Reducing Residential Greenhouse Gas Emissions in the City of Bexley, Ohio

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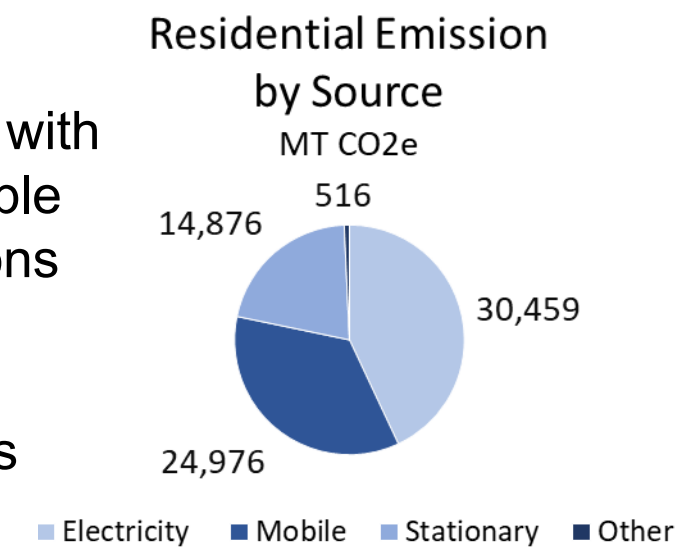
Project Overview

Context

The City of Bexley is a suburb east of Columbus. It has a population of 13,681 and a median household income of $121,182. It is in the process of creating a Climate Action Plan (CAP) and would like assistance with identifying strategies to reduce greenhouse gas (GHG) emissions.
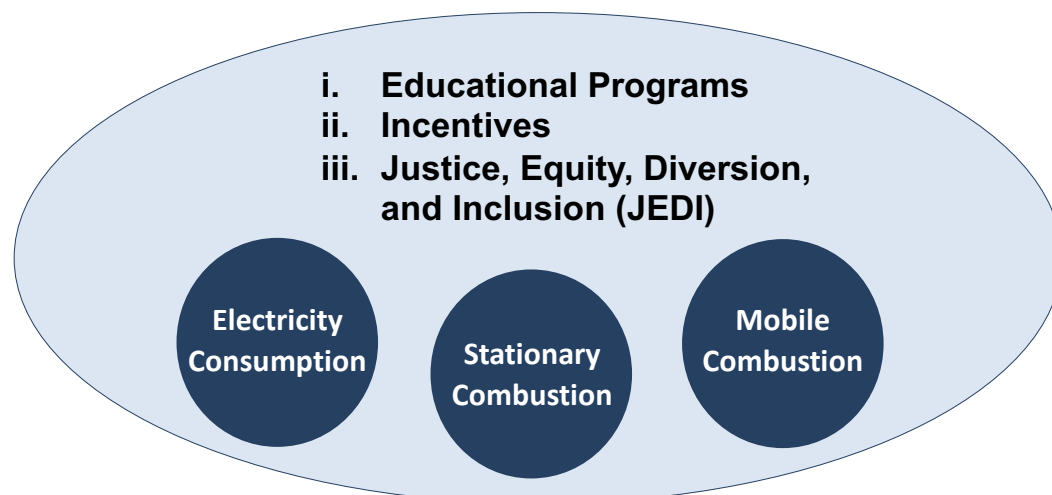
Project Goal

Provide Bexley with a list of actionable recommendations that will reduce residential greenhouse gas emissions.

Residential Emission by Source
MT CO2e

- 516
- 14,876
- 30,459
- 24,976

Electricity ▪ Mobile ▪ Stationary ▪ Other

Project Objective

We will use case study research to identify specific strategies and best practices as they relate to reducing greenhouse gas emissions for our project focus areas.

Project Focus Areas

i. Educational Programs
ii. Incentives
iii. Justice, Equity, Diversion, and Inclusion (JEDI)

- Electricity Consumption
- Stationary Combustion
- Mobile Combustion

Research Activities

For each focus area, we conducted online research about other cities' CAPs and sustainability programs. We then conducted informal interviews with cities of interest.

Focus Area 1: Electricity Consumption

Recommendation #1: Community Solar

Ohio HB450 is being introduced to allow community solar projects, and the IRA will offer at least 30% investment tax credits on such projects. Cities in Ohio are already on the right track, such as Gem City solar in Dayton working on a small utility scale project to serve the community.

Gem City Solar Project Area

Recommendation #2: Energy Assistance Programs

Ohio Home Energy Assistance Program (HEAP)	AEP Neighbor to Neighbor Program
Up to $930	Up to $500 in grants

Recommendation #3: Community Workshops

Inspired by the City of Belmont, CA, these workshops would be a way for residents to learn about current sustainability programs as well as provide their own input.

Recommendation #4: "Focus Packs"

Inspired by the City of Sun Prairie, WI, they could include:

1. LED Lightbulbs
2. Smart Power Strips
3. Solar Power Banks

Focus Area 2: Stationary Combustion

Recommendation #1: Rebates

Government sponsored rebates would make a switch to electric appliances more attractive and accessible.

- Use a tiered rebate system based on household size and income.

Recommendation #2: Lending Programs

Giving residents the opportunity to try out new electric appliances would help them commit to purchasing and owning them.

Induction Cooktops	Electric Lawnmowers
Inspired by the Cities of Albany & Piedmont, CA	Inspired by the City of Charlotte, VT

Recommendation #3: Campaigns

Public campaigns would encourage residents to convert their appliances to electric and reduce their energy use in general.

Electrify Everything!	Switch is On	No Mow May
Inspired by Portland, ME	Led by the state of California	Sponsored by Bee City USA

Focus Area 3: Mobile Combustion

Recommendation #1: Resident Education

Inspired by the City of Concord, MA, education offers a comprehensive approach to encouraging residents' transition to Electric or Hybrid Vehicles. Methods include the following:

- Educating residents on mobile combustion & detriments of emissions
- Providing interactive trail maps, EV charging station maps, alternative commuter routes, educational videos, etc.
- Detailing various ways in ways in which EV/Hybrid vehicles offer improved convenience and long-run savings

Recommendation #2: Infrastructure

Inspired by the City of Dayton, Ohio

Benefits of New Infrastructure

Infrastructure Development and Improvement	Decrease GHG emissions	Increase resident accessibility	Incentivize residents
Storage/disposal plans for unneeded vehicles	✔	✖	✖
Redesign priority streets & pedestrian safety features	✔	✔	✔
Disposition of gas stations	✔	✖	✖
Increase prevalence of sidewalks and bike lanes	✔	✔	✔

JEDI

Inspired by the City of Los Angeles, CA's Climate Emergency Mobilization Commission (CEMC). This group focuses on community motivation, inclusion, and representation. Bexley could combine these methods with their current Environmental Sustainability Advisory Committee to improve full representation in their JEDI efforts.

CEMC Representation:
- Top 10% of pollution burdened areas
- Youth
- Labor
- Community Leadership
- Climate-Health Officials

Climate EQUITY LA

References