

# BELLEFONTE CLIMATE ACTION PLAN

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# OUTLINE

- Background of Bellefonte
- Greenhouse Gas Inventory
- Task Force
- Community Involvement
- Vulnerability and Adaptation
- Emissions Reduction Strategies
- Conclusions

# BELLEFONTE BOROUGH

Historic Bellefonte, Est. 1795

# BACKGROUND



## History

- County Seat, Incorporated 1795
- Home/Birthplace of seven Governors (5 PA, 1 KS, 1 CA) serving 1852-1903
- Birthplace of Jonathon Frakes, aka "Commander Riker"
- Known for the Big Spring, Railroading, the Iron Industry, historic architecture, and kayaking & fly fishing
- Population 6281 (in 2018)

# COMMERCIAL AND RESIDENTIAL AREAS



# TALLEYRAND PARK: EXTREME WEATHER



# GREENHOUSE GAS INVENTORY

Fall Term – Introduction to ClearPath

# WORKING WITH ICLEI – FALL TERM

- Held webinars/one-on-ones walking through each step:
  1. Introduced to protocols – U.S. Community Protocol
  2. Chose scope of inventory – Scope 1
  3. Data collection – Utilities, local government, businesses
  4. Input into ClearPath – Factor sets, activity data



# CLEARPATH INVENTORY TOOL

Community Scale | Inventories

[Inventories](#) [Forecasts](#) [Planning](#) [Monitoring](#) [Factor Sets](#) [Reports](#)

Jurisdiction: Bellefonte, PA ▼

## Bellefonte 2017 [Edit Parameters](#)

Residential Energy	Commercial Energy	Industrial Energy	Transportation & Mobile Sources	Solid Waste	Water & Wastewater	AFOLU	Process & Fugitive Emissions	Upstream Impacts of Activities	Consumption Based
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### Available Calculators

Pick a calculator to enter a new record.

- [Emissions from Grid Electricity](#) ⓘ
- [Emissions from Stationary Fuel Combustion](#) ⓘ
- [Notation Keys for Residential Energy](#) ⓘ

### Inventory Records For Residential Energy

Residential Natural Gas 2017	<a href="#">Edit</a>   <a href="#">Delete</a>
Residential Grid Electricity 2017	<a href="#">Edit</a>   <a href="#">Delete</a>
Residential Heating Fuel 2017	<a href="#">Edit</a>   <a href="#">Delete</a>

# Residential Natural Gas Usage

Inputs		
	Value	Units
<b>Calculation Inputs</b>		
Use this section to enter the quantity of energy used and related data		
Is this a Direct Entry Record? <a href="#">?</a>	No <input type="text"/>	
Fuel Type <a href="#">?</a>	Natural Gas <input type="text"/>	
Fuel Use <a href="#">?</a>	871577 <input type="text"/>	Therms <input type="text"/>
Data Source	Measured usage <input type="text"/>	

## Notation Keys and Data Quality

Use these fields to indicate data quality and set the notation key as appropriate.

