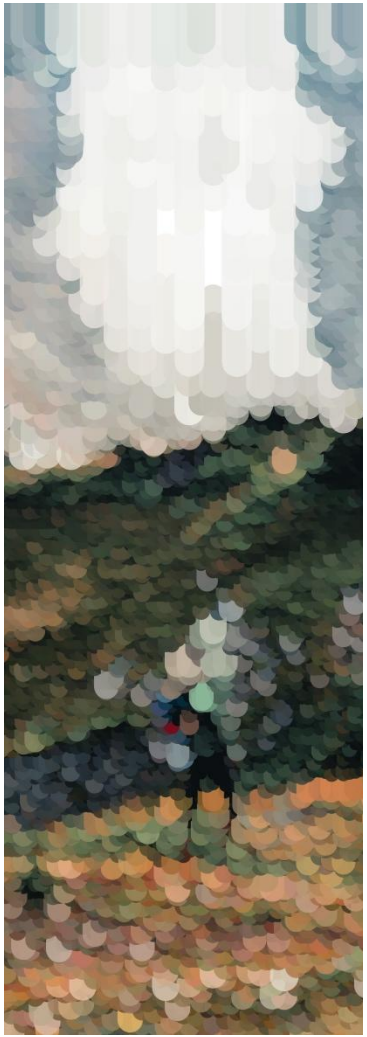
Comprehensive Climate Action Plan for the Miami Valley Regi

Miami Valley Regional Planning Commision

Sustainability Solutions Group



Today's agenda

01 Engagement and project updates

02 Pathways results and Preferred Scenario

03 Local pathways

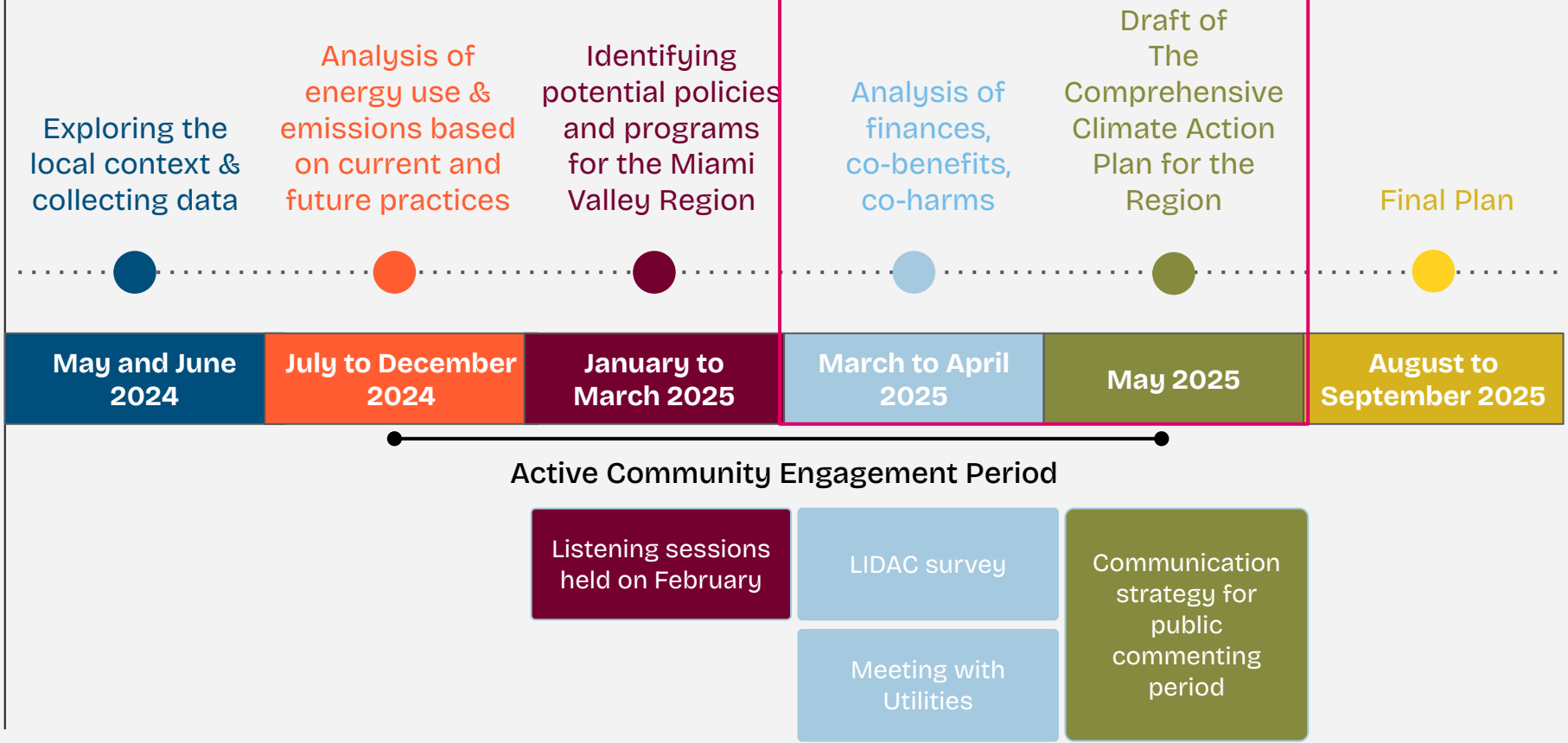
04 Workforce needs and gaps

PART 1

Engagement Update

Sustainability
Solutions Group

Overall process



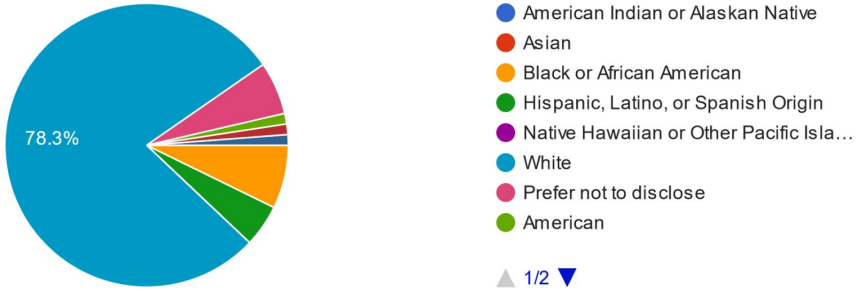
LIDAC survey

Total of 83 responses

Demographics

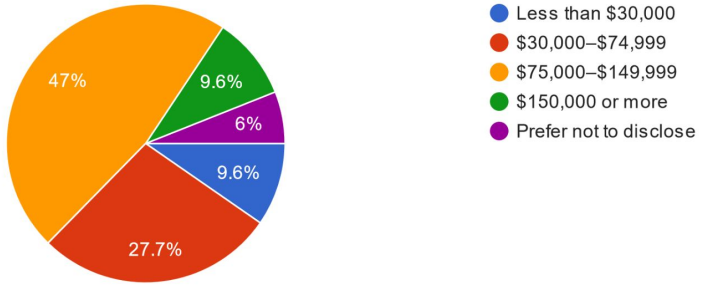
15. Which of the following describes your race or ethnicity?

83 responses



19. Gross annual family/household income:

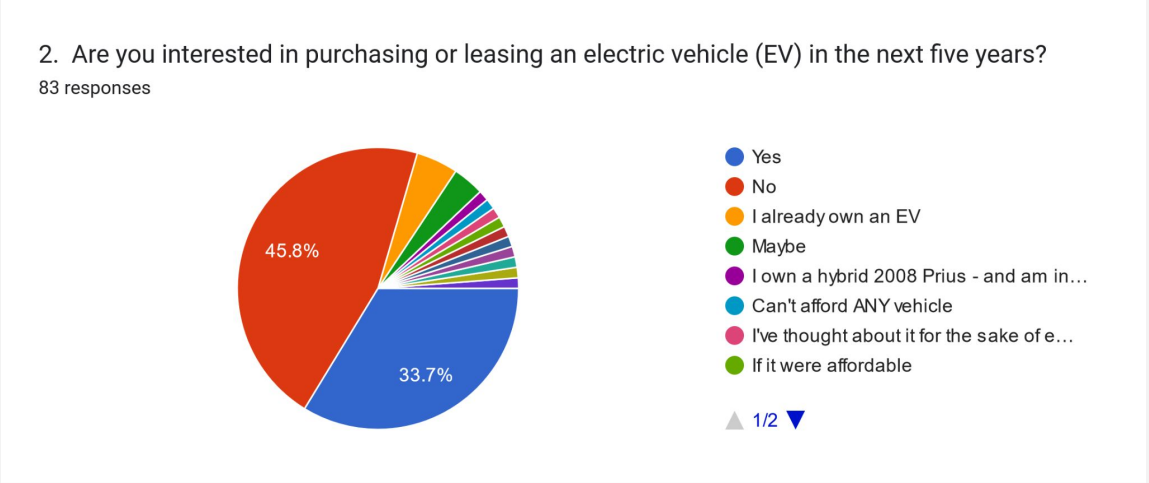
83 responses



LIDAC survey

Are you interested in purchasing an EV in the next five years?

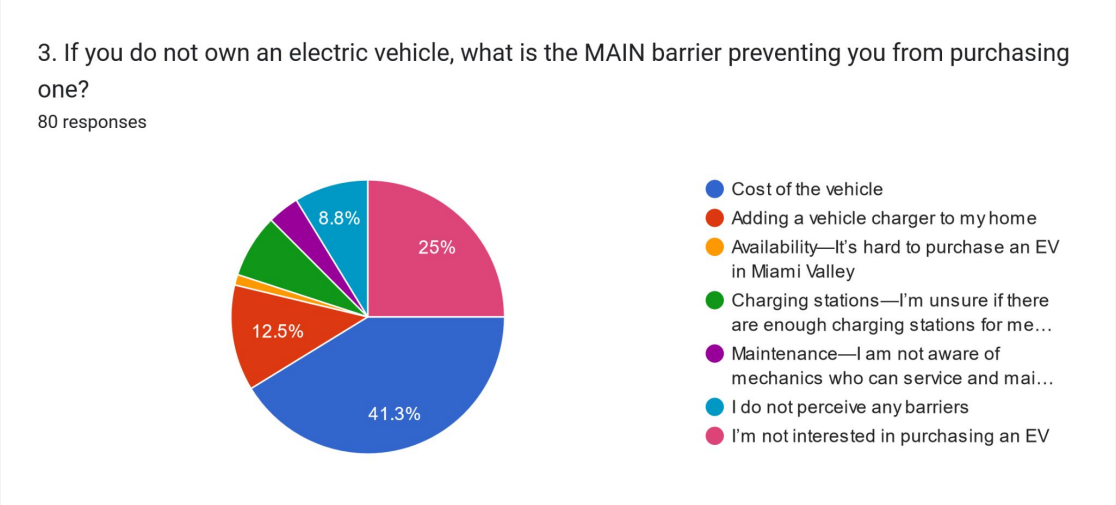
No- 46%
Yes-34%



LIDAC survey

Why not?

