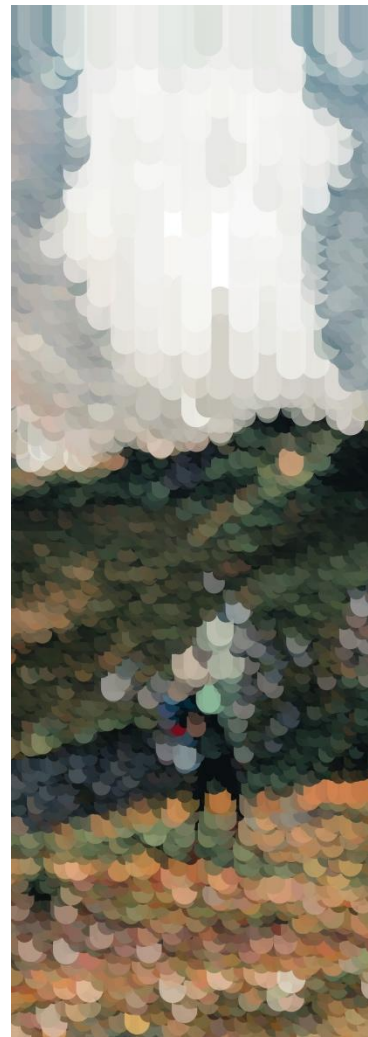


Comprehensive Climate Action Plan for the Miami Valley Region

Miami Valley Regional Planning Commission

Sustainability
Solutions Group



Today's agenda

01

Business as Usual and Business as Planned modeling results

02

Scenario Framework and Actions – What does the future hold?

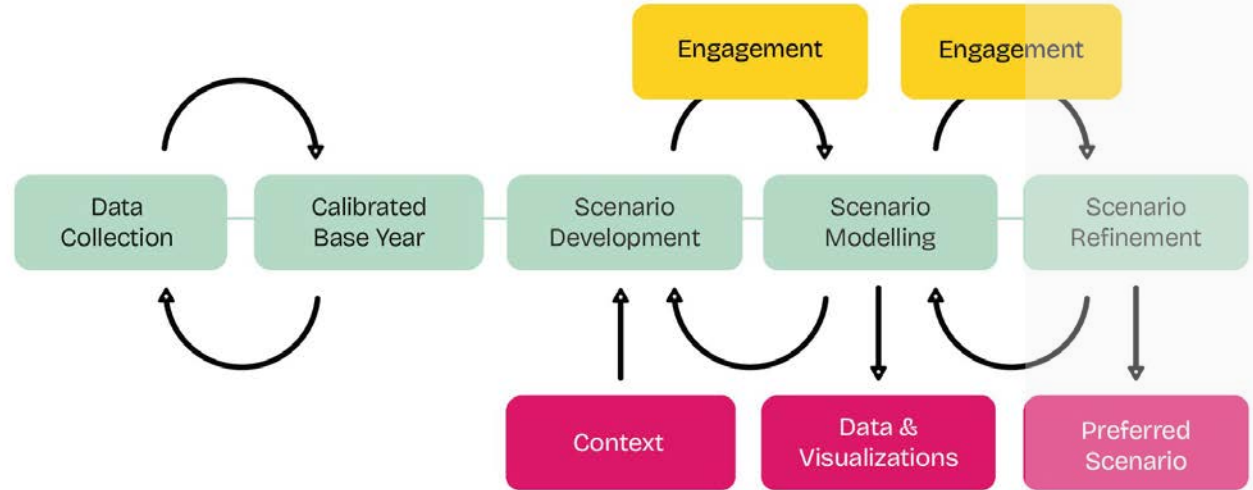
03

Implementation Approaches

PART 1

BAU and BAP

Project overview.



What We Heard

We restored the natural prairie?

Municipalities did everything they can?

The Government mandated action?

There was political alignment?

We made every household carbon

We maximized energy efficiency?