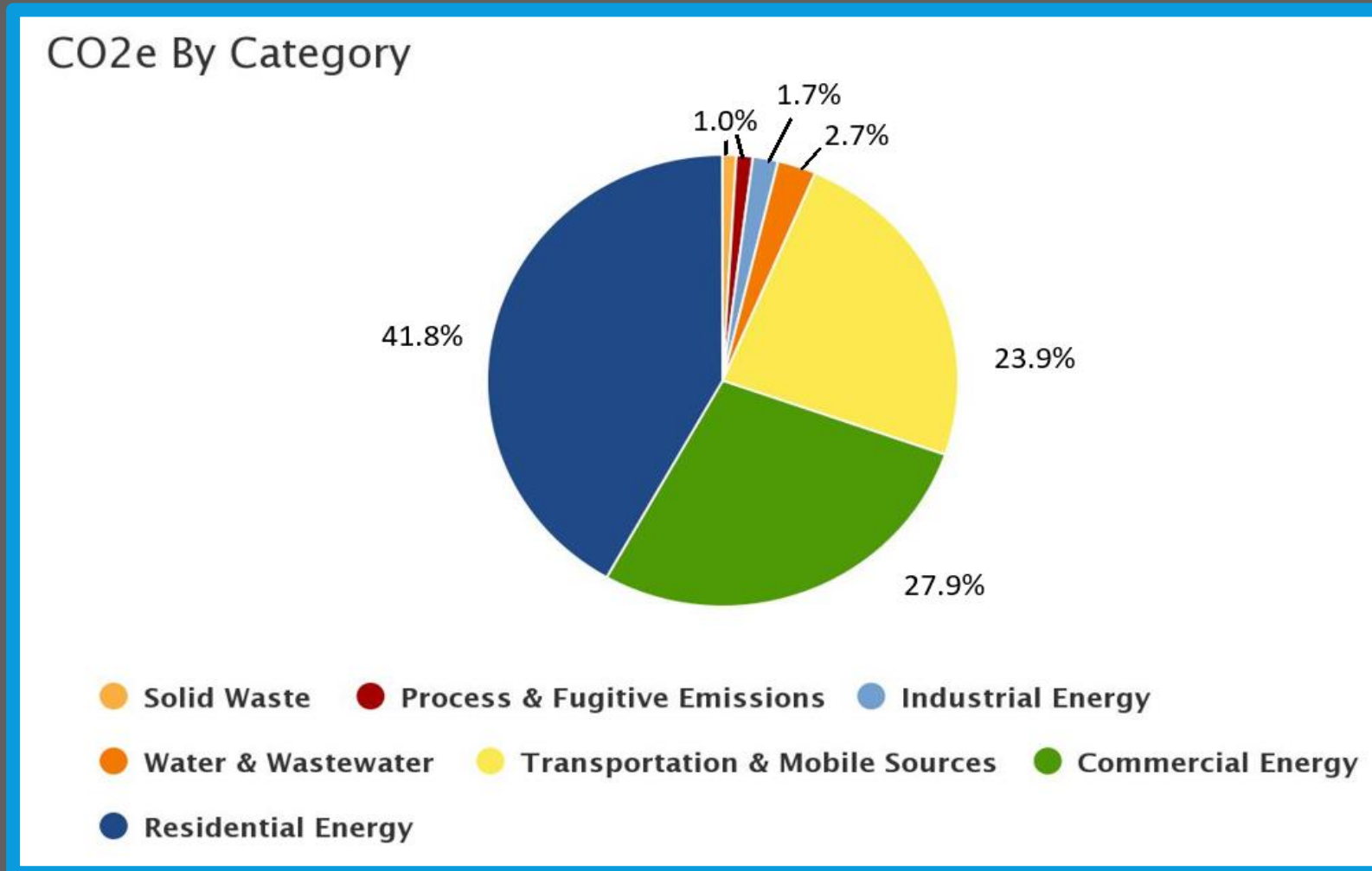
Notation Keys [?](#)

Data Quality: Activity Data [?](#)

