the patrol cars with the Hybrids and potentially explore EVs soon.

Measures of Success:

- Annual fleet inventory process established.
- Annual driver training established.
- Work towards meeting the NJ State goal of reducing annual municipal fleet GHG emissions by 20% by 2027.

- 1. Develop a 5-year replacement plan for vehicles nearing its useful life.
- 2. Develop specifications for EV replacement vehicles based on use type.

Strategy 2: Accelerate Deployment of Renewable Energy and Distributed Energy Resources

Expanding renewable energy generation is necessary to eliminate greenhouse gas emissions from our energy system. New Jersey's most readily available renewable resource is sunlight, which more and more utility customers can now access thanks to declining prices and new systems like community solar. Cherry Hill can continue to refine local policies regarding solar and other renewable resources to promote local growth of renewable generation capacity.



Initiative 2.1 Adopt Supportive Zoning and Permitting for Solar

Description: Provide clear guidance/standards for solar developers and limit barriers to solar adoption such as lengthy permitting and multiple reviews.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Community Development	Jan 2024	High	Complete	N/A

Departments involved:

Code Enforcement Community Development Municipal attorney

Obstacles/Barriers:

- Hesitation regarding upfront costs
- Concern about aesthetics
- Concerns about monthly costs

Community notes:

Cherry Hill Township adopted Ordinance 2013-18 which amended the township's zoning regulations related to supportive zoning and permitting for solar on May 13, 2013. The amended regulations came into effect on June 2, 2013. Any development applications deemed complete on or after that date are subject to these updated regulations.

Commercial	Residential	Other	Total Size of Systems
50	1,227	14	23,220.84 kW

Table 2. Solar Installations by Customer Type 2020

Source: Sustainable Jersey

Measures of Success:

- Pass solar-friendly ordinance.
- Expedite/eliminate zoning permit.

- 1. Evaluate solar-friendly ordinance.
- 2. Consider fee incentive solar to include other offsets.
- 3. Provide solar energy systems information and resources on the municipal website.

Initiative 2.2 Post Solar Permitting Checklist

Description: Provide clear guidance/standards for solar developers with a permitting checklist that can be easily found on the municipality's website. Solicit feedback from users and revise checklist based on comments.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Community	February 2024	Medium	One Month	N/A
Development				

Departments involved:

Community Development

Code Enforcement

Obstacles/Barriers

Developing a list of all the solar vendors.

Community notes:

- Rooftop Solar Checklist
- Existing Tree Ordinance

Measures of Success:

- Permit requirement checklist online.
- Permit checklist revised based on user feedback, i.e., major developers.

- 1. Develop a list of solar vendors in surrounding area.
- 2. Publish checklist and permitting process on website.
- 3. Facilitate outreach to Solar Developers for feedback.

Initiative 2.4 Train First Responders on Solar

Description: To further public confidence and maintain emergency preparedness, require training on solar infrastructure for first responders

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	Sept 2024	High	Ongoing	N/A

Departments involved:

Operations Fire Department Police Department Construction

Obstacles/Barriers:

- Scheduling/Coordinating first responders is challenging given that they do not have set schedules.
- The Police Chief will build support for Solar safety training by creating awareness that Solar arrays have unique first-response protocols.

Community notes:

- 100% of first responders have undergone training specific to Solar Energy.
- As of 2020, Cherry Hill had 1,291 on-site solar systems: 50 commercial; 1,227 residential; and 14 other*.

Source: Sustainable New Jersey Solar Installation by Customer Type

*other includes: Farms, Government Facilities, Municipalities, Non-profits, Private Universities, Public Universities, K-12 Public Schools, and Other Schools.

Measures of Success:

- Training held for each relevant department.
- Establishing a policy for ongoing training.

Next steps:

Implement refresher training courses on a recurring basis for previously trained and new staff.

Initiative 2.5 Train Non-Emergency Staff on Solar

Description: To ensure municipal staff can efficiently and effectively inspect, review, permit, etc. solar installations in the community, require training on solar infrastructure for all relevant staff.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	Sept 2024	Medium	Ongoing	N/A

Departments involved:

Operations Construction Community Development

Zoning Public Works

Obstacles/Barriers:

- Determining what is the appropriate training course for non-emergency staff.
- Scheduling/Coordinating staff is challenging given that they do not have set schedules.