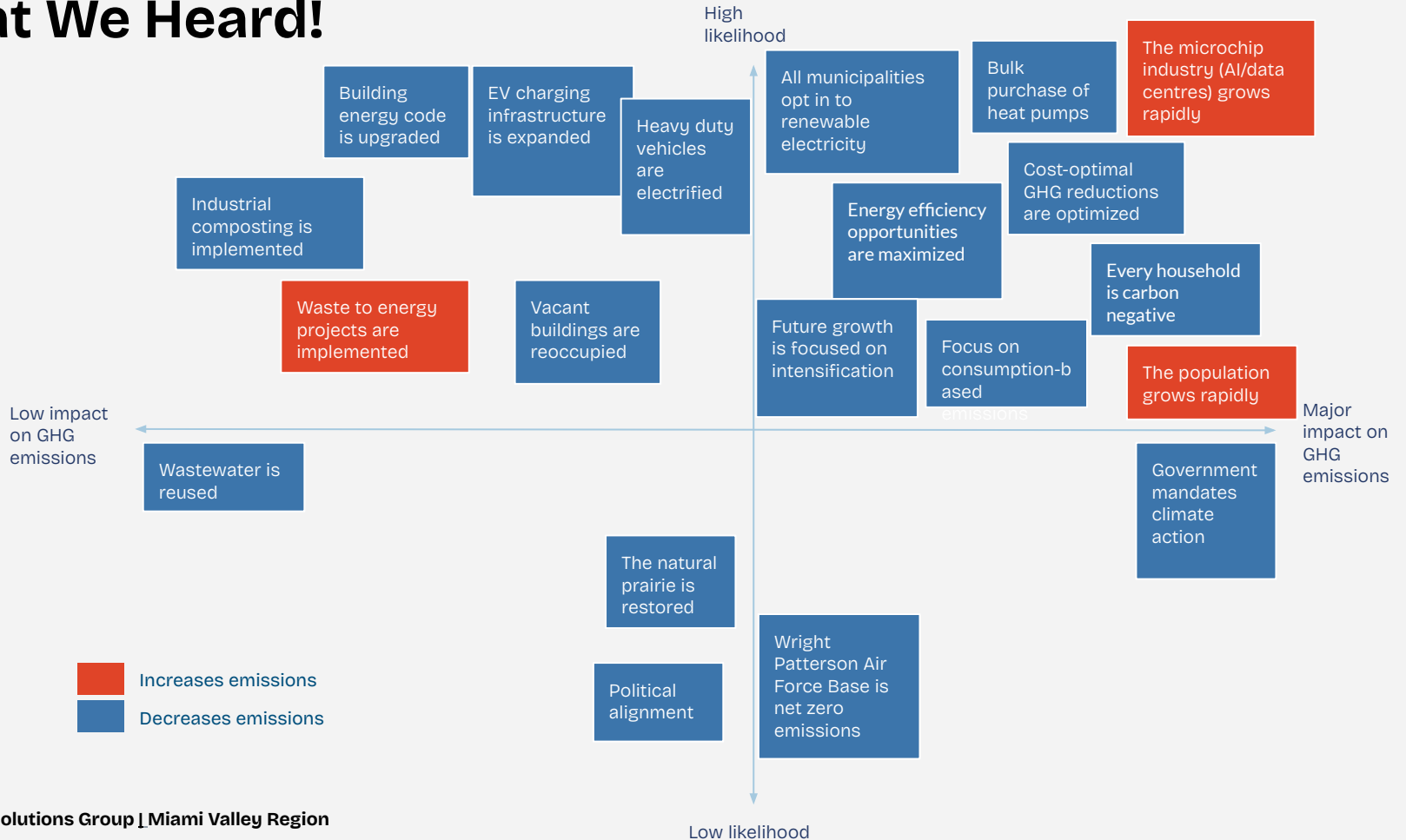
We implemented the cost optimal GHG actions?

The population grew rapidly?