Data Quality: Emissions Factor

Example  
Calculation and  
Data Quality Input

# RESULTS



# TASK FORCE

Local government and concerned citizens

# TASK FORCE MEMBERS

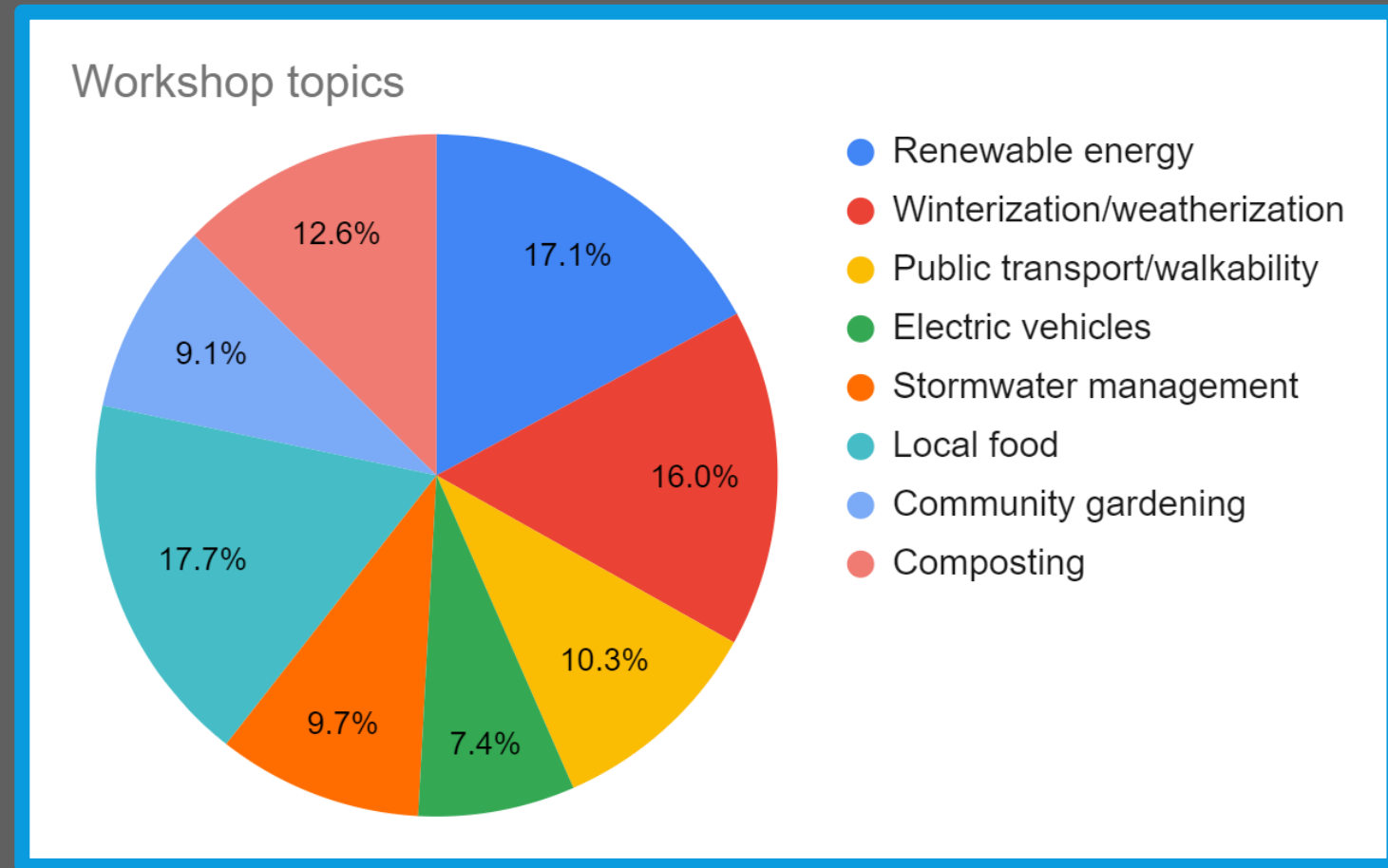
- Local Government Officials and Staff
  - Joanne Tosti-Vasey, Bellefonte Borough Council President & Chair of the Spring Creek Watershed Commission
  - Don Holderman, Assistant Borough Manager
  - Raymond Stolinas Jr., Centre County Planning Director
- External Agencies and Partners
  - Madeleine Pelchat, Drexel University
  - Gay Dunne, Bellefonte Resident
  - Kevin Abbott, Bellefonte Business Owner