Community notes:

- Construction inspectors have undergone training specific to Solar Energy via the UCC.
- Cherry Hill has 1,291 on-site solar systems: 50 commercial; 1,227 residential; and 14 other.

Measures of Success:

- Training held for each relevant department.
- Establishing a policy for ongoing training.

- 1. Determine the appropriate training course for non-emergency staff.
- 2. Extend training to other non-emergency positions.
- 3. Implement refresher training courses on a recurring basis for previously trained and new staff.

Initiative 2.6 Install On-Site Municipal Renewable Generation

Description: Host a solar, wind, or geothermal project on municipal property to generate renewable energy for municipal facilities. Such projects can be leased from a developer or purchased and owned outright.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	March 2024	Medium	Ongoing	Federal and State
				Incentives, Capital
				Budget

Departments involved:

Operations Building Maintenance Community Development

Obstacles/Barriers:

Space and upfront costs

Community notes:

Since 2010, the Township has installed 2 separate solar arrays totaling 130 kWh. The 100 kWh system at the Public Works facility is subsidizing more than 60 percent of its energy consumption through the sun. The Township has been in the black from day one based on all the funding incentives received by State and Federal Agencies.

- In addition to all the financial benefits, the Township influences surrounding municipalities and residents to consider alternative sources of energy by educating them about energy alternatives.
- A kiosk located at the Municipal Building has become a learning center for sustainability. The display provides real-time information about the Township's solar panels and all the sustainable attributes associated with utilizing renewable energy.



Measures of Success:

- Increase onsite solar production.
- Explored all possible buy or lease opportunities for renewable installations on municipal property.
- Implement outreach illustrating the benefits of renewable energy to the community using the municipal project.

Next steps:

Develop solar feasibility studies for all municipal buildings for potential on-site solar.

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Initiative 2.7 Buy Renewable Energy for Municipal Facilities

Description: Buy renewable electricity for municipal facilities directly from a green energy supplier or participate in a buying pool that supplies electricity with high renewable content. The accompanying renewable energy certificates (RECs) should be certified as PJM Class I.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	June 2021	High	Ongoing	Operating Budget

Departments involved:

Operations

Finance

Obstacles/Barriers

- Premium cost for renewable portfolio
 - \circ Market variables add another element of risk related to cost.

Community notes:

- Since 2015, Cherry Hill Township has been procuring its electricity and natural gas through the New Jersey Sustainable Energy Joint Meeting (NJSEM) consortium. NJSEM has aggregated electricity and natural gas purchasing for 185 of its member municipalities and authorities throughout the State of New Jersey.
- In its latest electric bid (2023), a 29.5% renewable portfolio was achieved for all of its members in PSE&G service territory. Based on our current contract and when compared to PES&G strike price, the Township will realize an estimated savings of \$11,120.00.
- Current contract expires May 2025.

Measures of Success:

- Contract with third-party supplier or buying pool with a greater proportion of renewable content than current Renewable Portfolio Standard
- Increase renewable percentage beyond the State's targets.

Next Steps:

Analyze market conditions for opportunities for procurement and increased renewable percentages.

Strategy 3: Maximize Energy Efficiency and Conservation and Reduce Peak Demand

Energy efficiency and conservation are the most cost-effective methods of reducing greenhouse gas emissions from the energy system. Improving energy efficiency also generates local jobs, reduces local pollution, improves health and comfort, and adds resiliency to the energy system. Cherry Hill can utilize energy efficiency to lower costs in municipal operations and encourage the community to follow suit to realize these many benefits.





Initiative 3.1 Upgrade Energy Efficiency for Municipal Facilities

Description: Upgrade municipal facilities to be more energy efficient. New Jersey's Clean Energy Program and electric and natural gas utilities offer incentive programs that guide municipalities through the upgrade process, starting with free audits to establish the most effective measures to reduce energy use. Following implementation, showcase upgrades in energy efficiency outreach to local businesses.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	Jan 2015	High	Ongoing	NJCEP (NJ Clean Energy
				Program: SmartStart
				Existing Buildings (SSB);
				Customer Tailored Energy
				Efficiency Program
				(CTEEP); Direct Install
				(DI); Pay for Performance
				Existing Buildings (P4PEB))
				PSE&G and JCP&L utility
				incentive programs
				Energy Savings
				Improvement Program
				(ESIP)

Departments involved:

Operations Building Maintenance

Obstacles/Barriers:

Up-front costs/funding

Community notes:

Cherry Hill intends to achieve the Sustainable Jersey Gold Star in Energy, which requires reducing greenhouse gas emissions from municipal operations and facilities at least 3.6% per year for three consecutive years.