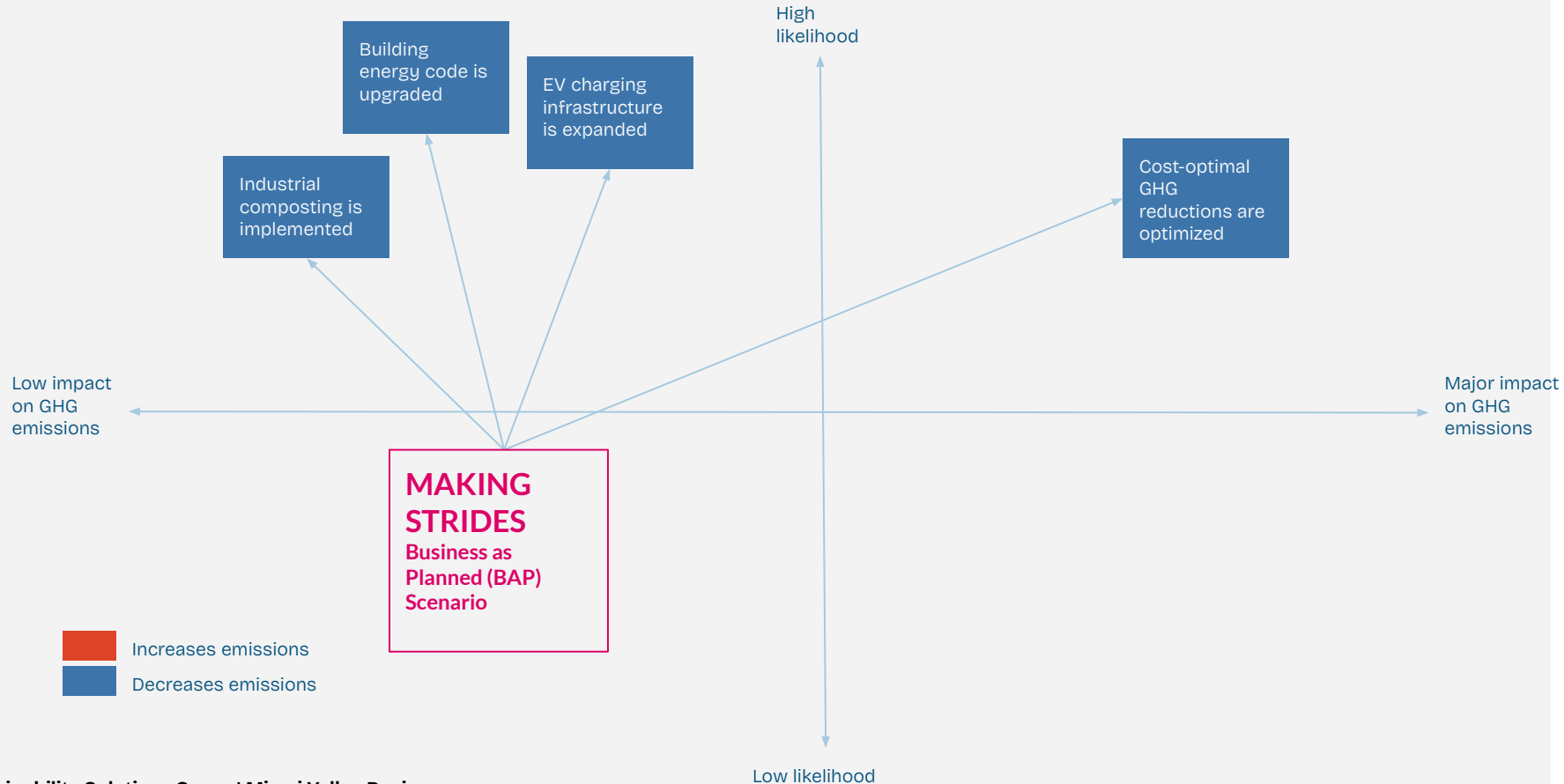
The microchip industry grows in leaps and bounds?