# COMMUNITY INVOLVEMENT

Spring Term - Survey and Focus Group

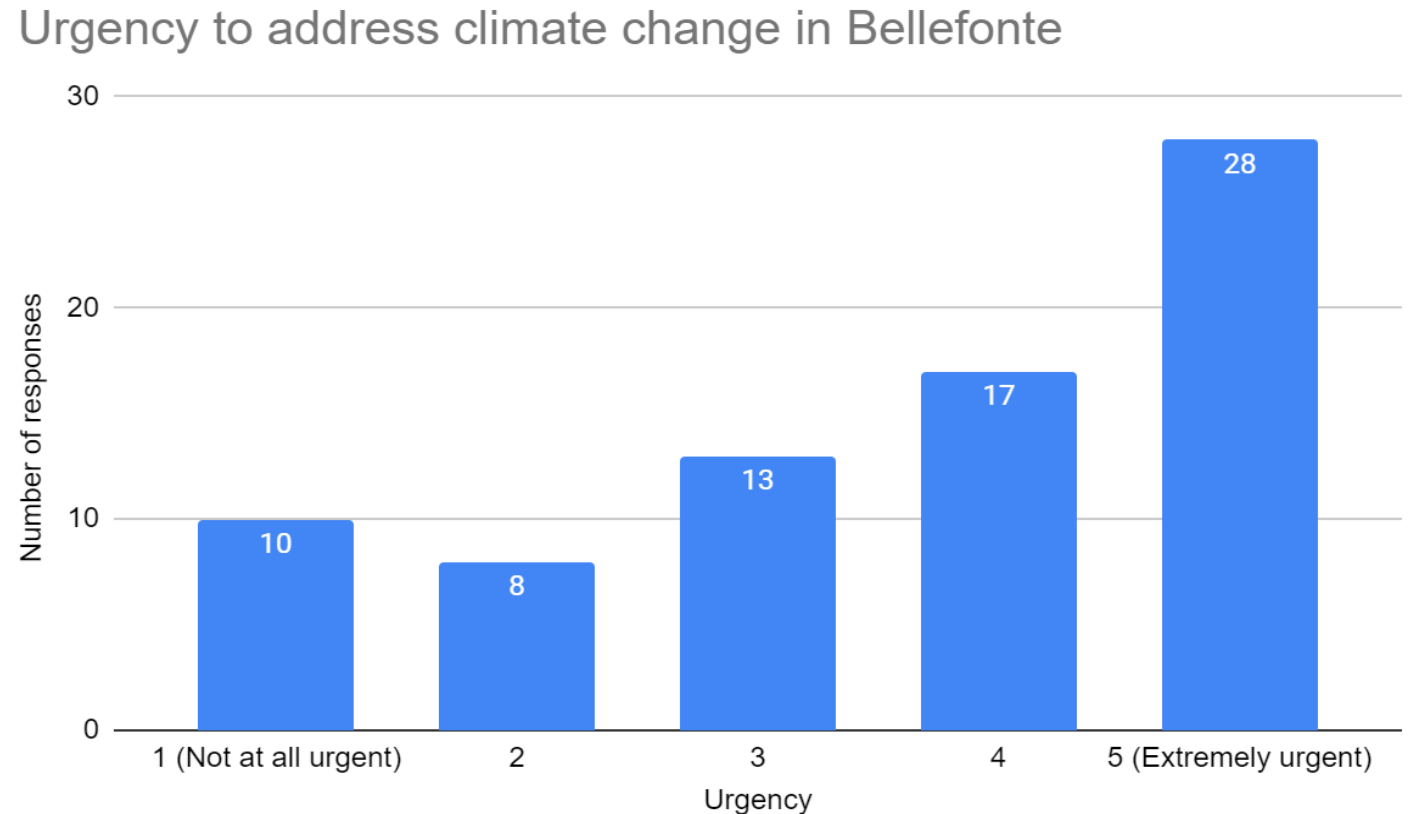
# MAIL/ONLINE SURVEY

- >50% response rate
- Surveyed general interest:
  - Renewable energy
  - Weatherization
  - Public transportation
  - Walkability
  - Electric vehicles
  - Stormwater management
  - Local food/gardening
  - Waste reduction/composting



# FOCUS GROUP

- In depth discussion with ~10 participants, Zoom
- Volunteers very in favor of climate action
  - Knowledgeable, helpful in strategy prioritization
- Survey showed range of opinions (including negative)