Cost- 41%
Not interested-25%

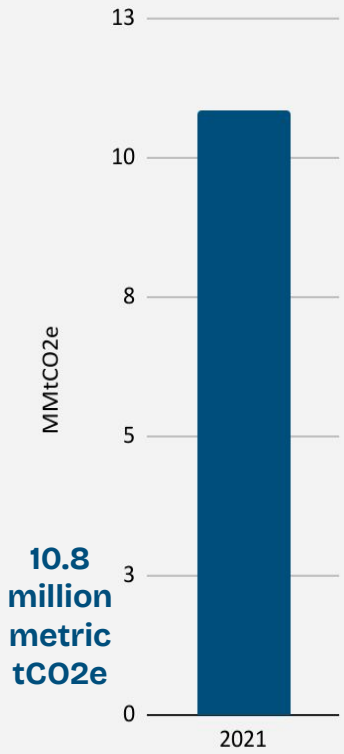


PART 2

Pathways for the Miami Valley Region

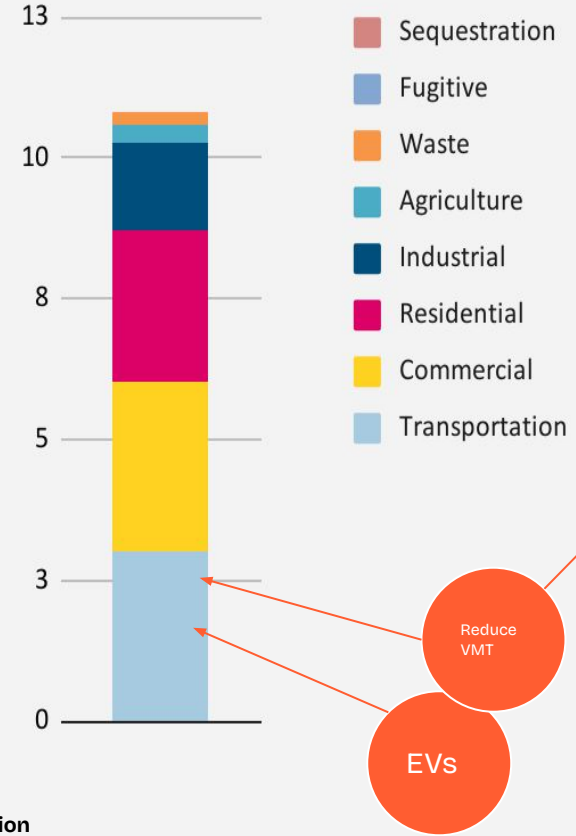
Sustainability Solutions Group

The Starting Point

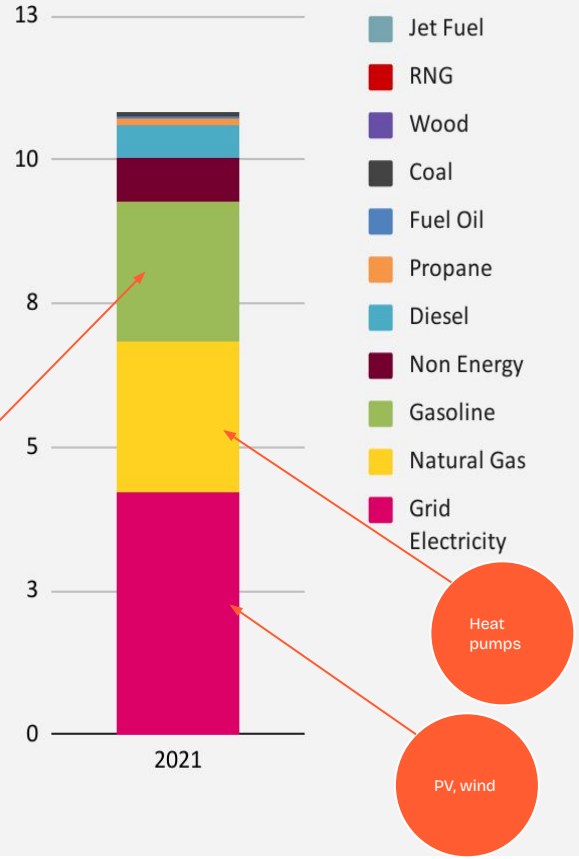


10.8 million metric tCO2e

By sector



By energy source



Business as Usual (BAU) Scenario

Business as Planned (BAP) Scenario

Low Carbon Scenario (LCS)

Business as Usual (BAU) Scenario

Business as Planned (BAP) Scenario

Low Carbon Scenario (LCS)

Changes in population up to 2050

Changes in employment up to 2050

Hotter summers and milder winters

New project development in Wolf Creek

Ohio Building code 2021 for residential and commercial

Vehicle fuel economy standards

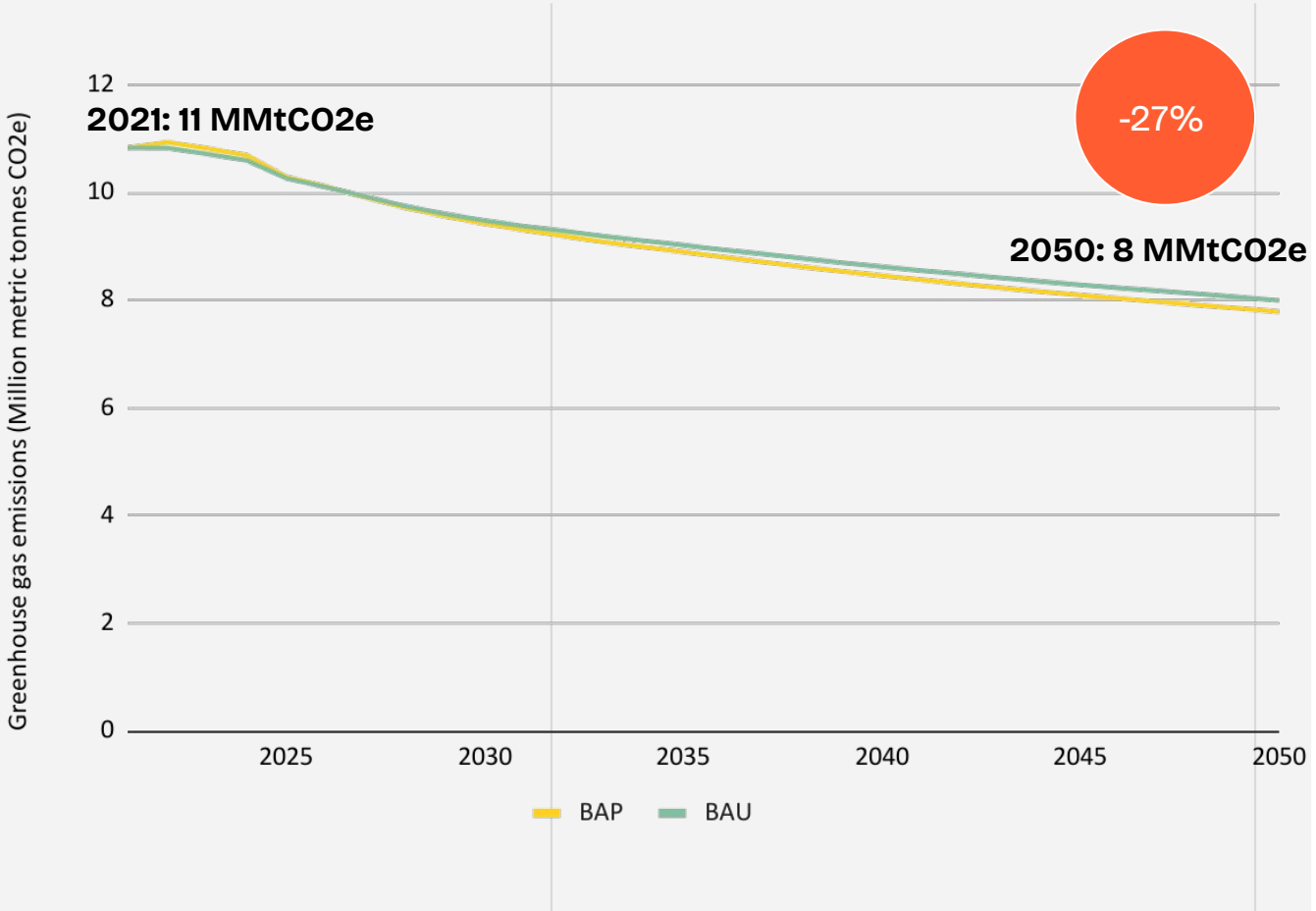
EV penetration increases slightly

BAU + IRA impact + municipal fleet

Composting facility Montgomery County

Renewable energy - Solar for All Dayton

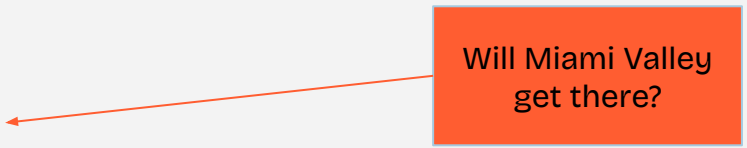
Where are we heading to?