negative?

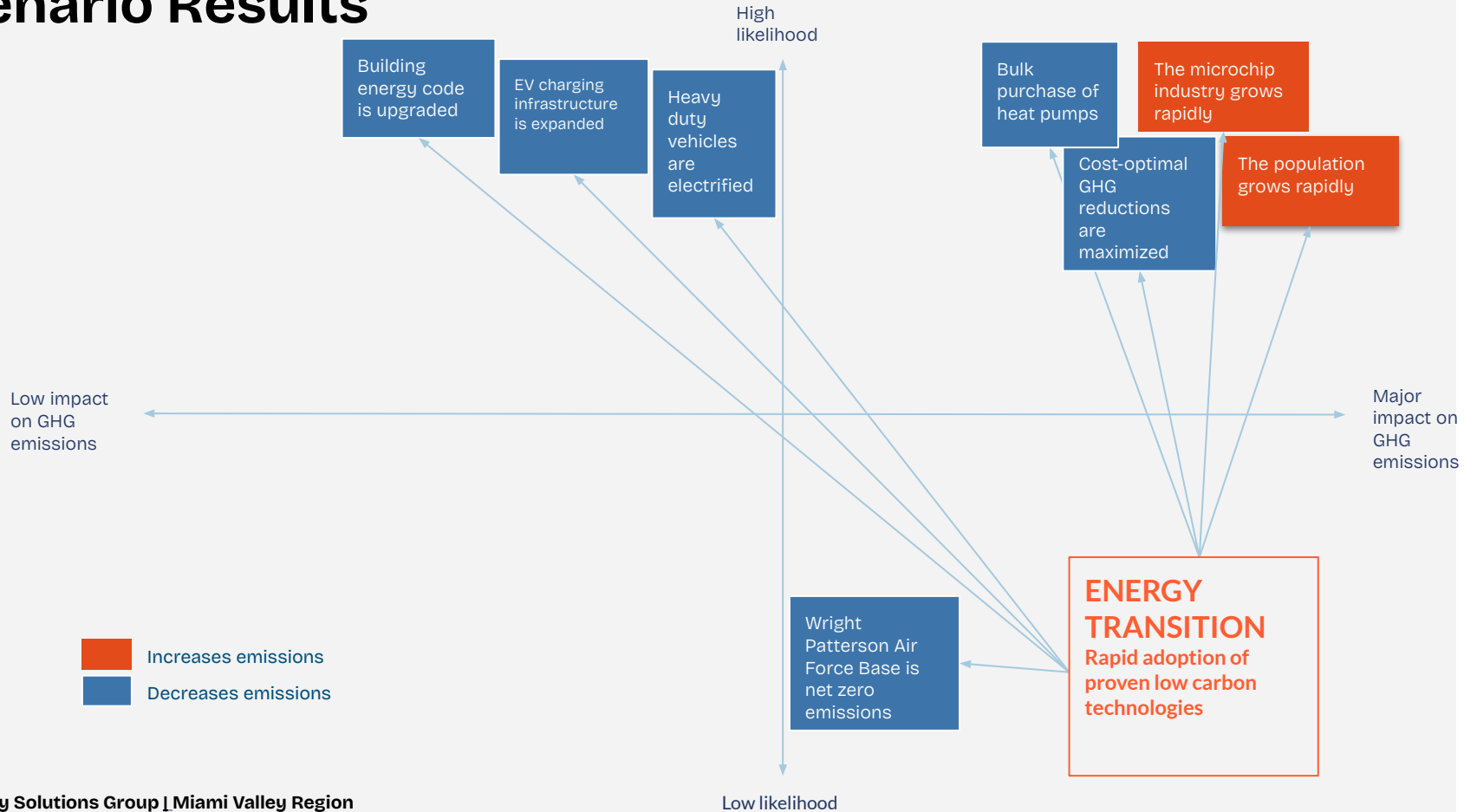
What We Heard!