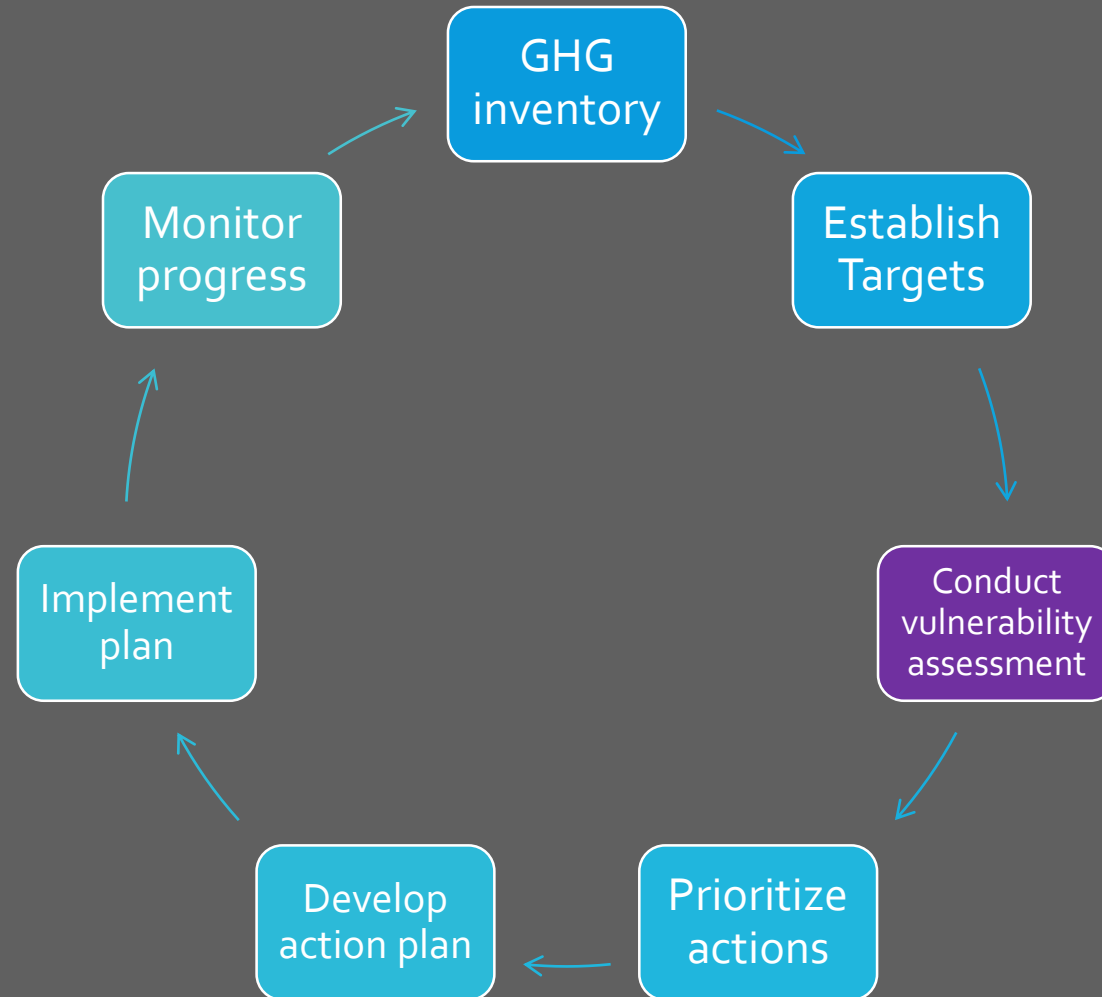




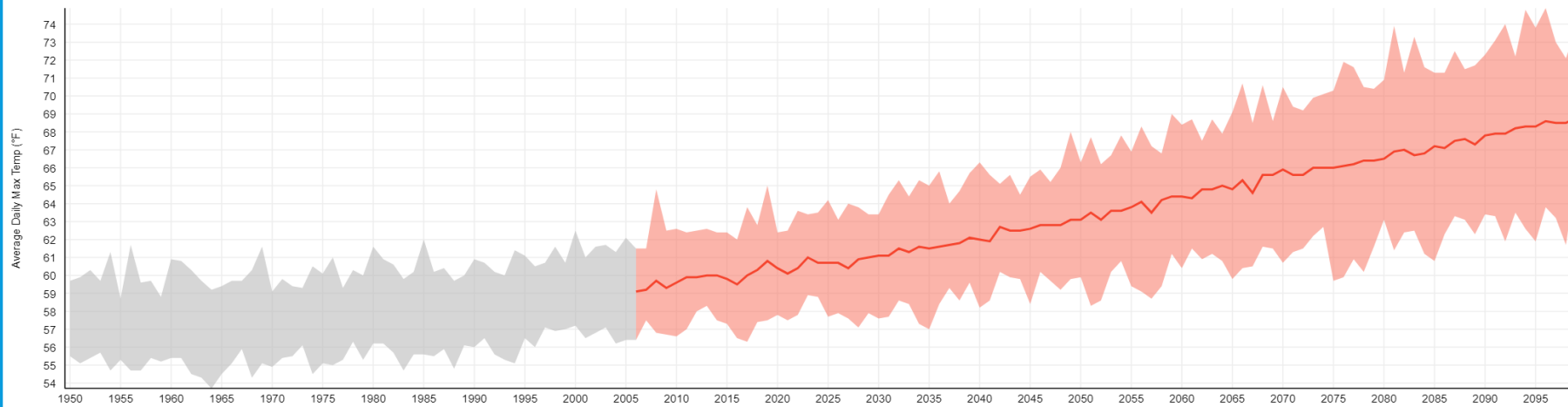
# ASSESSING VULNERABILITIES

Spring Term - Climate Explorer, Temperate, and lived experience