Since 2012, the Township has worked with the State and local utilities to upgrade facilities through the Direct Install Program. Currently the Township is working with PSE&G on implementing lighting and mechanical upgrades.

Property	Year of Last Upgrade	NJCEP Program	Invoiced Incentive
Town Hall	2009	Local Govt. Energy Audit	\$11,679
Public Works Bldg. 1, Perina Blvd.	2011	Local Govt. Energy Audit	\$8,150

Property	Year of Last Upgrade	NJCEP Program	Invoiced Incentive
1100 Kings Highway North	2011	Local Govt. Energy Audit	\$4,107
Municipal - Civilian 820 Mercer Street	2012	Direct Install	\$39,950
Municipal – Croft Farm and Wilbur Ave Building	2015	Direct Install	\$13,296
Municipal - Police 820 Mercer Street	2012	Direct Install	\$27,835
Cherry Hill DPW 1 Perina Blvd	2020	Direct Install	\$35,958
Municipal – Town Hall, DPW, Community Center, Croft, Barclay, Wilbur	2023-2024	PSEG – Energy Saver Program	\$429,112

Table 3. Energy Efficiency Incentives Utilized in Cherry Hill's Municipal Buildings Source: Sustainable Jersey. NJCEP Local Government Projects 2008-2021

Measures of Success:

- Apply for Local Government Energy Audit and/or Procure Engineered lead ASHRAE Level II Energy Audits in facilities not previously audited.
- Achieving Sustainable Jersey Energy Gold status.

- 1. Create building energy baselines.
- 2. Identify facilities for Energy Audits and various fundings/incentives.
- 3. Review Energy Audits to understand the types of energy efficiency measures to implement.
- 4. Review incentives available for the energy efficiency projects identified.
- 5. Investigate Continuous Commissioning/Energy Tracking System in Municipal Portfolio.
- 6. Benchmark Buildings in Energy Star Portfolio Manager.

Initiative 3.2 Residential Energy Efficiency Outreach Campaign

Description: Implement an outreach effort to help residents take advantage of energy efficiency incentive programs offered by New Jersey's electric and natural gas utilities, including Home Performance with ENERGY STAR and Comfort Partners.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Community	2023	Medium	Ongoing	N/A
Development				

Departments involved:

Community Development Construction

Mayor's Office

Obstacles/Barriers:

Lack of awareness around utility, state and federal rebates and incentives.

Community notes:

According to the US Census Bureau 2020, 79.9% of Cherry Hill residents own their home.

As shown in Chart 4 below, most Cherry Hill's residential properties are single unit homes, and 79% of households live in buildings with four or fewer units.



Chart 4. Housing Units by Structure Type Source: Sustainable Jersey

Chart 3 "Overall GHG Emissions of Cherry Hill by Subsector" on page 8 shows that the residential building sector is the second most significant source of emissions for Cherry Hill, behind only transportation related to on-road vehicles.

		Units in	Tatal	Comment	# of Duciesta
		with 4 units	Completed	Lifetime Rate	# of Projects Needed to get
Municipality	County	or less	Projects	%	to 5%
Cherry Hill	Camden	22,208	2,394*	10.78%	

Table 4: Lifetime Residential Efficiency Program Participation Rate for 2021.

Source: Sustainable Jersey

*This number includes projects from the Home Performance with ENERGY STAR, Comfort Partners, Weatherization Assistance Program, and PSEG Whole House programs (Sustainable Jersey, Lifetime Residential Energy Efficiency Program Participation Rate (2021)).