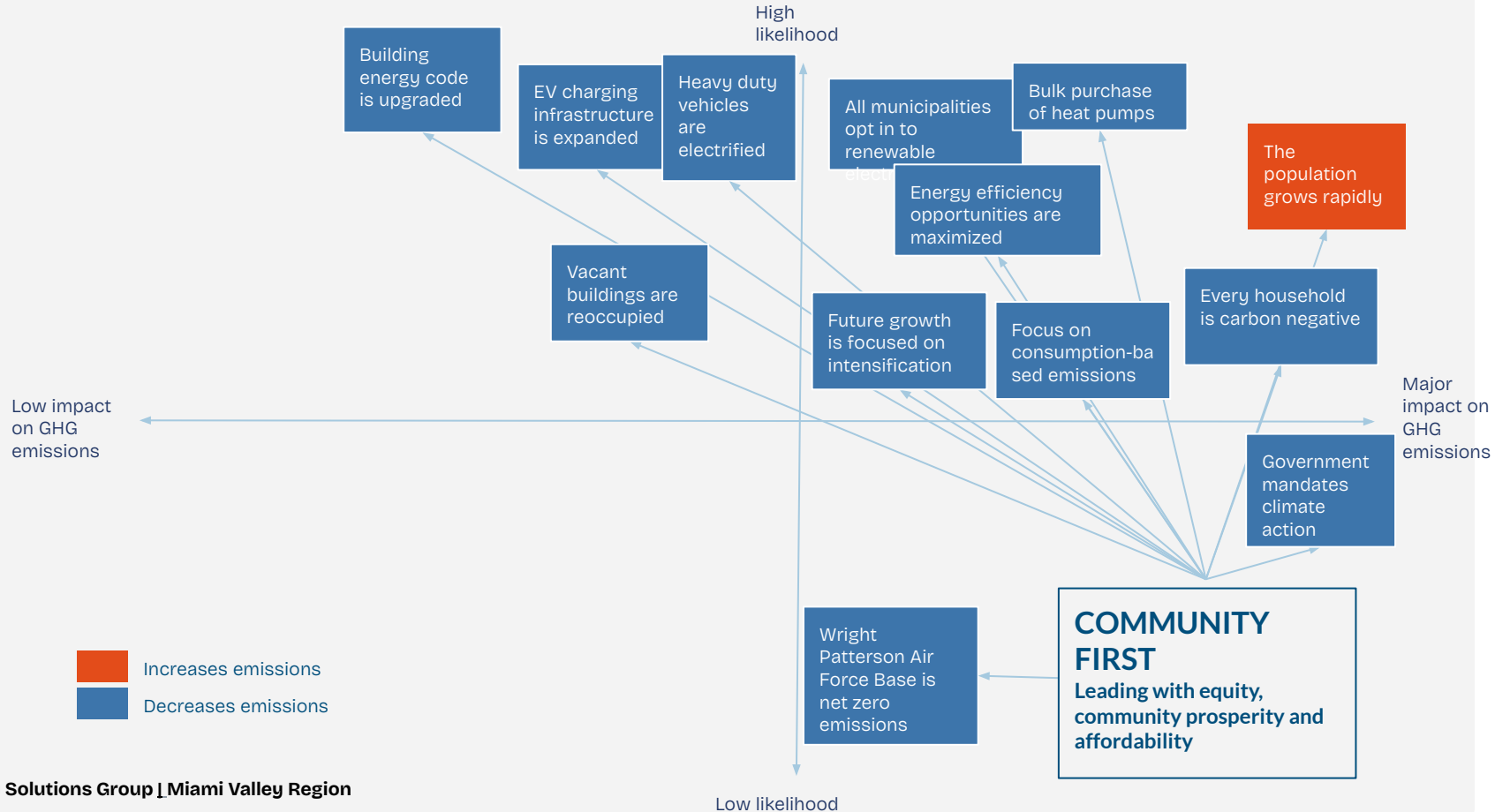
Scenario Results



Scenario Results



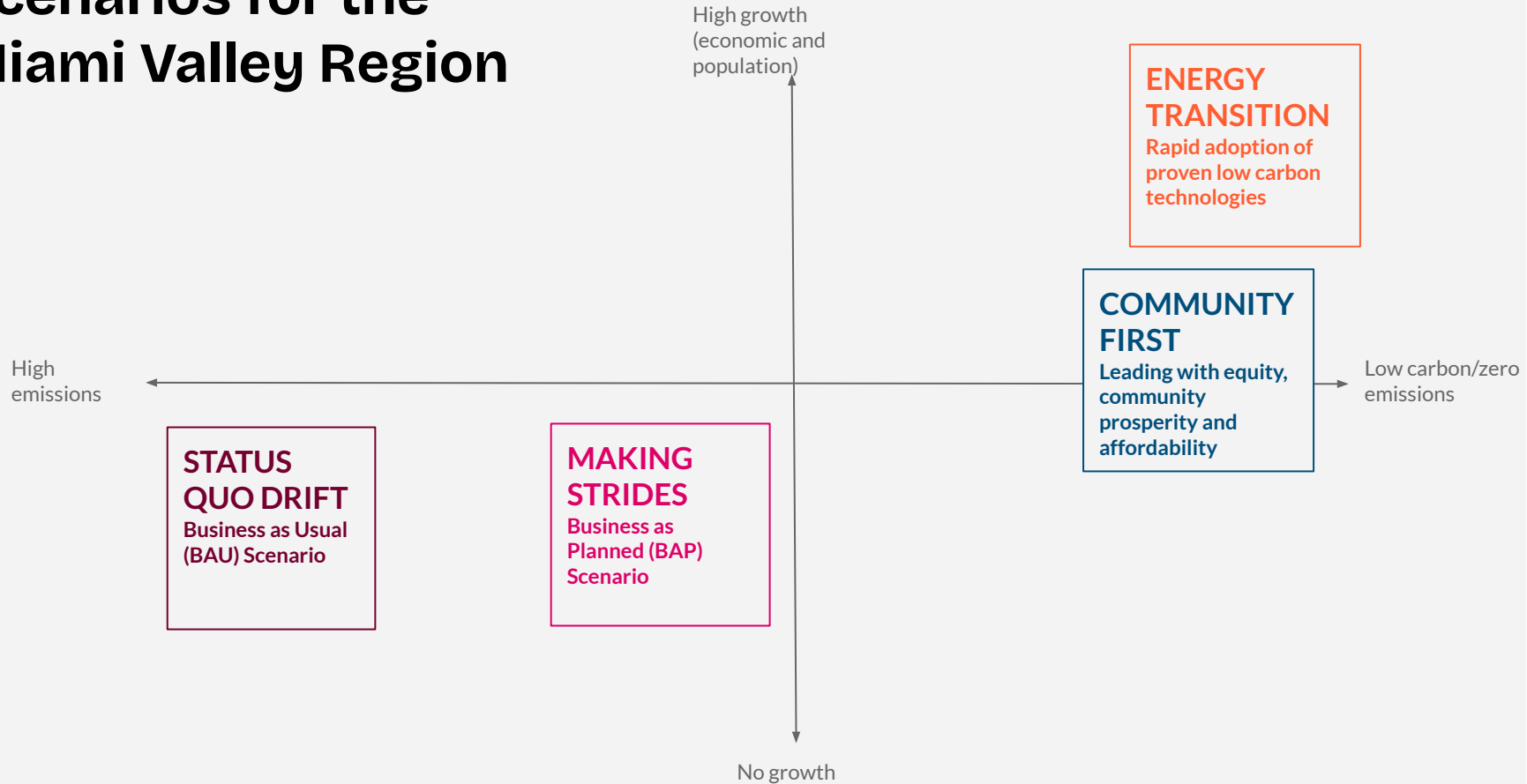
Scenario Results



Narratives

STATUS QUO DRIFT	MAKING STRIDES	COMMUNITY FIRST	ENERGY TRANSITION
Business as usual	Business as planned	Moderate economic and population growth	High economic and population growth
Continuation of current profile with limited or no economic or population growth for the region as a whole	Planned and funded policies, programs and investments IRA investments plus other federal state policies	Urban intensification with local community hubs (hub and spoke model of development) Equity-focused