# CLIMATE ADAPTATION AND MITIGATION

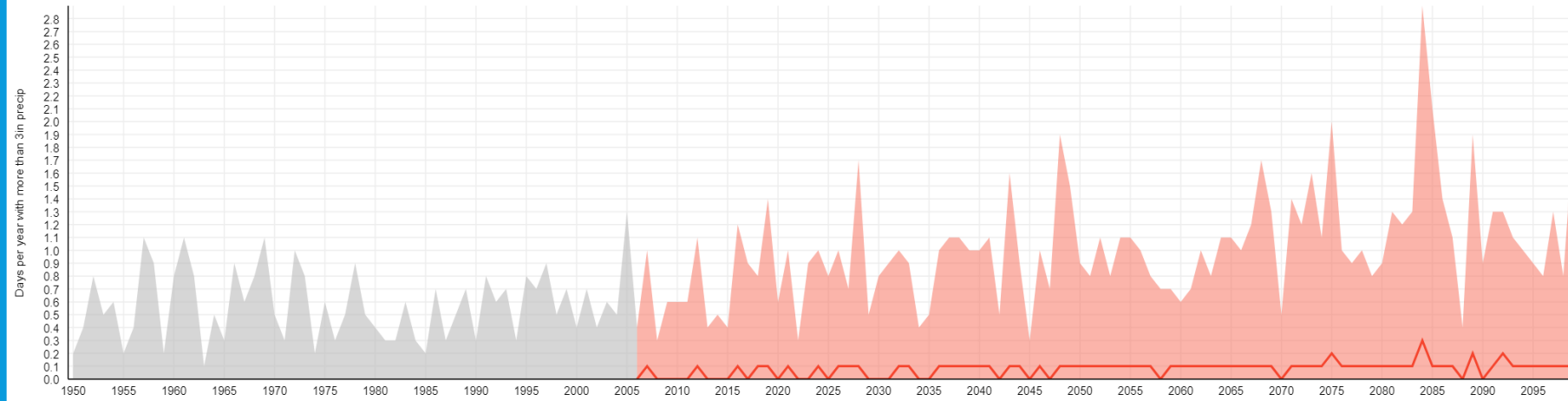


# ASSESSMENT TOOLS



Climate Explorer –  
Bellefonte Projected Temp

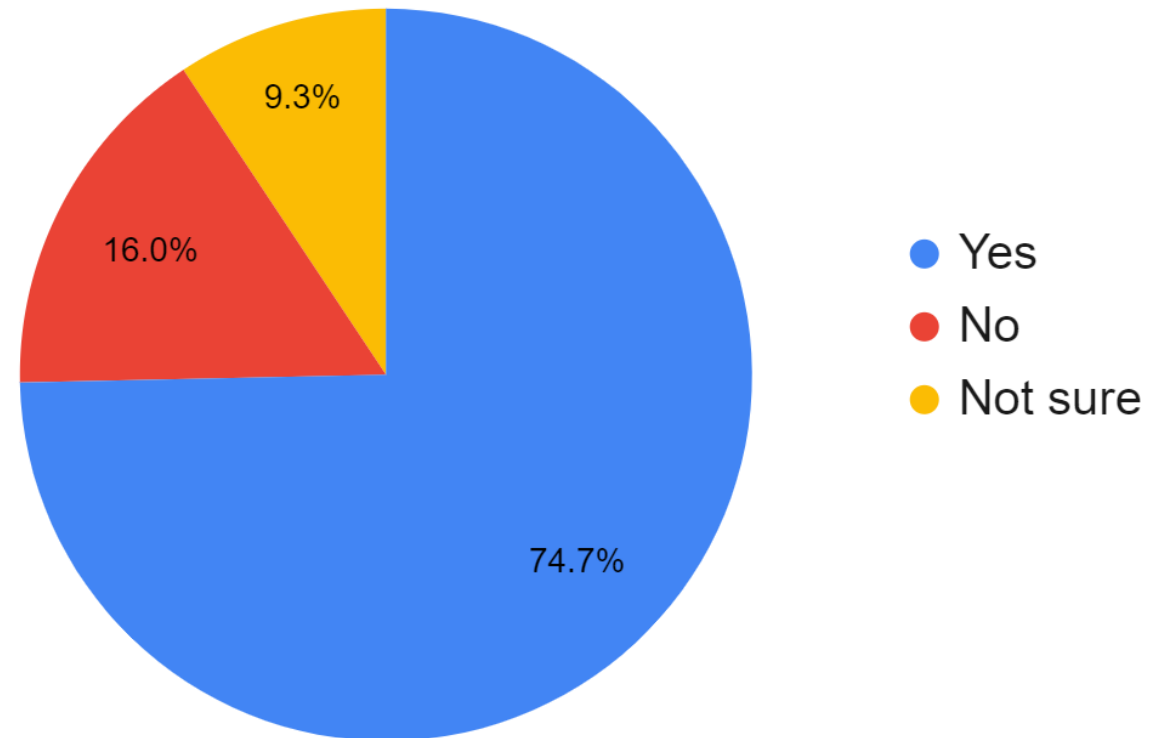
Climate Explorer –  
Bellefonte Projected  
Precipitation



# STORMWATER MANAGEMENT

- Education for residential options
- Public spaces
  - Rain gardens
  - Permeable pavement
  - Rain barrels
  - Underground piping