- Cherry Hill is working with PSE&G on the implementation of residential audits and energy efficiency upgrades. Working through various public events and communicating through a variety of not for profits and public officials Cherry Hill will continue to aggressively market the state's energy efficiency programs for residents.
 - Home Performance with ENERGY STAR (HPwES) is a comprehensive residential energy efficiency program offered by through PSE&G and JCP&L. The program offers participants a home energy audit and incentives for completing recommended energy efficiency upgrades. All residential utility customers residing in buildings with four or fewer units are eligible for HPwES.
- Working with PSE&G, Cherry Hill has had two successful community and business energy efficiency outreach efforts.
 - Staffing a table at Cherry Hill Community events which attract thousands of residents and businesses. The table allows individuals and businesses to learn how to take advantage of the various utility programs.
 - Partnering with Home Depot to inform contractors, businesses and residents about the various auditing and energy conservation programs that existed throughout the state. Residents throughout the Cherry Hill and Camden County area were able to receive first-hand information about programs and the utility and representatives continue to follow up today.



Measures of Success:

- Increase the number of outreach campaigns promoting the utilities' residential energy efficiency incentive programs.
- Increase participation in targeted programs.

Next steps:

1. Identifies residents who have already utilized residential energy efficiency programs to be advocates in outreach campaign.

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- 2. Identify venues to hold additional workshop and coordinates with utility reps and advocates to determine date/time of workshop.
- 3. Develop and distributes flyers and digital materials to promote residential incentive programs and advertise the workshop.
- 4. Market links to state and utility residential incentive programs on municipal website.

Initiative 3.3 Conduct Energy Efficiency Outreach to Large Energy Users

Description: Contact large energy users in the community to prompt interest in managing energy use, including participating in utility commercial energy efficiency incentive programs like Engineered Solutions and PJM's Demand Response program.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Community Development	August 2023	Medium	Ongoing	N/A

Departments involved:

Mayor's Office Community Development Code Enforcement

Obstacles/Barriers:

- Need for upfront capital.
- Lack of awareness around utility, state and federal rebates and incentives.

Community notes:

As of 2020, there are 1,158 commercial and industrial properties in Cherry Hill. These properties may be well suited for commercial renewable energy generation and energy efficiency programs such as NJCEP's Large Energy Users Program (LEUP) or Energy Management solutions programs offered by the utilities. There are also significant Federal incentives available.



Map 2. Commercial and Industrial Properties of Cherry Hill

As shown in Chart 3 on page 8, "Overall GHG Emissions of Cherry Hill by Subsector", the commercial building sector is the third most significant source of emissions for Cherry Hill, behind transportation related to on-road vehicles and the residential building sector.

Municipality	County	C&I Taxed Parcels	Total Completed Projects	Current Lifetime Rate %	# of Projects Needed to get to 5%
Cherry Hill	Camden	1,133	127	11.21	

 Table 5. Lifetime Commercial Energy Efficiency Program Participation Rate for 2021.

 Source: Sustainable Jersey

* Determined number of Direct Install (DI) projects based on NJCEP and PSEG data from program inception through 2021

- As previously stated, Cherry Hill has been working with PSE&G and has had two successful community and business energy efficiency outreach efforts.
 - PSE&G had a table at Cherry Hill Day which attracted thousands of residents and businesses. The table allowed individuals and businesses to take advantage of the various utility programs.
 - Cherry Hill also partnered with the Home Depot and PSE&G to inform contractors, businesses and residents about the various auditing and energy conservation programs that existed throughout the state. Residents throughout the Cherry Hill and Camden County area were able to receive first-hand information about programs and the utility and representatives continue to follow up today.

Measures of Success:

- Increase the number of participating commercial partners.
- Outreach team training with Sustainable Jersey.

- 1. Develop a case study highlighting business that has utilized commercial energy efficiency incentives/rebates.
- 2. Train municipal staff (Community Development Office and Construction Official) on programs and potential savings.
- 3. Coordinate with business groups on ways to connect with their membership.
- 4. Establishes commercial energy efficiency portal page on website.
- 5. Consider implementing benchmarking and commissioning policies, both for public and private buildings within the municipality's zoning ordinance and regulations
- 6. Workshop for large energy users.
- 7. Review New Jersey's recently passed C-Pace legislation as a mechanism to finance large-scale energy efficiency, renewable energy projects, water conservation and resiliency improvements, and stormwater management.

Strategy 4: Reduce Energy Consumption and Emissions from the Building Sector

According to New Jersey's Energy Master Plan, 62% of the state's total end-use energy consumption is associated with buildings, with space heating, water heating, appliances, and industrial uses accounting for 28% of New Jersey's greenhouse gas emissions. Decisions made during new construction and building retrofits have significant and long-lasting impacts on this energy use. Cherry Hill can reduce energy use and emissions from buildings by prioritizing green design in new construction and utilizing municipal buildings as models for the community.