investments in decentralised renewables Emphasis on household affordability over the long-run	New industries including server farms, microchips, vehicle manufacturing Rapid adoption of EVs, renewable energy, storage

Scenarios for the Miami Valley Region



Status Quo Drift



Business as Usual

Continuation of current profile with limited or no economic or population growth for the region as a whole

Making Strides



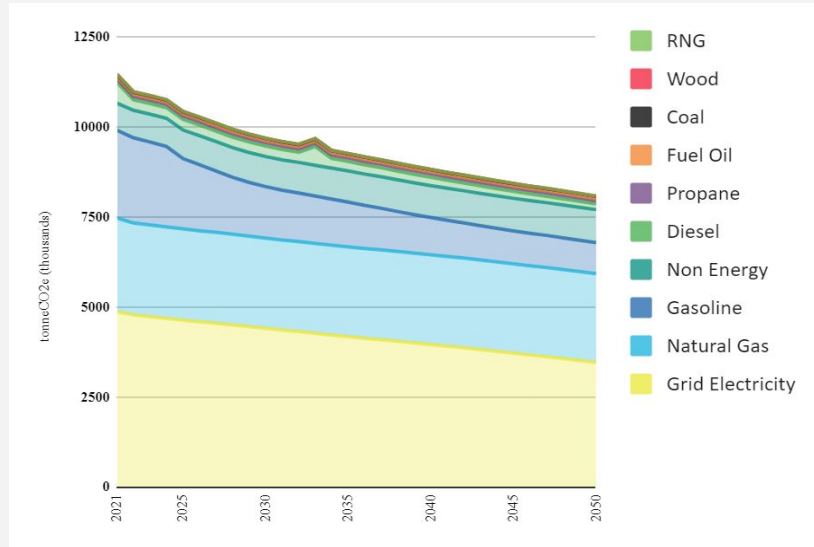
Business as Planned

Planned and funded policies, programs and investments

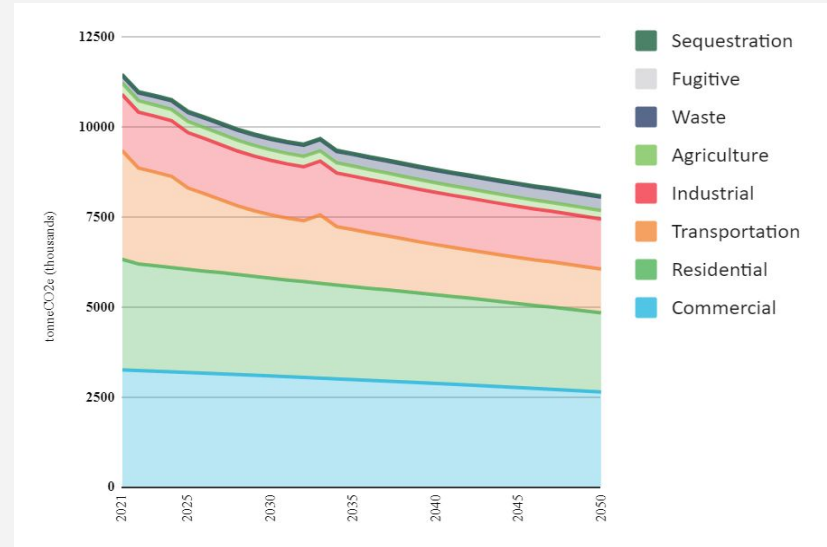
IRA investments plus other federal state policies

Status Quo Drift (BAU)