Need for stormwater management in Bellefonte



# EMISSIONS REDUCTION

Spring Term – Brainstorming mitigation strategies

# TARGETS AND GOALS

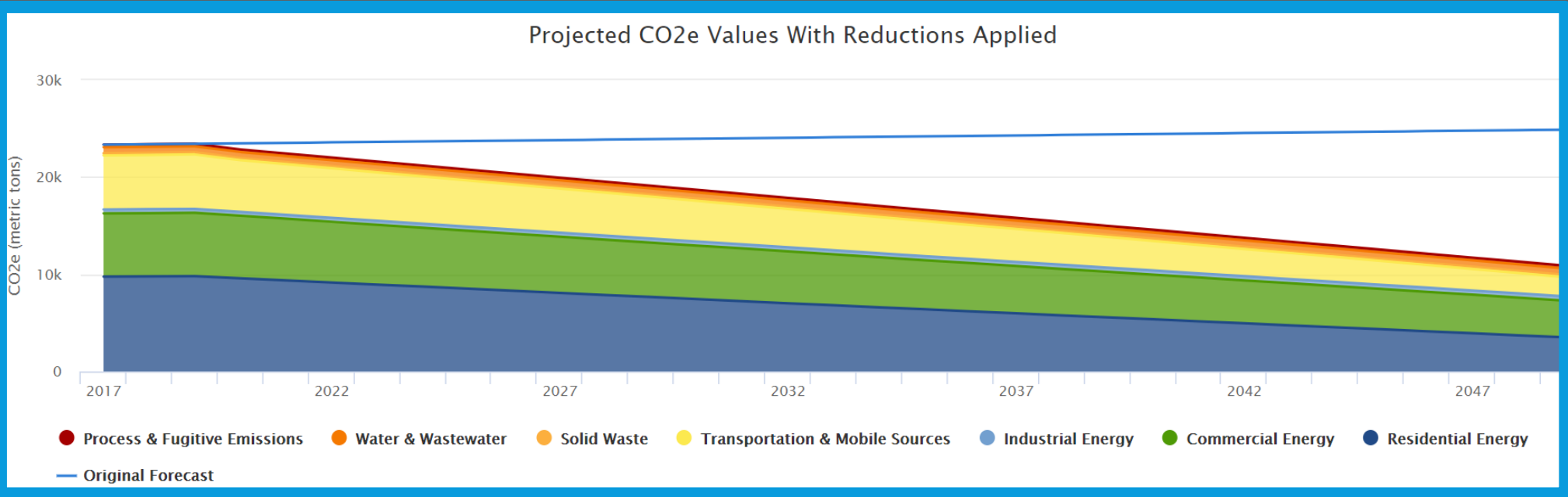
- ICLEI recommended same targets as State Plan
  - 80% reduction of 2005 emissions by 2050
- Example action goals:

Overall area	Goal	Short term (2025)	Medium (2035)	Long-Term (2050)
Transportation	Increase EV charging	3% of parking lot spaces with EV chargers	10% of parking lot space with EV chargers	25 % of parking lot spaces with EV chargers
	Create and increase Plug-in hybrid vehicles for borough	1 EV charging unit for police and 1 for public works	3 EV charging units for police Enough charging units to cover 25% of public works vehicles	1 EV charging unit for each police vehicle Enough charging units to cover 50% of public work EV vehicles
	Transfer to light EV Plug In vehicles	1 EV police car	3 EV police cars 25% of public work and administrative vehicles are EV	100% EV police cars 50% of public works and administrative vehicles are eV

Energy	Renewable Energy	Borough to have installed a solar energy system to reduce GHG from electric use by 50% of the 2020 usage	25% of homes and businesses hooked up to solar energy or are purchasing solar and/or wind energy – could use property tax credits if helpful	50% of homes and businesses hooked up to solar energy or are purchasing solar and/or wind energy – could use property tax credits if helpful
	Coal and oil burning heating	Create a survey of town to determine where we still have coal-fired and oil-fired heating	50% of the town that has coal furnaces and oil-fired heating in 2020 be converted to a cleaner form of energy (renewables or natural gas)	100% of the town that has coal furnaces and oil-fired heating in 2020 be converted to a cleaner form of energy (renewables or natural gas)

# CLEARPATH PLANNING TOOLS

Projected CO2e Values With Reductions Applied



## Measure Name

- Electric Vehicles
- Residential Renewable Energy
- Residential Electricity Reduction
- Transition from Heating Fuels
- Weatherization
- Reduced Residential Natural Gas
- Reduced Commercial Natural Gas
- Reduced Commercial Electricity
- Reduced VMT
- Commercial Renewable Energy
- Increased Public Transit
- Food Waste Education
- Adding food compost collection

# CONCLUSIONS

June 2020 – Bellefonte's first Climate Action Plan



# 2020 CLIMATE ACTION PLAN

- High emissions sectors:
  - Residential/Commercial energy
  - Transportation
- Areas of vulnerability:
  - Extreme temperatures
  - Extreme weather
- General community interest
- Inventorying/planning tools necessary for informed decisions

## Bellefonte Borough Climate Action Plan



Local Actions and Policies to Reduce Bellefonte's  
Greenhouse Gas Emissions