Initiative 4.2 Encourage Benchmarking and Commissioning for Existing Buildings

Description: Educate local building managers about benchmarking and commissioning. Inform building managers of utility building management programs that include benchmarking and/or commissioning.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	December 2023	Medium	Ongoing	N/A

Departments involved:

Community Development Operations Mayor's Office

Obstacles/Barriers:

Costs and time to promote programs.

Community notes:

Commercial buildings over 25,000 square feet are required to benchmark their energy and water usage in Energy Star Portfolio Manager (ESPM) by October 1, 2023, using data from the 2022 calendar year. Building owners of covered buildings were notified by July 1, 2023 of the October 1, 2023 submission deadline. Note, there was a 90-day grace period to complete submissions (December 1, 2023).

New Jersey's benchmarking requirement does not authorize the assessment of fine for non-compliance but does make compliance a prerequisite for participation in any of the NJBPU's other programs, including utility energy efficiency programs.

Measures of Success:

Increase the number of businesses compliant with new NJ Benchmarking Legislation for buildings >25,000 s.f.

- 1. Benchmark Township buildings in Energy Star Portfolio Manager (ESPM)
- 2. Consider implementing benchmarking and commissioning policies, both for public and private buildings within the municipality's zoning ordinance and regulations.
- 3. Develop an outreach material to educate commercial buildings owners on value proposition of Benchmarking and Commissioning.
- 4. Look into establishing a benchmarking pledge for major building owner agreeing to have buildings benchmarked and commissioned.
- 5. Publish NJ Benchmarking Legislation information on Township website.

Strategy 6: Support Community Energy Planning and Action with an Emphasis on Encouraging and Supporting Participation by Low- and Moderate-Income and Environmental Justice Communities

New Jersey's Energy Master Plan calls for Community Energy Plans like this one to drive a rapid shift to a clean energy system that specifically benefits low- and moderate-income (LMI) and environmental justice (EJ) residents. Under the current system, low- and moderate-income residents often struggle to afford energy resources such as electricity and gasoline. Meanwhile, environmental justice communities suffer from health problems caused by pollution from the fossil-fuel-based energy system. By integrating the needs of LMI and EJ communities with local energy initiatives, Cherry Hill can alleviate burdens on these communities caused by the current system while mitigating global climate change.



Initiative 6.3 Support Shared Mobility Programs

Description: Promote and develop shared transportation networks of buses, cars, bikes, etc. with design features that particularly assist low- and moderate-income residents. Encourage shared transportation services to expand access in low-income neighborhoods and provide low-income membership options.

Lead	Start Date	Priority	Anticipated Length	Funding Sources
Operations	August 2025	Medium	Ongoing	NJDEP's eMobility grant

Departments involved:

Recreation Community Development Mayor's Office Purchasing

Obstacles/Barriers:

Cherry Hill staff have some experience related to creating and operating a shared e-mobility program, i.e., Senior Bus Service has been established.



Community notes:

Like most municipalities in New Jersey, transportation in Cherry Hill consists primarily of private automobile travel. Commuter data for Cherry Hill from the US Census shows that as of 2020, 82% of Cherry Hill's working adults commute by car.

There are 2 passenger rail stations in Cherry Hill and multiple NJ TRANSIT lines, which provide service to Philadelphia and other New Jersey destinations.

Chart 5. 2020 Means of Transportation to Work Source: Sustainable Jersey. Community Profile Data by Municipality Chart 7 illustrates the distribution of annual miles traveled across different types of on-road vehicles for trips that start and/or end in Cherry Hill.

The total GHG emissions from vehicle miles associated with Cherry Hill is 370,116 metric tons of CO₂e.



Chart 6. Vehicle Miles Traveled in 2019

Source: Sustainable Jersey. Vehicle Miles Traveled (VMT)/On-Road Vehicle GHG Emissions Data

Note: VMT data includes mileage from alternative fuel vehicles, such as electric vehicles.

Measures of Success:

- Increase shared transportation options in the Township.
- Cherry Hill adopted a resolution in support of Coalition for circuit trails and a complete streets policy as part of the bike/ped master plan.

- 1. Develop a feasibility study for shared e-mobility project.
- 2. Update the Bike and Pedestrian element of the Master Plan.