Emissions by Fuel

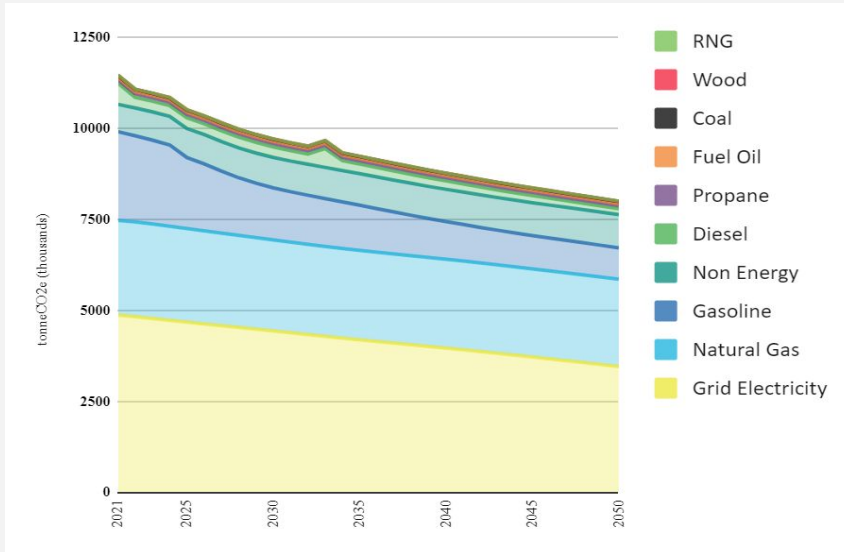


Emissions by Sector

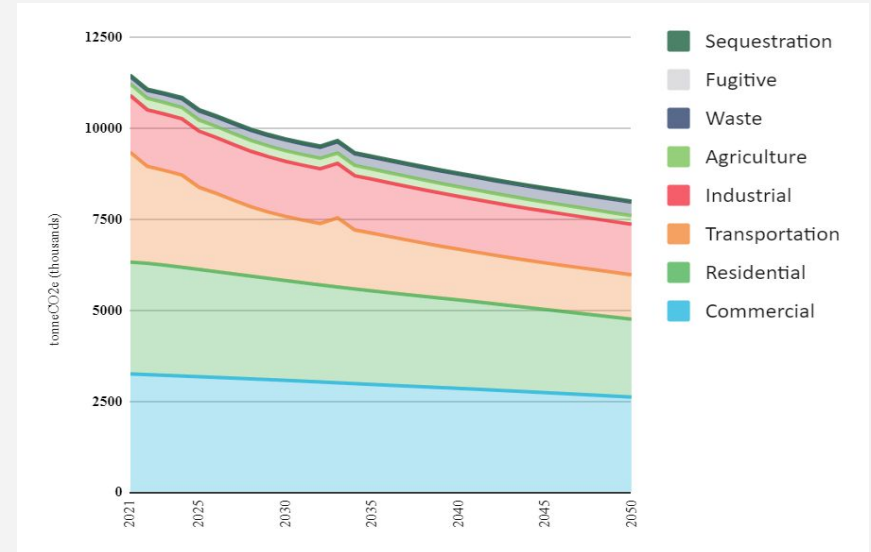


Making Strides (BAP)