Targets

Overall targets are recommended to be aligned with U.S. targets

U.S. Target: 61-66% reduction in greenhouse emissions from 2005 levels by 2030, and net-zero emissions by 2050.



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Composting facility Montgomery County

Renewable energy - Solar for All Dayton

New buildings more efficient

Increase alternative transportation modes

More electric vehicles

Reduce waste generation

Increase on-site generation

Electrifying heating/cooling and appliances

Building retrofits

Scenario Community First

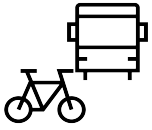
Scenario Energy Transition

Region-wide

(Sooner) Retrofit existing buildings (Later)

(Focus on LIDACs) More efficient buildings

(Sooner) Building uses Electrification (Later)

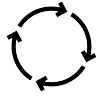


Vehicle electrification

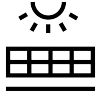
Increased alternative transportation by trip distance

Composting waste

Anaerobic digestion of waste



Reducing waste per capita



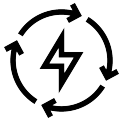
(on-site generation) Renewable energy (buildings and industry) (large-scale)

District energy

Scenario Community First

Scenario Energy Transition

Region-wide



RNG to displace natural gas

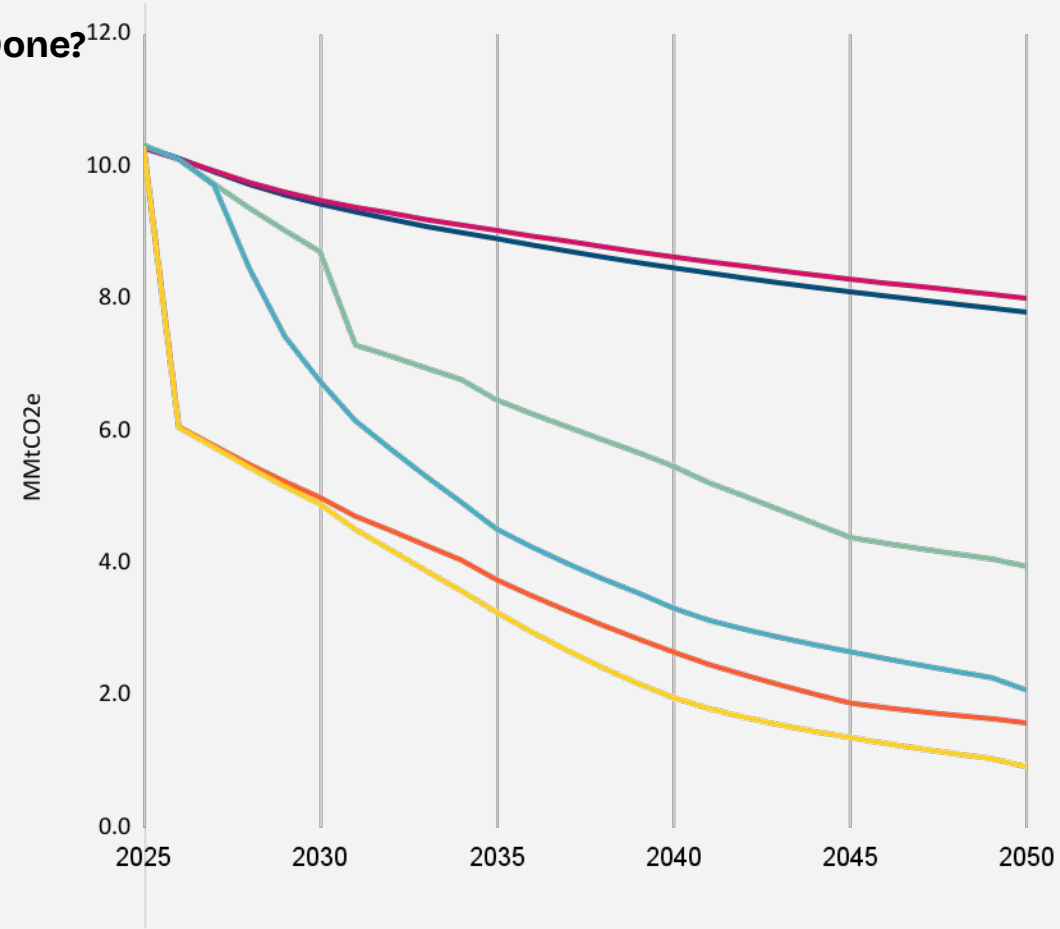
Electrification of industrial processes

Energy efficient industries

Hydrogen for industrial processes

CCS for industrial emissions

What Can Be Done?
The Scenarios



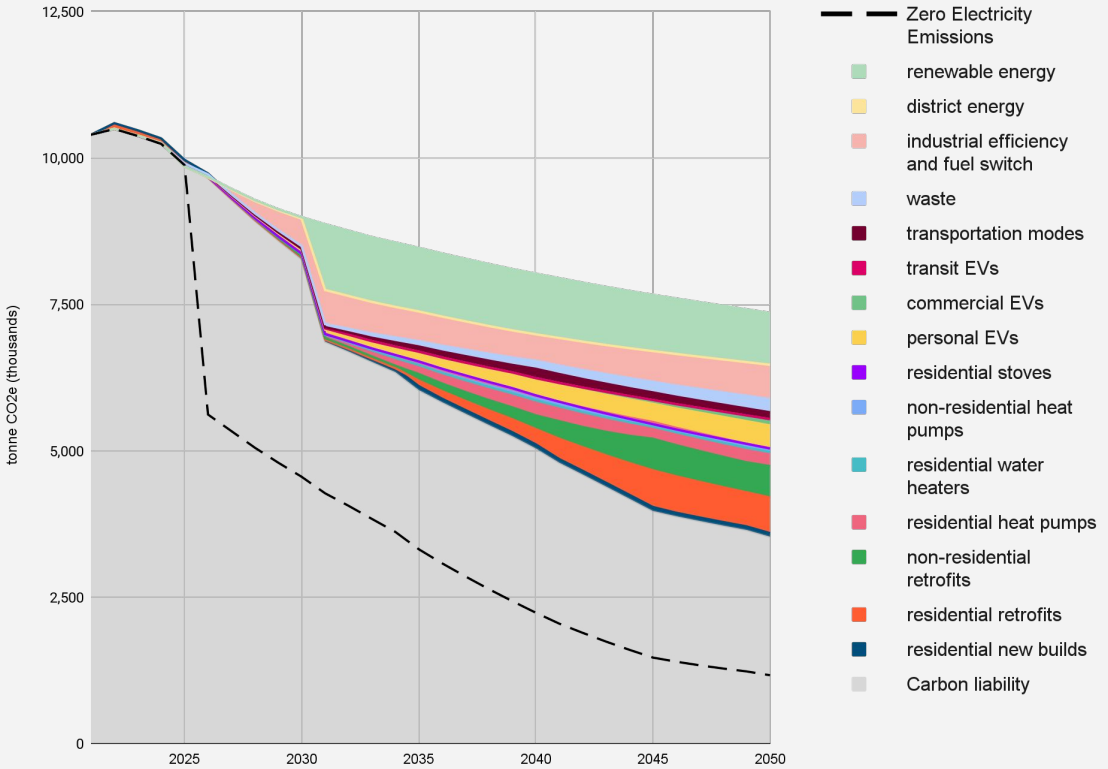
-62%

-80%

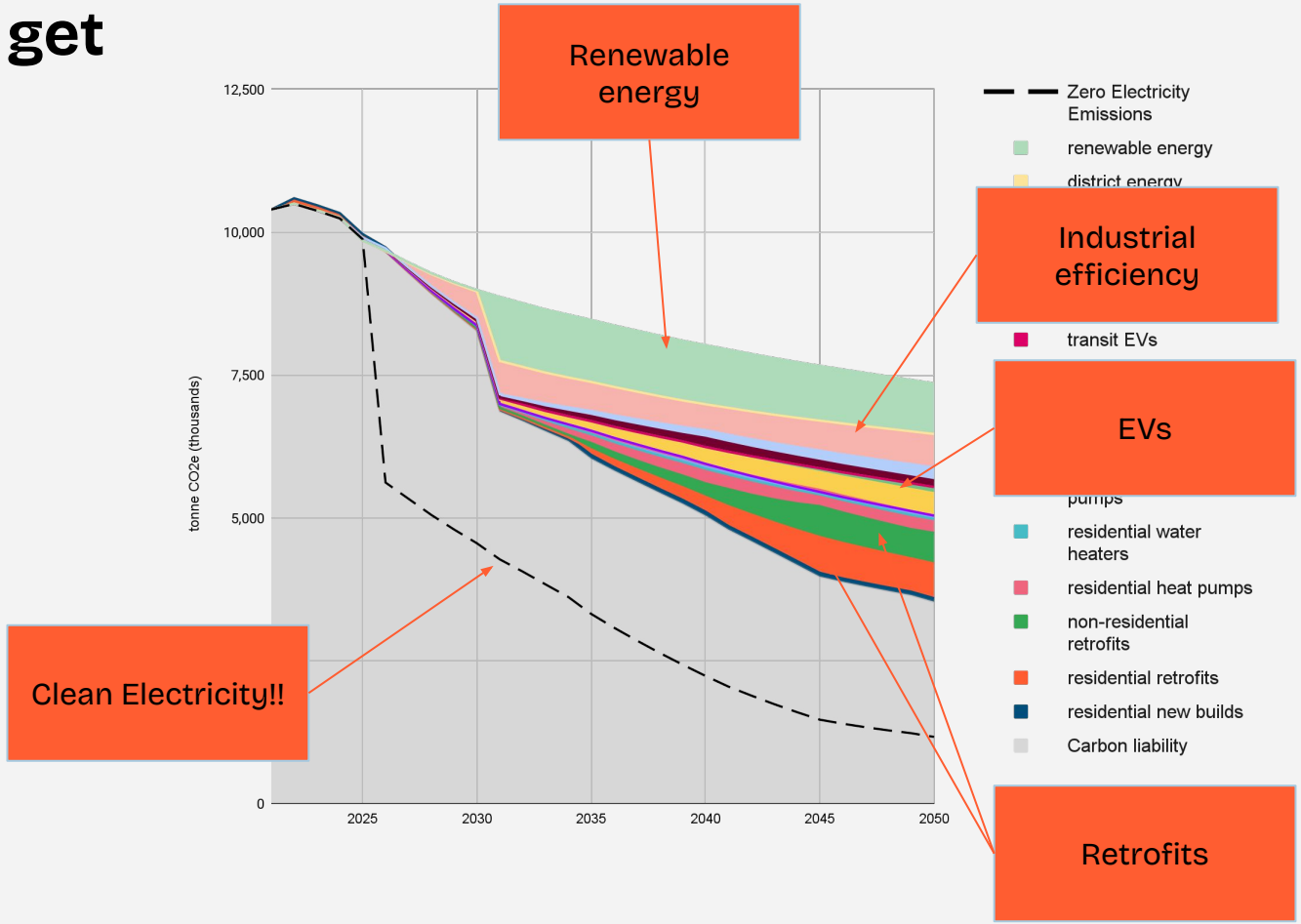
-85%

-91%

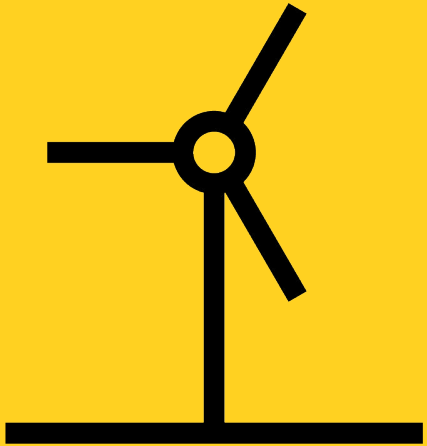
How did we get here?



How did we get here?



Renewable energy is the lynchpin of deep emissions reductions



Targets

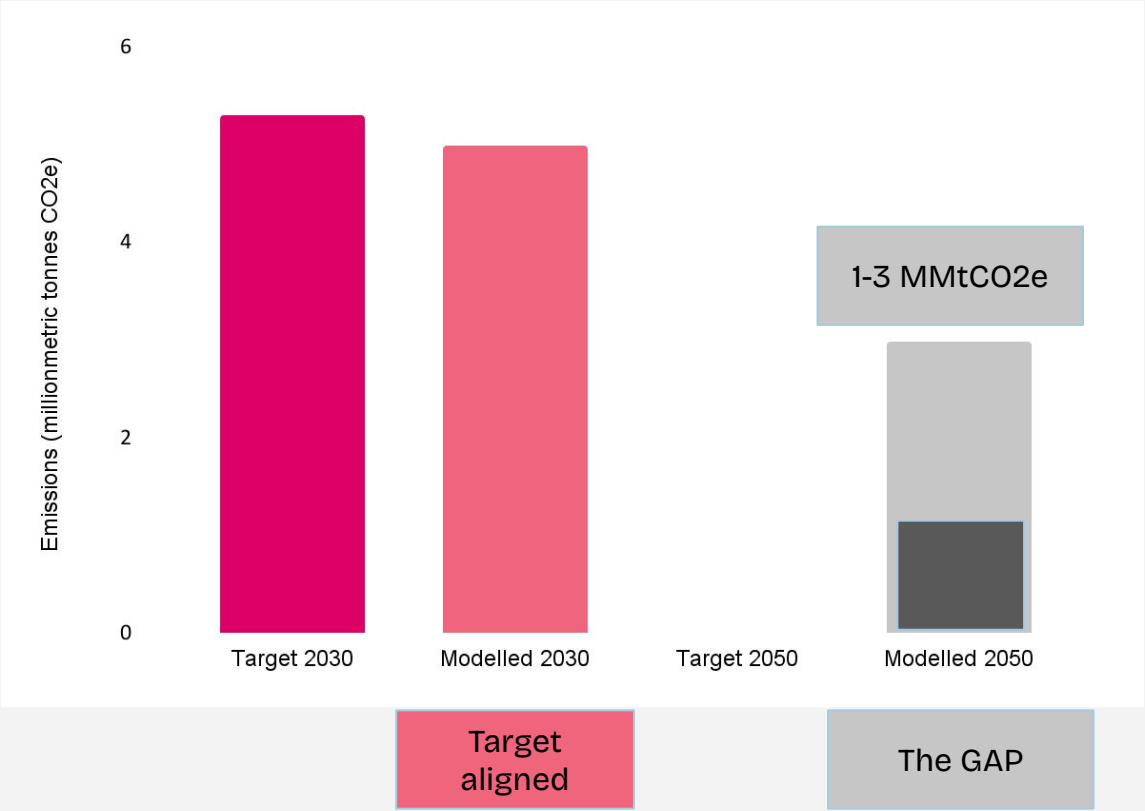
Overall targets are recommended to be aligned with U.S. targets

U.S. Target: 61-66% reduction in greenhouse emissions from 2005 levels by 2030, and net-zero emissions by 2050.

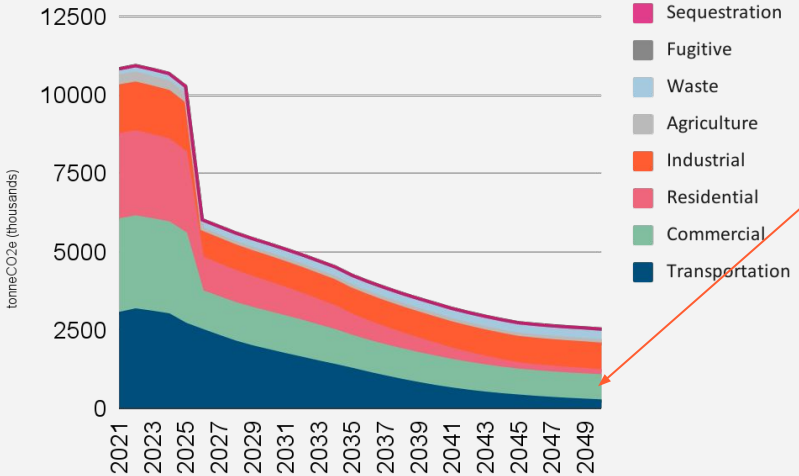
Miami Valley target:

Interim target: limiting GHG emissions in to 5.3 $MMtCO_2e$ in 2030.

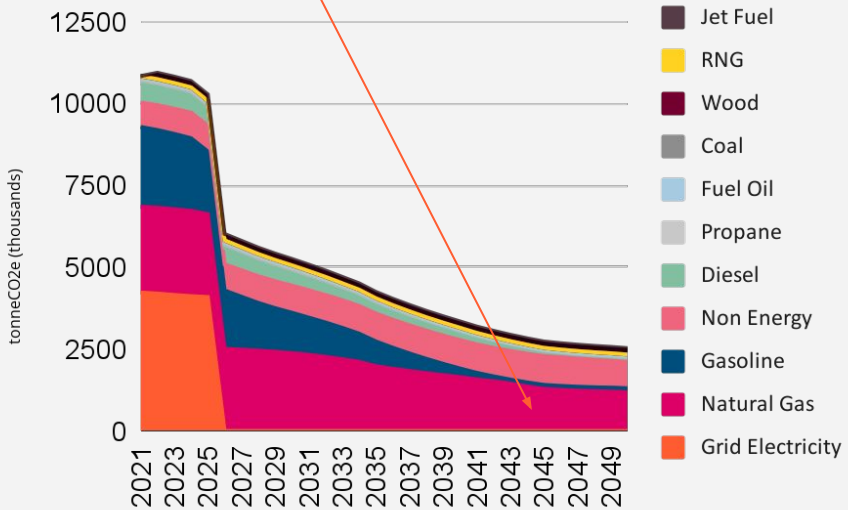
Long term target: 0 tonnes of CO_2e by 2050.



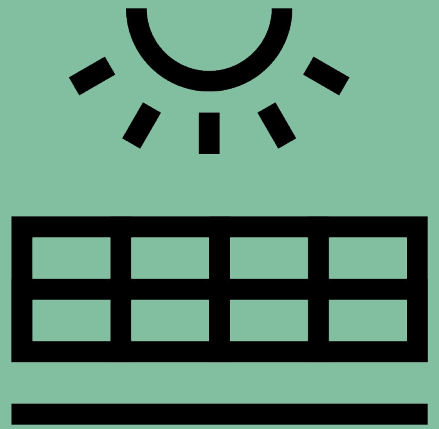
Opportunities for more reductions?



Natural gas in commercial sector



Is the Community First the preferred scenario?