Exhibit A



This report was made possible through a grant from New Jersey's Clean Energy Program[™]. New Jersey's Clean Energy Program is brought to you by the New Jersey Board of Public Utilities.

ABOUT THE NEW JERSEY BOARD OF PUBLIC UTILITIES (NJBPU)

The New Jersey Board of Public Utilities ("NJBPU" or "Board") is the state agency with authority to oversee the regulated utilities, which provide critical services such as natural gas, electricity, water, telecommunications, and cable television. The law requires the Board to ensure safe, adequate, and proper utility services at reasonable rates for customers in New Jersey.

ABOUT THE NEW JERSEY CLEAN ENERGY PROGRAM (NJCEP)

NJCEP, established on January 22, 2003, in accordance with the Electric Discount and Energy Competition Act (EDECA), provides financial and other incentives to the State's residential customers, businesses and schools that install high-efficiency or renewable energy technologies, thereby reducing energy usage, lowering customers' energy bills, and reducing environmental impacts. The program is authorized and overseen by the New Jersey Board of Public Utilities (NJBPU).

ABOUT SUSTAINABLE JERSEY

Sustainable Jersey is a certification program for municipalities in New Jersey. Launched in 2009, Sustainable Jersey is a nonprofit, nonpartisan organization that supports community efforts to reduce waste, cut greenhouse gas emissions, and improve environmental equity. It provides tools, training, and financial incentives to support and reward communities as they pursue sustainability programs. Sustainable Jersey is one hundred percent voluntary, and each town can choose whether it wants to get certified and the actions it wants to do to achieve enough points to get certified. References

- EIA (U.S. Energy Information Administration). 2021. New Jersey State Profile and Energy Estimates. <u>https://www.eia.gov/state/analysis.php?sid=NJ</u>.
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- State of New Jersey. 2018. New Jersey's Railroad Network. https://www.state.nj.us/transportation/refdata/gis/maps/RailRoadlines.pdf.
- State of New Jersey. 2020. 2019 New Jersey Energy Master Plan: Pathway to 2050. State of New Jersey. <u>https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf</u>.

Appendix. Data Sources

Most data used in this plan is sourced from the <u>Sustainable Jersey Data Center</u>.

Community Overview Data					
Section, Map, or Table	Original Source(s)	Link to data			
General Information Section	U.S. Census American Community Survey (ACS)	SJ Community Profile Data by Municipality			
Current Housing Units by Year Built Chart	U.S. Census ACS	SJ Community Profile Data by Municipality			
Number of Units by Structure Type Chart	U.S. Census ACS SJ Community Profile Data by Municipality	SJ Community Profile Data by Municipality			
Commercial & Industrial Properties Map	NJ MOD IV Tax Data	SJ Commercial & Industrial Properties Map			
Commercial & Industrial Properties Data	NJ MOD IV Tax Data	SJ Commercial & Industrial Properties Data			

Energy Use Data					
Section, Map, or Table	Original Source(s)	Link to data			
Amount of Electricity Used by Sector (kWh) Chart	NJ Investor-Owned Utilities	SJ Aggregated Community-Scale Utility Energy Data			
Amount of Natural Gas Used by Sector (Therms) Chart	NJ Investor-Owned Utilities	SJ Aggregated Community-Scale Utility Energy Data			
Number of Occupied Housing Units by Primary Heating Fuel	U.S. Census ACS	SJ Community Profile Data by Municipality			
Greenhouse Gas (GHG) Emissions Charts	SJ GHG Emissions by Municipality	SJ Community-Scale Greenhouse Gas (GHG) Emissions Data			

Energy Efficiency and Renewable Energy Data				
Section, Map, or Table	Original Source(s)	Link to data		

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Solar Installations Chart	NJCEP Solar Installation	SJ Solar Installation Data
	Data	
Commercial Energy Efficiency	New Jersey Clean Energy	SJ Energy Efficiency Program
Program Participation Data	Program (NJCEP) Data	Participation (2008-2021) Data -
		Lifetime Commercial
		Participation
Residential Program Participation	NJCEP Data	SJ Energy Efficiency Program
Data		Participation (2008-2021) -
		Lifetime Commercial
		Participation
Energy Efficiency Projects	NJCEP Data	SJ NJCEP Local Government
Completed by Municipality Data		Projects 2008-2021