Solebury Township

Energy Transition Plan

or Community Energy Strategy Plan (CESP)

- Achieve carbon free ELECTRICITY by 2035
- Achieve carbon free ENERGY by 2050

Ready for 100 initiative (Rf100)

- Part of the initiative established by Sierra Club as a nationwide effort to achieve carbon neutral energy and reduce Green House Gases (GHG).
- In July 2020 we joined more than 2 dozen townships and counties in PA, and 170 municipalities, counties and states across the country, in passing similar resolutions.

Goals

Cut Waste – Build and Buy Efficient

Reduce Pollution – Clean Electricity Supply

Emphasize Sustainability

Energy efficiency in buildings and operations

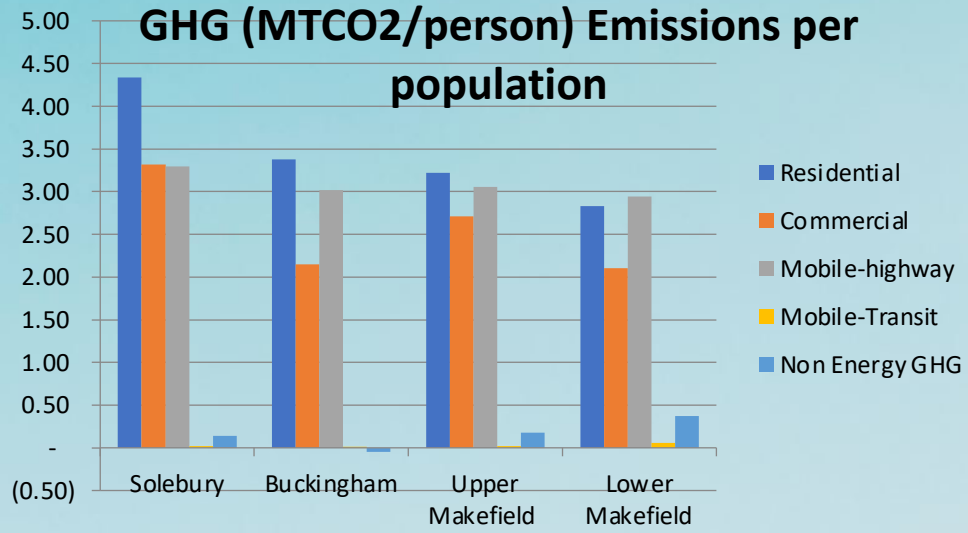
Community Outreach

Two parts:

- Municipal
  - Includes township buildings and municipally owned facilities
- Community
  - Includes residential, transportation, farming and commercial

Municipal Findings

We have completed an energy audit of Solebury. This is based on DVRPC's data collected 2015



In 2019 Solebury Township fleet vehicles & equipment consumed:

20,500 GALLONS OF GASOLINE

5,240 GALLONS OF DIESEL FUEL

— which translates to —

$57,300 TOTAL FUEL COST

213 *metric tons* TOTAL GHG EMISSIONS

In 2019 Solebury Township facilities consumed:

340 MEGAWATT-HOURS OF ELECTRICITY

15,800 GALLONS OF PROPANE

— which translates to —

$37,100 TOTAL ENERGY COST

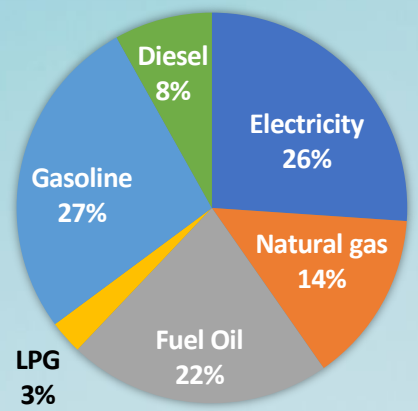
219 *metric tons* TOTAL GHG EMISSIONS

OUR HIGHEST EMITTERS

Community Findings

We have completed an energy audit of Solebury. This is based on DVRPC's data collected 2015

Energy breakdown for Solebury Township
values in BBTU (DVRPC, 2015)



In 2015 Solebury highway transportation:

$7,728,508
TOTAL FUEL COST

28,450 *metric tons*
TOTAL GHG EMISSIONS

In 2015 Solebury Residential usage

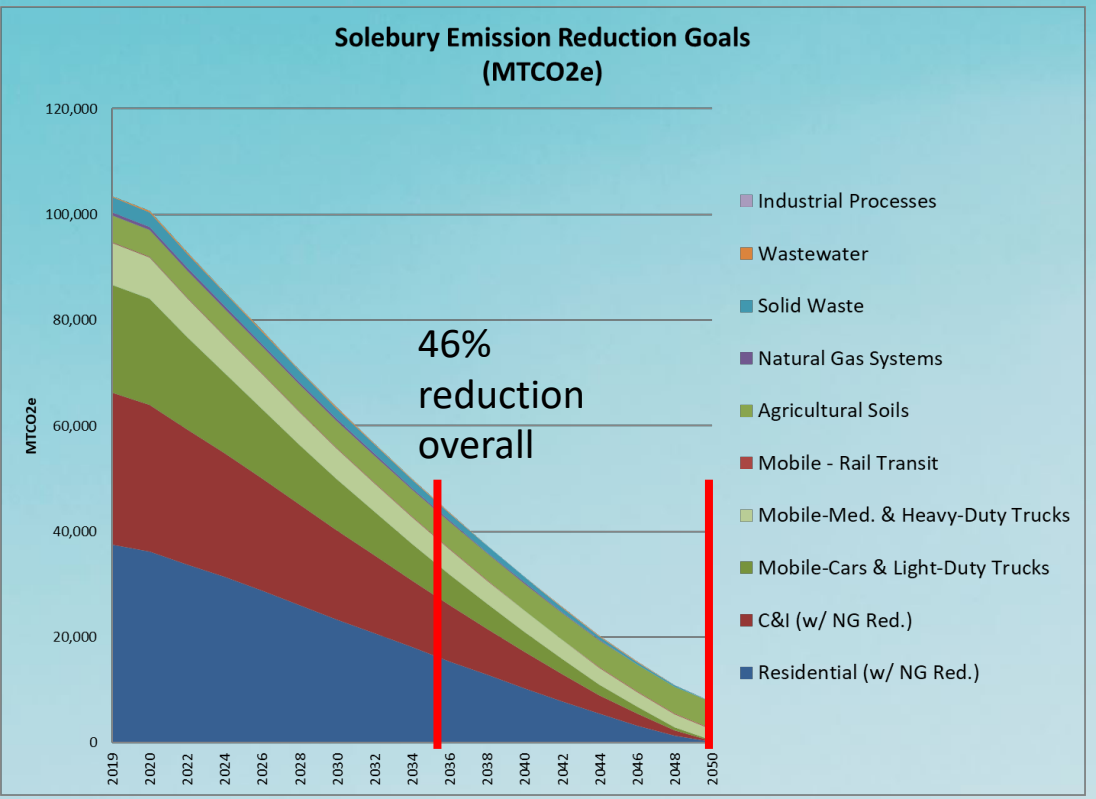
$10,226,301
TOTAL ENERGY COST

34,087 *metric tons*
TOTAL GHG EMISSIONS

In 2015 Solebury Commercial:

$5,109,454
TOTAL FUEL COST

23,020 *metric tons*
TOTAL GHG EMISSIONS

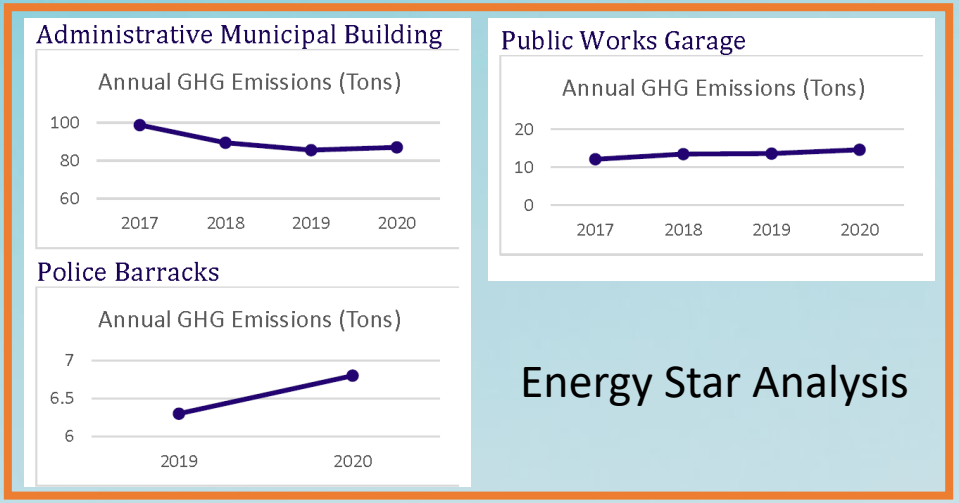


GHG Reduction Goals

Municipal emissions vis a vis Twp

- Muni: 432 MTCO2e (2019)
- Twp: 85,500 MTCO2e (2015)
- Muni = 0.4%
  - Lead by example
  - Reduce roadblocks
  - Regulatory review
  - Public education
  - Apply for grants

The municipality will implement energy efficiency measures and shift its energy sources to renewable energy as expeditiously as possible.