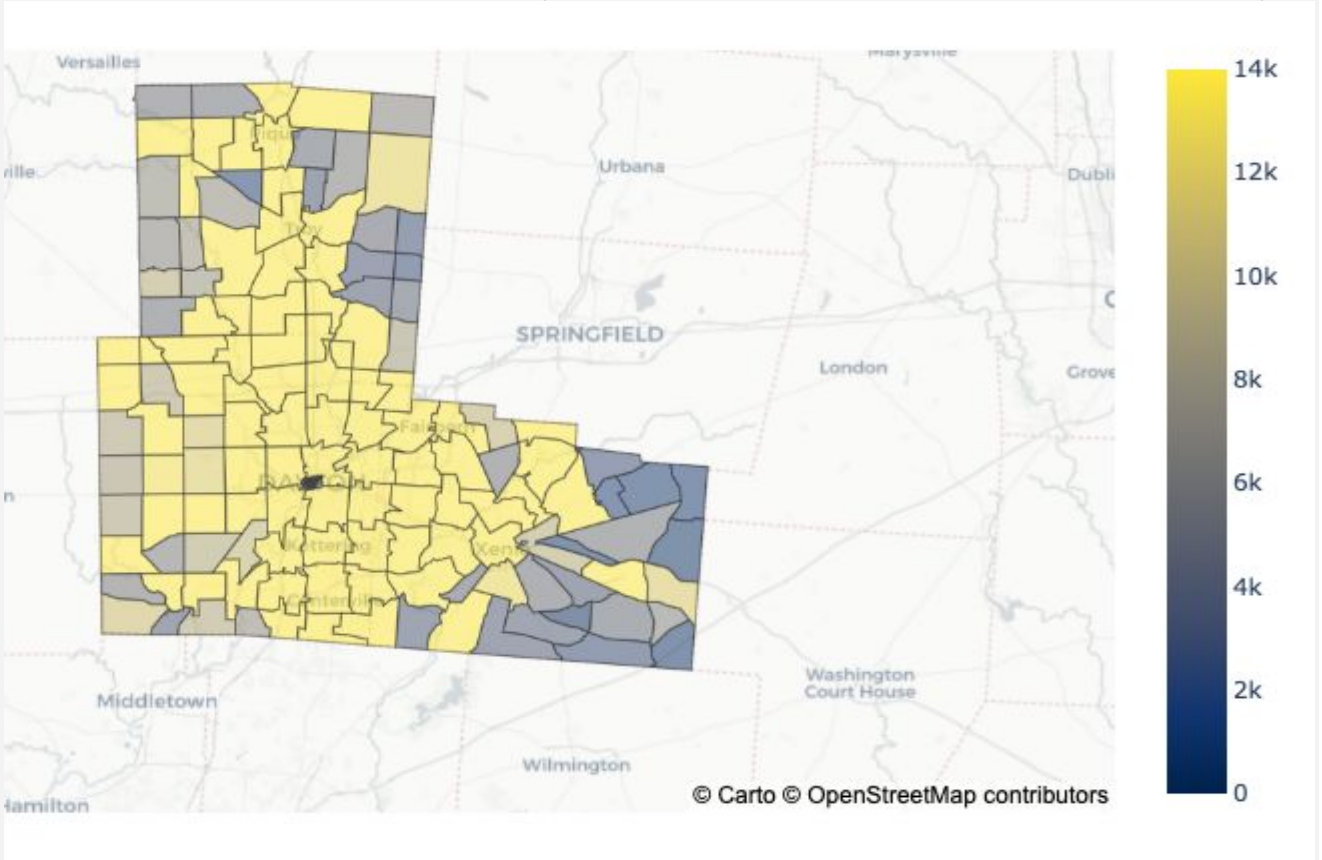


PART 3

Local pathways results

Sustainability Solutions Group

Spatial Distribution of Emissions (total)

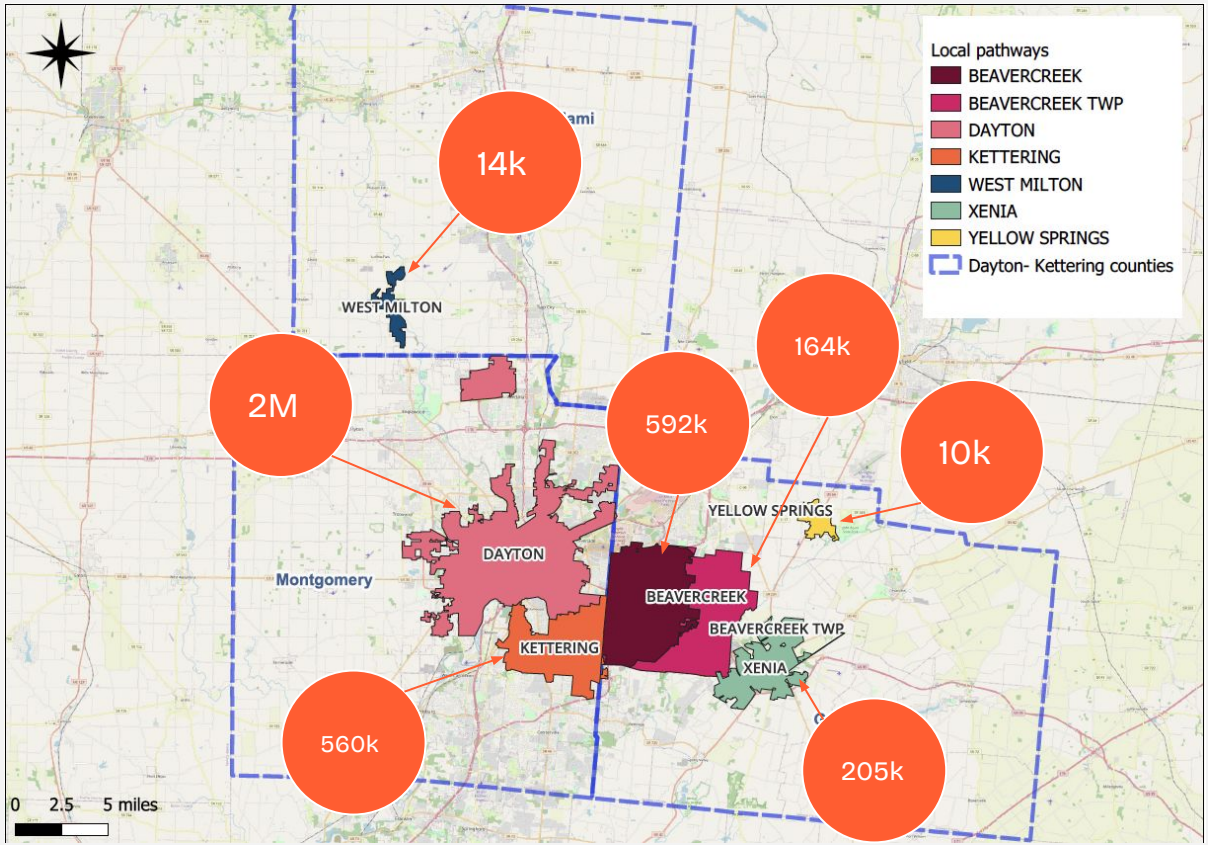


Scenario Community First

Scenario Energy Transition

Region-wide
City of Dayton
City of Xenia
City of Beavercreek
Beavercreek Township
Village of West Milton
Village of Yellow Springs
City of Kettering

What Can Be Done?
Local Pathways



What Can Be Done?
Local Pathways

33%

3.6 MMtCO2 of 10.8 MMtCO2e

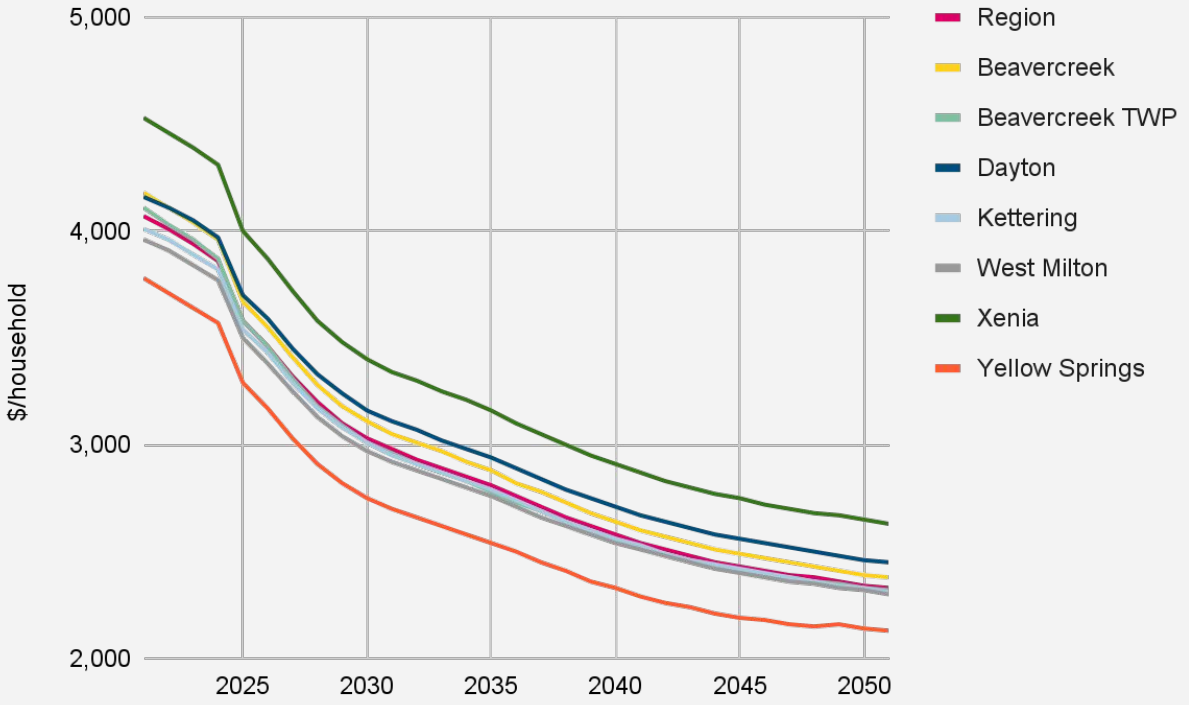
Beavercreek
Beavercreek TWP
Dayton
Kettering
West Milton
Xenia
Yellow Springs

Test

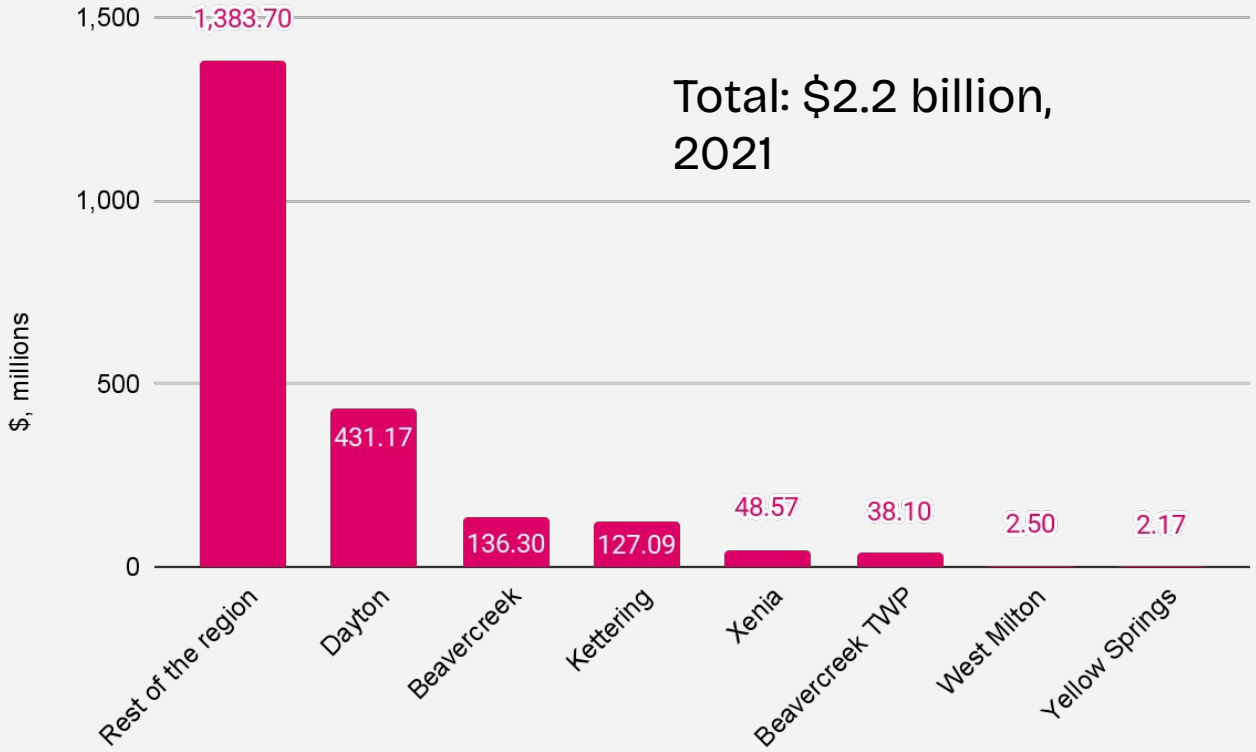
Which community spends the most on energy per household? Lowest?

Beavercreek
Beavercreek TWP
Dayton
Kettering
West Milton
Xenia
Yellow Springs

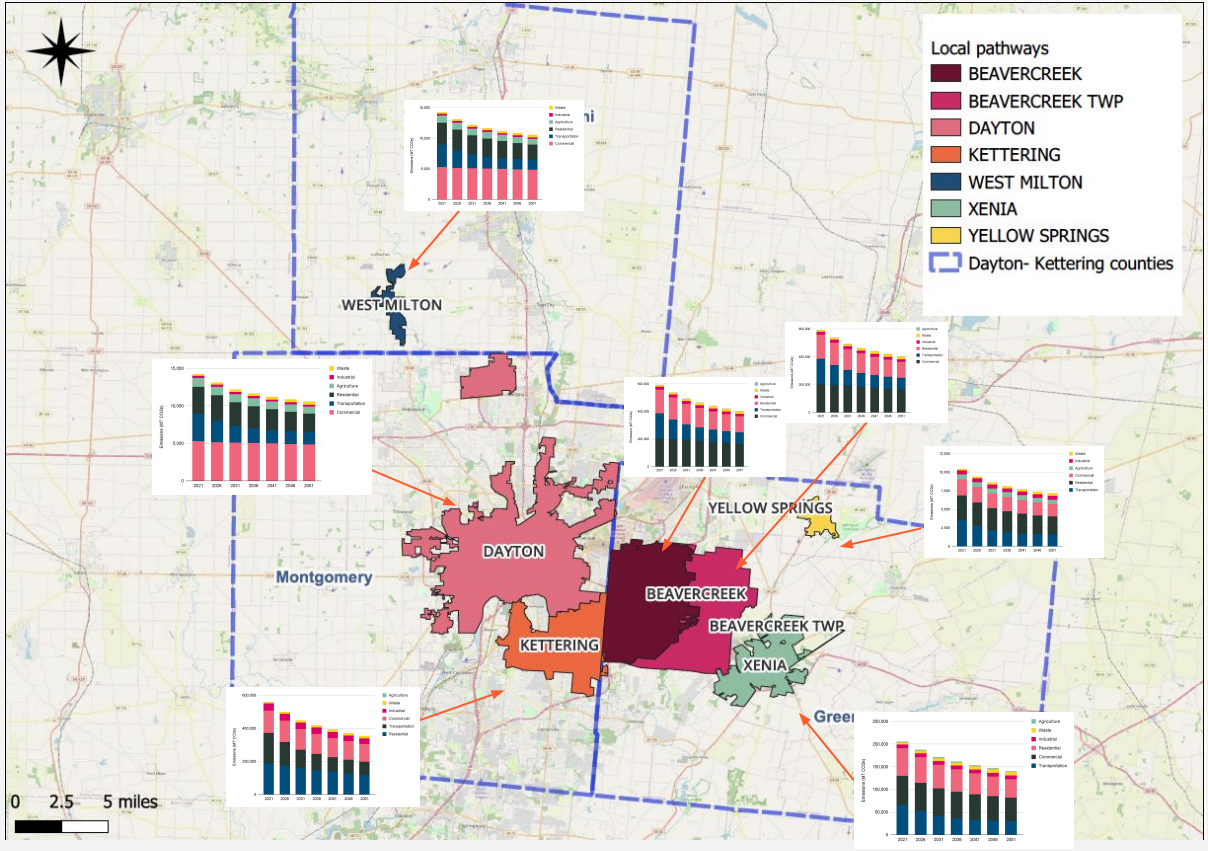
Energy Expenditures



Total Energy Expenditures



What Can Be Done?
Local Pathways



Increase renewable Energy

Retrofit existing buildings

Vehicle electrification

Waste management

Increase active transportation & transit use

Net-zero new building construction

Re-energized, clean industry

Local Climate Plans

33%

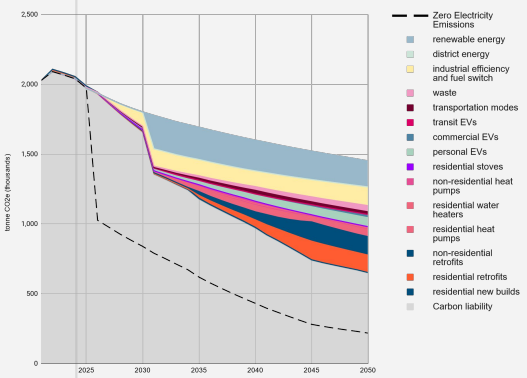
3.6 MMtCO2 of 10.8 MMtCO2e

Reduce:

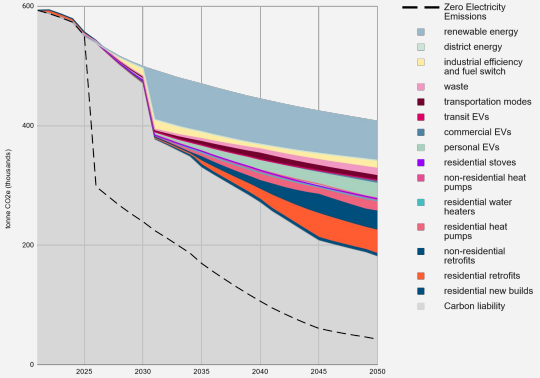
62% relative to 2021 by 2050

23% of total regional emissions

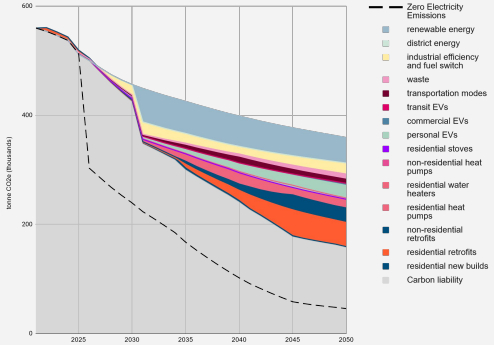
What additional opportunities can we explore?



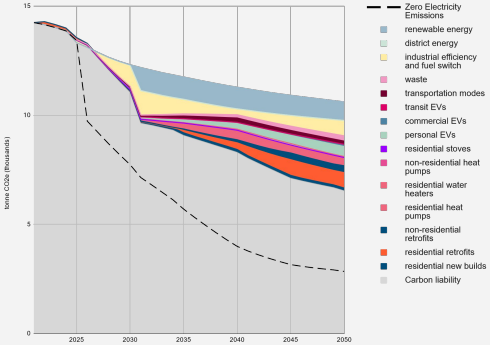
City of Dayton



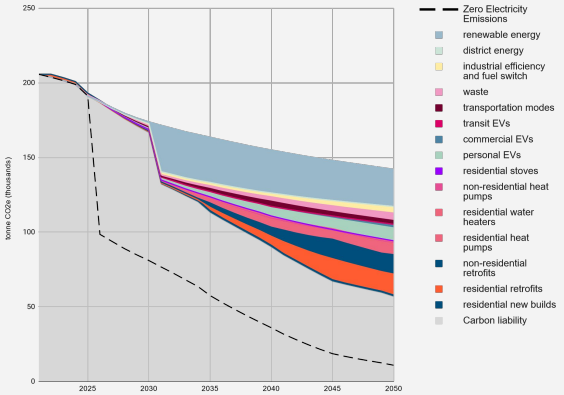
City of Beavercreek



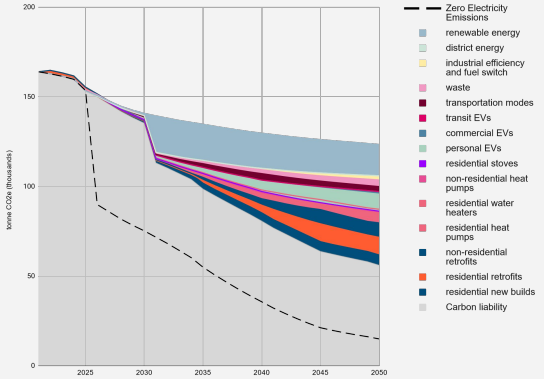
City of Kettering



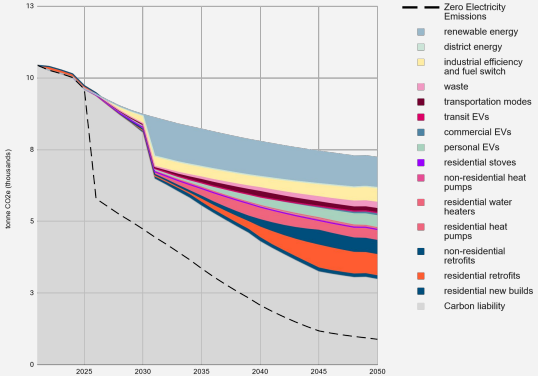
Village of West Milton



City of Xenia



Beavercreek Township



Village of Yellow Springs

PART 4

How do we prepare for implementation?