Energy Star Analysis

Leading by example

OUR APPROACH

- Cut Waste – Build and Buy Efficient
- Reduce Pollution – Clean Electricity Supply
- Emphasize Sustainability
- Energy efficiency in buildings and operations
- Electrification of heating systems and vehicles
- Forward thinking policies

WHAT WE'VE DONE

- ✓ Retrofitted traffic lights and township office with LEDs
- ✓ Built a new Public Works Building to most recent standards, including LED lighting, efficient roof insulation, and efficient in-floor heating.
- ✓ Fitted the Township Office Building with electric heat pumps for A/C
- ✓ Purchased two hybrid Police vehicles as part of an on-going program to electrify Township automobiles
- ✓ Moved Township staff to a 4-day workweek, reducing building energy and vehicle miles.
- ✓ Gold/platinum work for Sustainable Pennsylvania Community Certification
- ✓ Applied for Grants to fund an Electric Vehicle Charging station

WHERE WE'RE GOING

- ❑ Prioritize savings with the transition of the fleet to Hybrid and Electric Vehicles
- ❑ Perform energy audits
- ❑ Undertake Benchmarking with Energy Star Portfolio Manager
- ❑ Feasibility Study for Solar Installations
- ❑ Review Planning and Zoning ordinances and policies relative

		Participation	% Reduction	Quantity Change/yr	Units
Residential	New	0.5%	45%	18	Housing Units
	Existing	4.0%	24%	140	Housing Units
Commercial and Industrial	New	1.0%	45%		
	Existing	4.0%	24%		
Vehicles		3.5%		223	EVs and Hybrid

Reducing roadblocks

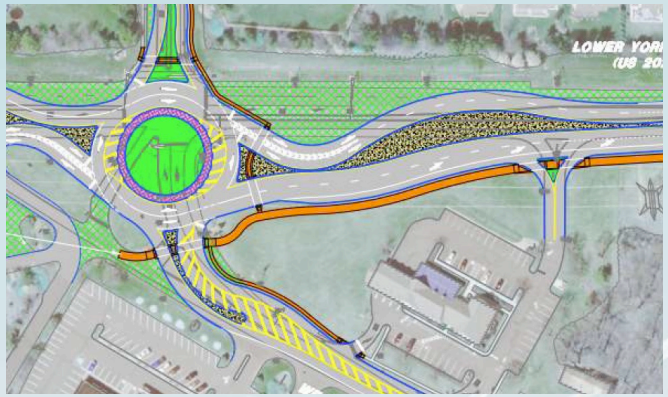
The municipality will consider implementing changes to reduce roadblocks for climate-positive investments and encourage adoption of energy transition programs and investments by residents, institutions and businesses.

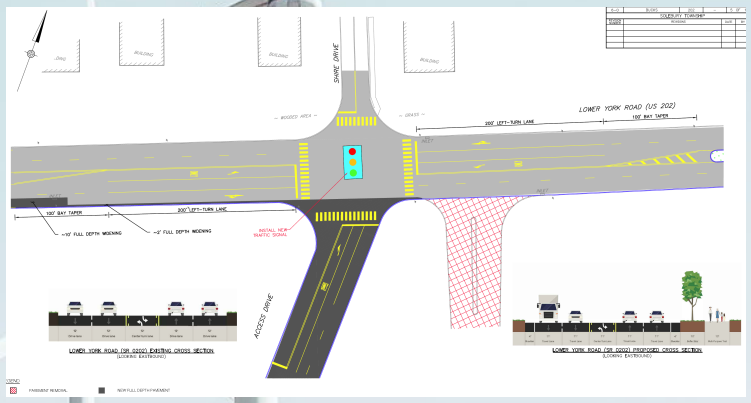
- Review processes to discover impediments to businesses and residents
- Conceive of and identify incentives
- Encourage investment of sustainable dollars

Regulatory review

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

- PC to review SALDO and zoning
- Join SolSmart to learn best practices
- Create efficient traffic movement





Public Education

The municipality will provide information and encouragement to all stakeholders in the community to use energy efficiently and transition to the use of renewable energy.

- Reach out to HOAs
- Engage with School District
- Communicate ideas to developers and business owners
- Engage with community as a whole – push for specific action

Apply for Grants

Municipal governments can seek grants from nonprofits or state/federal programs that subsidize some aspect of projects for energy transition.

- Continue our stellar performance in obtaining grants wherever possible
- EV grant already in the bag!

		2020						2021											
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Adopt Resolution Rf100																			
Develop the Community Energy Strategy (Transition) Plan (CESP)																			
	Establish Leadership Team																		
	Identify and Engage Stakeholders																		
	Create Energy Profile																		
	Develop Energy Goals and Strategies																		
	Present to EAC and BOS to get buy in																		
	Identify and Prioritize Actions																		
	Develop and Socialize the Plan																		
	Write Energy Transition Plan																		
	Review Plan with BOS, SSG and EAC																		
	Finalize Plan																		
	Publish CESP																		

Anticipated timeline up until completion of the CESP

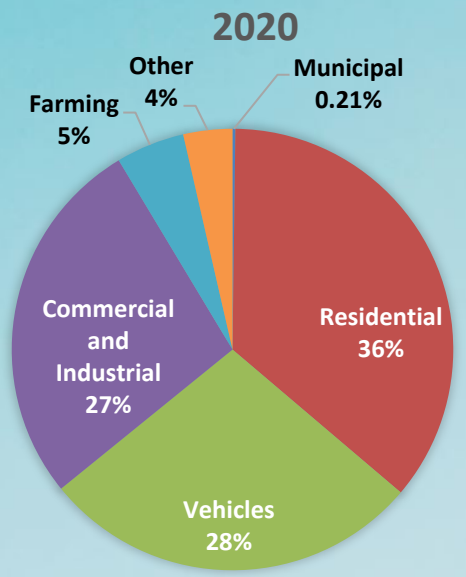
Timeline

Costs

What will the cost be to the Township?

- Township staff time
- Consultant ??
- Studies
- Solar installation
- Facilities upgrades
- Police Fleet
- EV stations
- Outreach materials

How will we know if we're succeeding?



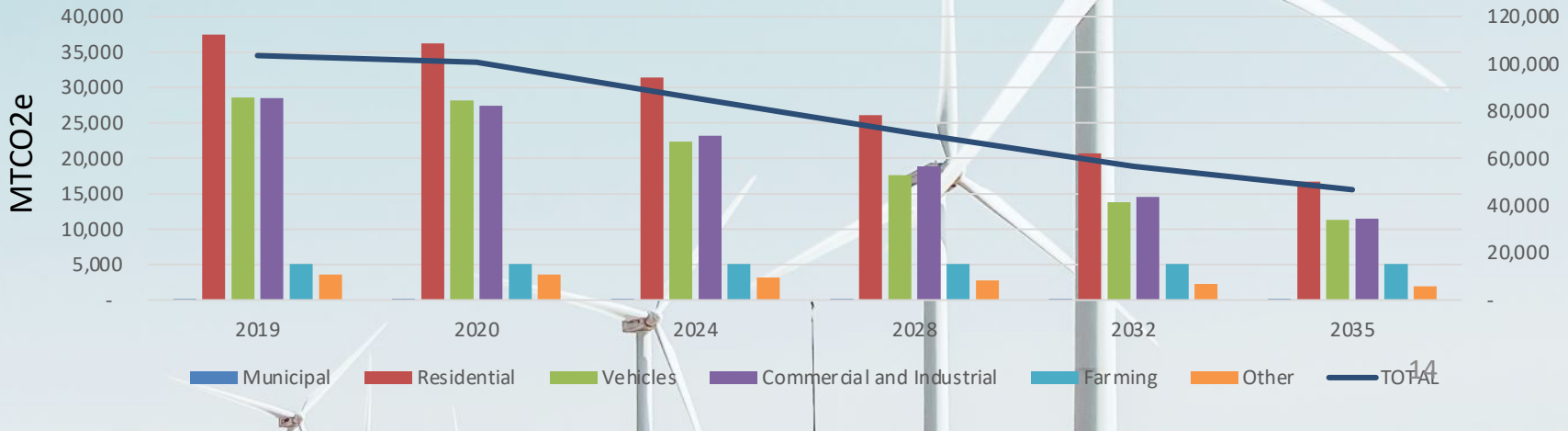
Current Solebury GHG Emissions

Tracking Progress

- Key Benchmarks
- Milestone achievements
- Measured Goals

MTCO2e	2019	2020	2024	2028	2032	2035
Municipal	213	213	200	180	175	170
Residential	37,491	36,248	31,395	26,105	20,705	16,743
Vehicles	28,590	28,135	22,343	17,659	13,808	11,340
Commercial and Industrial	28,527	27,425	23,213	18,847	14,551	11,499
Farming	5,058	5,058	5,058	5,058	5,058	5,058
Other	3,617	3,617	3,221	2,778	2,288	1,920
TOTAL	**103,496**	**100,697**	**85,430**	**70,627**	**56,586**	**46,730**

GHG emission targets



Who's involved

Who are the stakeholders and review bodies?

- Township Management
- EAC, PC, SSG
- Solebury School
- School District
- 13 HOAs
- Waste Management
- Logan Square: Penns Grant Realty Corp.
- Bucks County Audubon
- Watershed Associations
- Specialists:
  - Brent Alderfer, Solar
  - Mark Bortman, Solar
  - Dennis Rowan, EVs
  - Rob Graff, DVRPC

Questions?