Sustainability Solutions Group

Workforce development

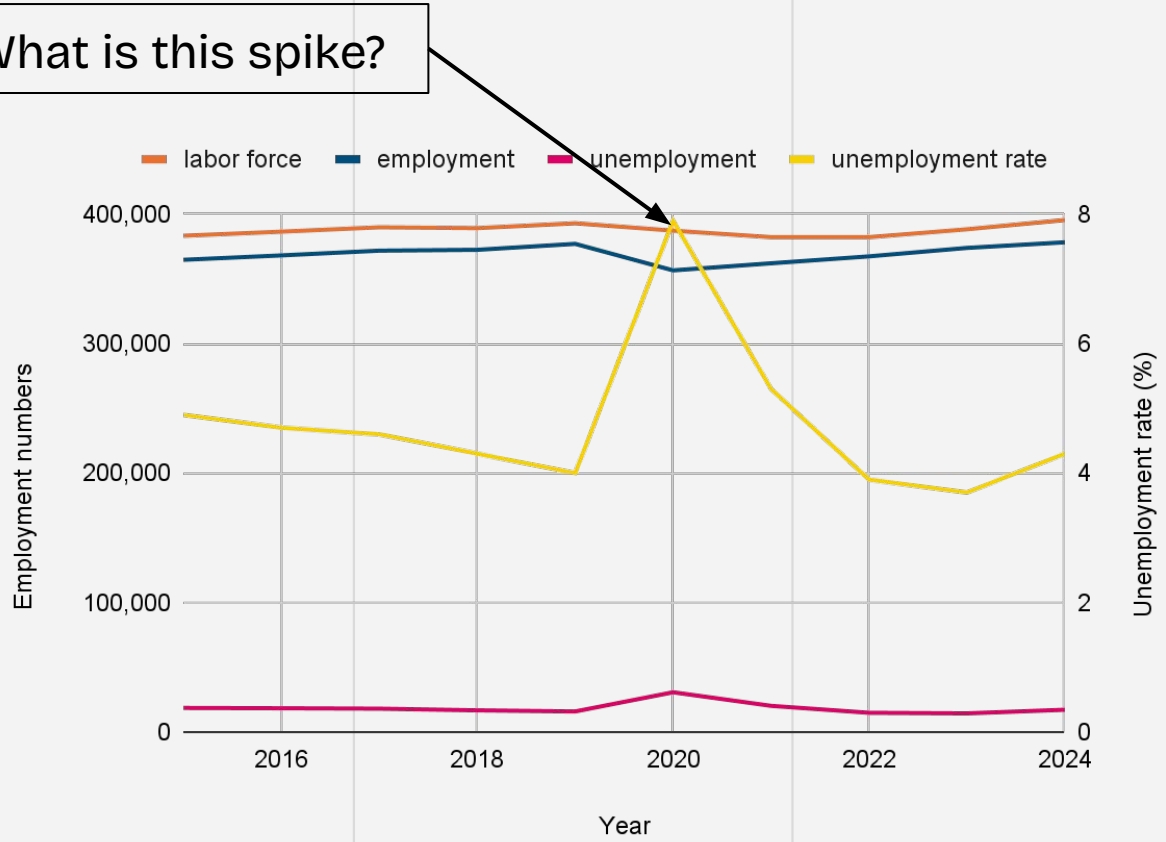
01

Part 1: Conduct an analysis of potential workforce shortages associated with CCAP actions

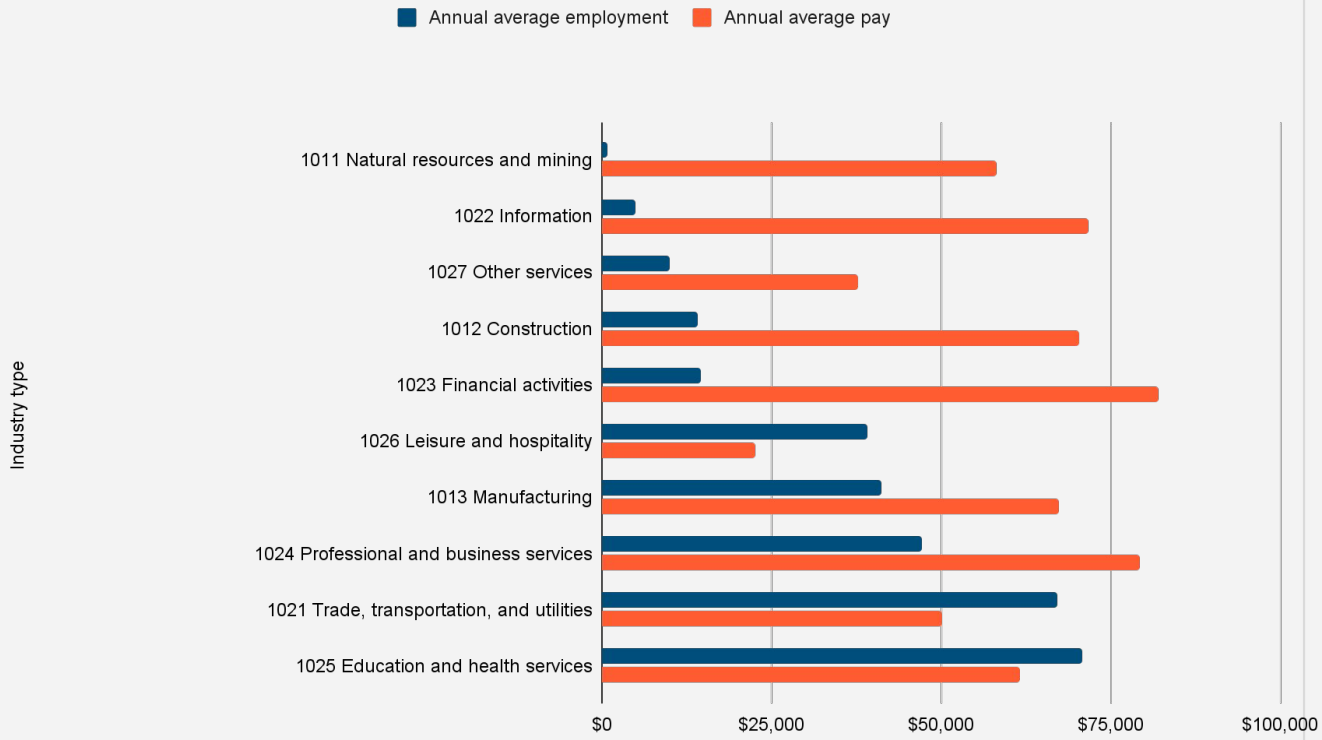
02

Part 2: Identify potential actions and solutions to address these challenges, and potential partners at the state, regional, and/or local levels who can help address them

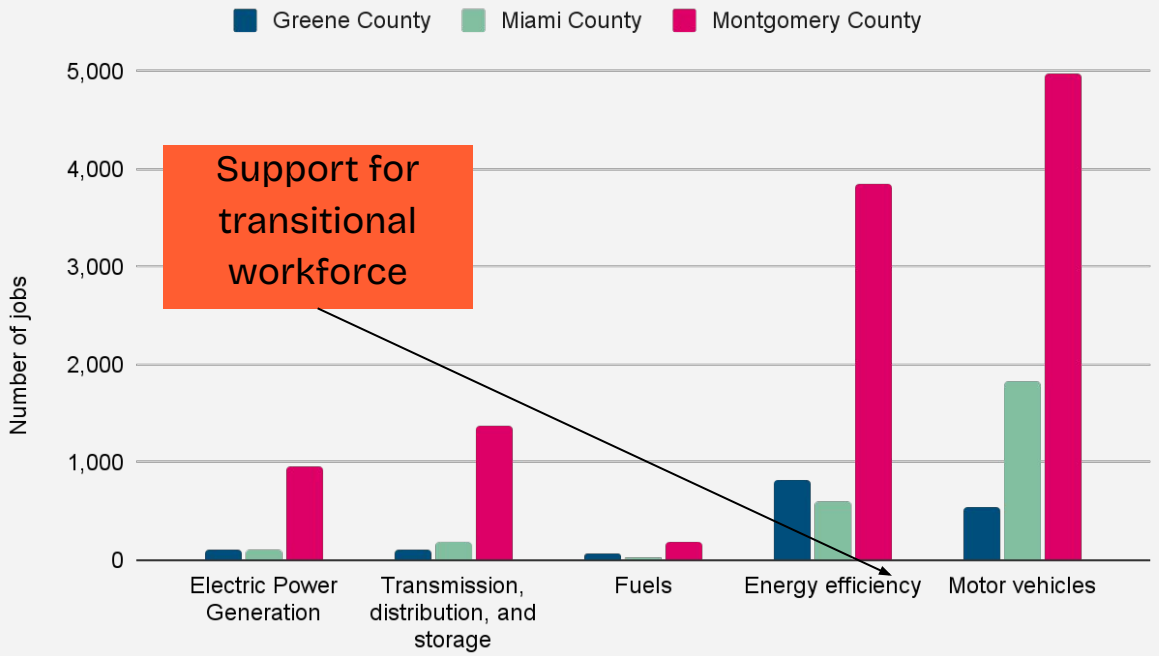
Workforce development



Workforce development
Total employment and average pay

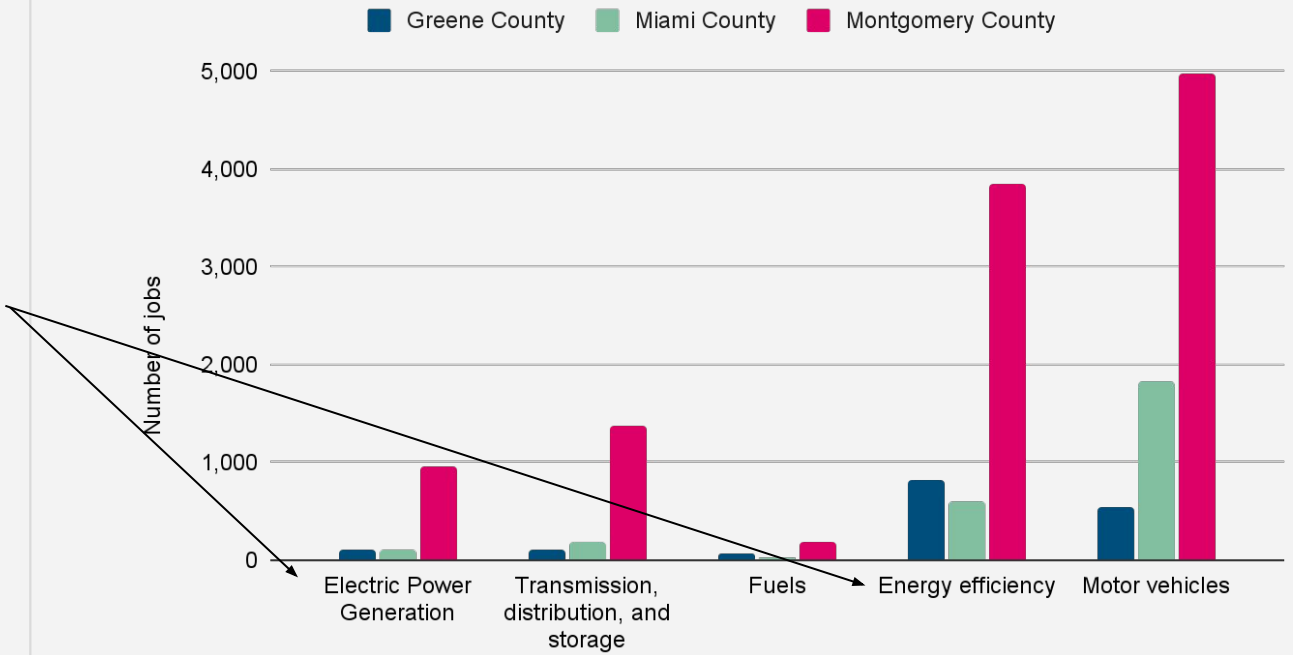


Workforce development
Employment in the Energy Sector



Workforce development

Increase staffing and specialty certification for technical areas



Increase renewable Energy

22111 Electric power generation (solar and wind)

Retrofit existing buildings

2382 Building Equipment Contractors (electrical, wiring, plumbing, heating and air- conditioning)

Vehicle electrification

335312 Motor and Generator Manufacturing (non-ICE vehicles)

Waste management

924110 Public sector environmental outreach (waste reduction campaigns)
562219 Waste Treatment and Disposal

Increase active transportation & transit use

237310 Highway, Street and Bridge Construction

Net-zero new building construction

2361 Residential Building Construction
2362 Nonresidential Building Construction (industrial, commercial and institutional)

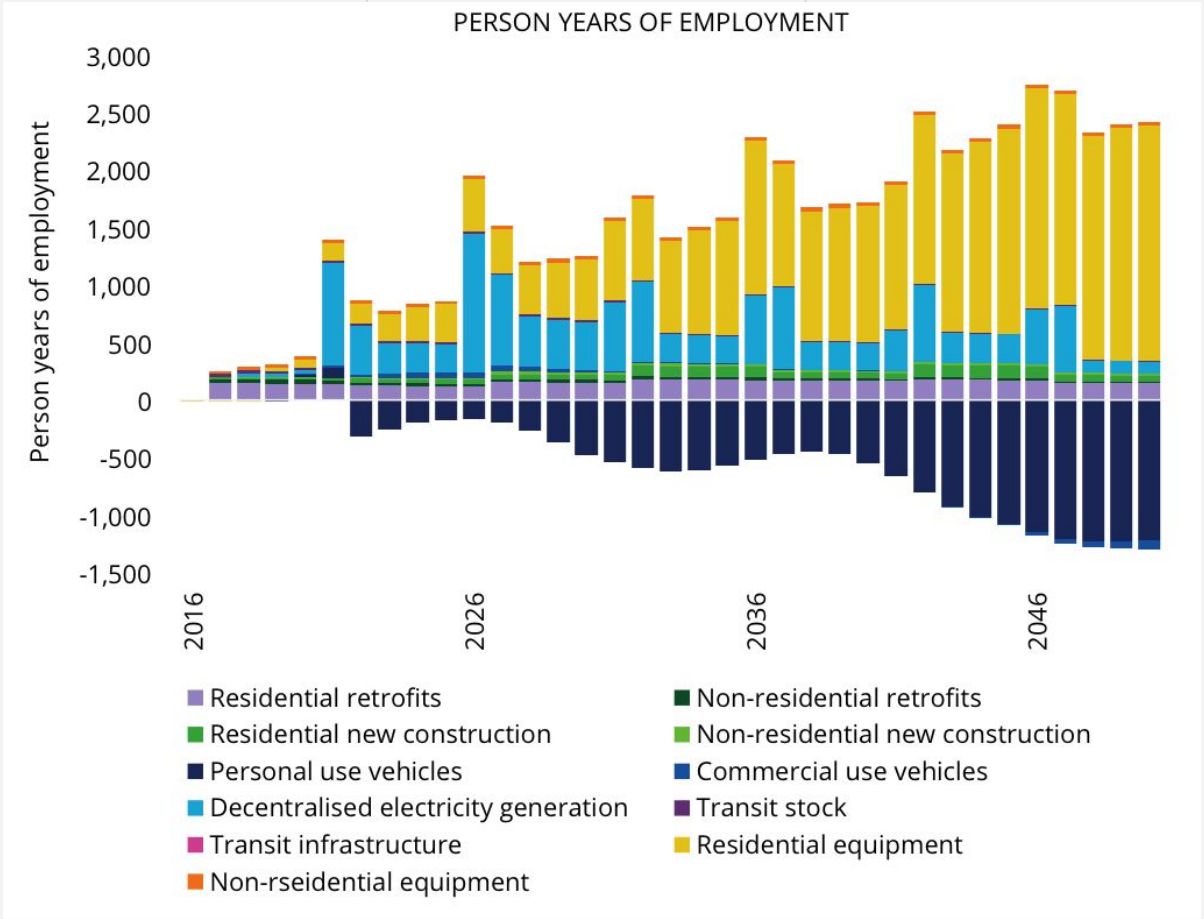
Re-energized, clean industry

334515 Energy measuring equipment, electrical, Manufacturing
424690 Other Chemical and Allied Products Merchant Wholesalers

Workforce

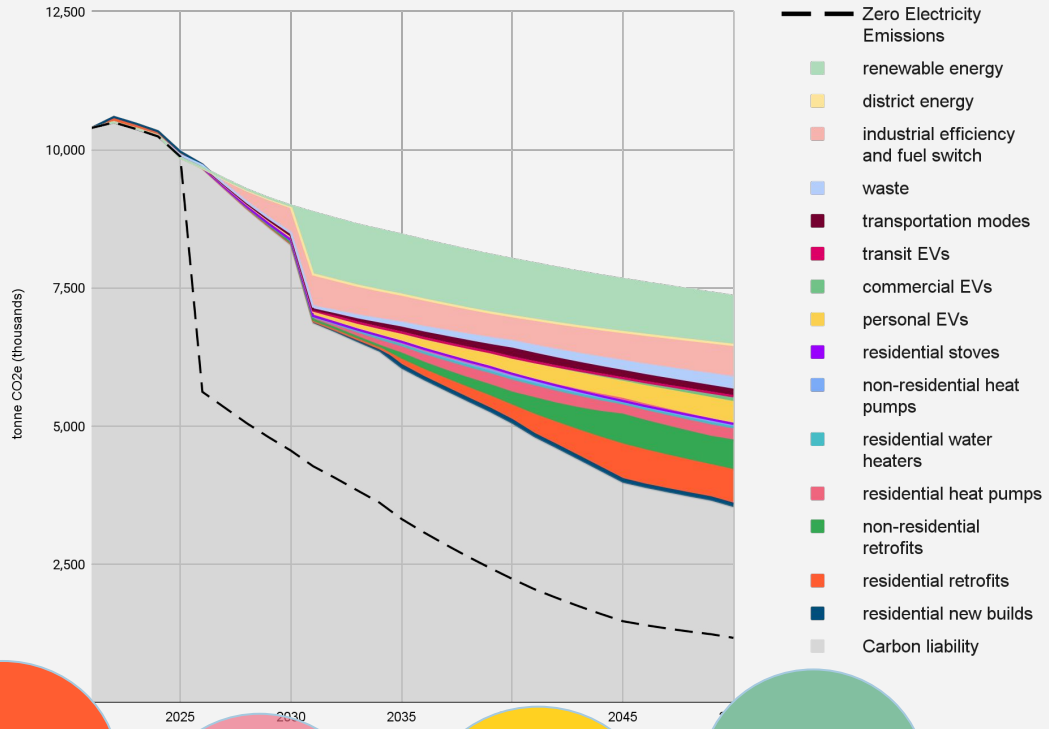
Example of jobs created by the implementation of the CCAP

Shortages and/or surplus by sector



Preliminary priority sectors for workforce development

What are the priority sectors for workforce development?



Buildings

Industry

Transportation - Motor vehicle

Energy

Communication strategy

We need your help spreading the word

Your help in sharing this opportunity with your networks will be greatly appreciated.

The comment period will provide an important chance for residents and organizations to weigh in on proposed strategies and opportunities for the region.

Official announcement and links will be shared as soon as the comment period opens.

Preliminary commenting period dates:

June 2nd to July 2nd, 2025.

Thank you

Sustainability
Solutions Group