Emissions by Fuel

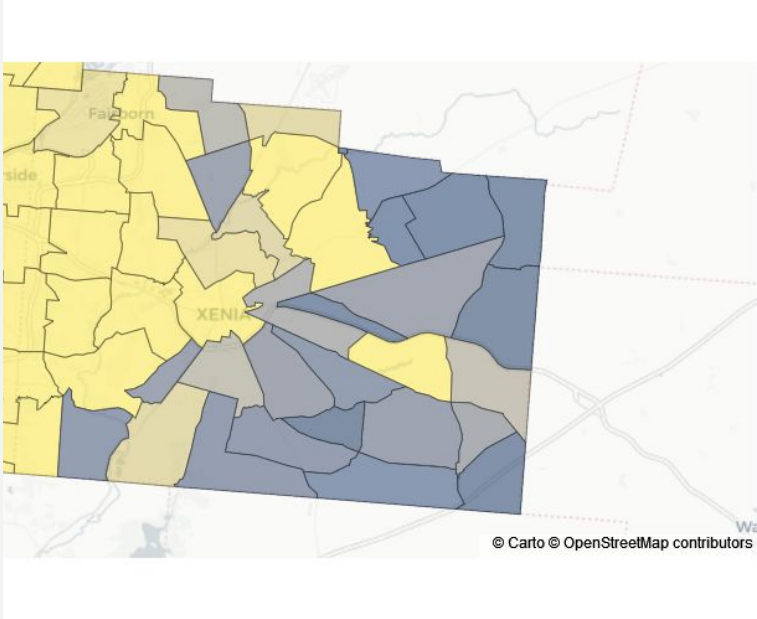


Emissions by Sector

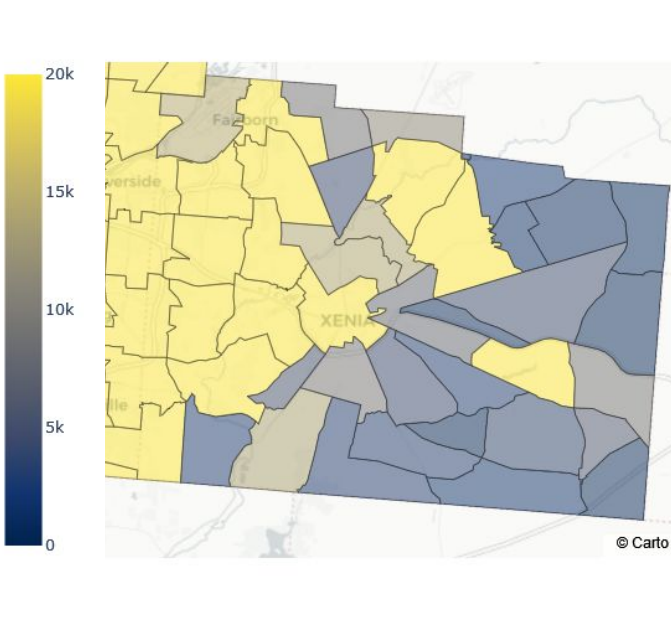


GHG Emissions, City of Xenia

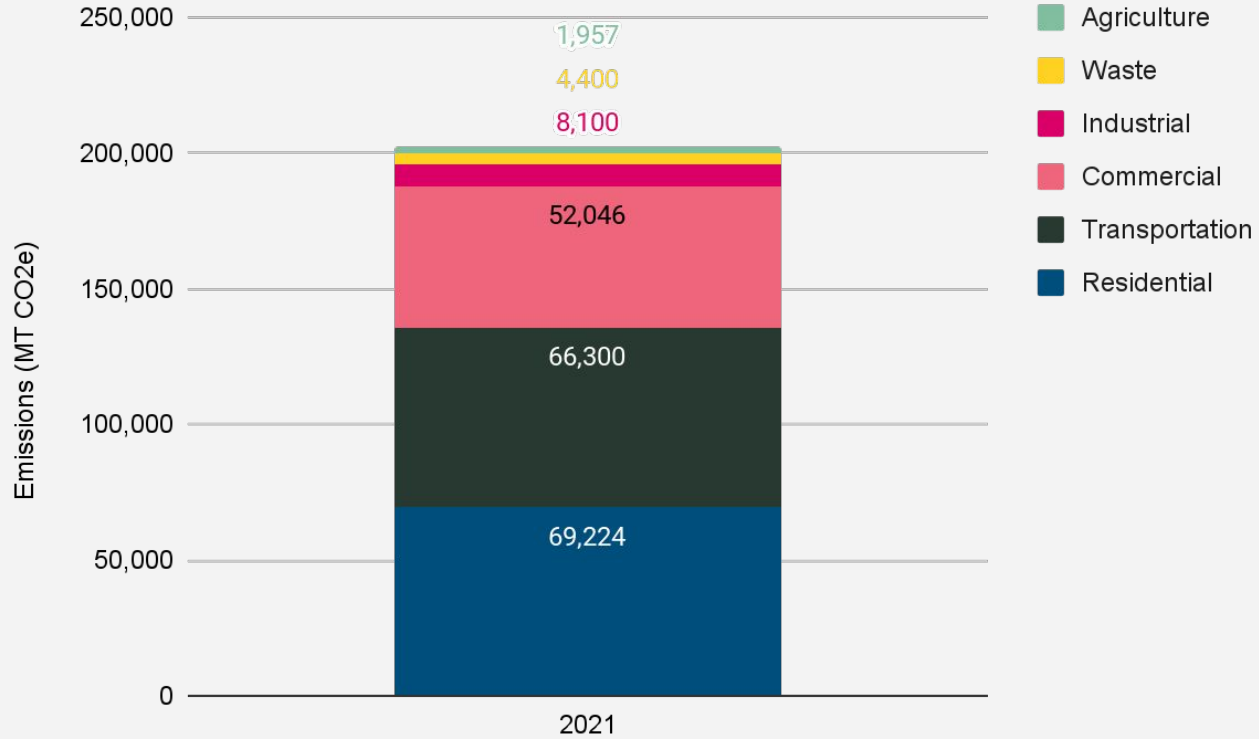
2021



2050



GHG Emissions, City of Xenia



Average household energy costs in Xenia in 2021 were \$5,236.

PART 2

Scenario Framework and actions

Moderate economic and population growth

Urban intensification with local community hubs (hub and spoke model of development)

Equity-focused investments in decentralised renewables
Emphasis on household affordability over the long-run

High economic and population growth

New industries including server farms, microchips, vehicle manufacturing

Rapid adoption of EVs, renewable energy, storage

Community First

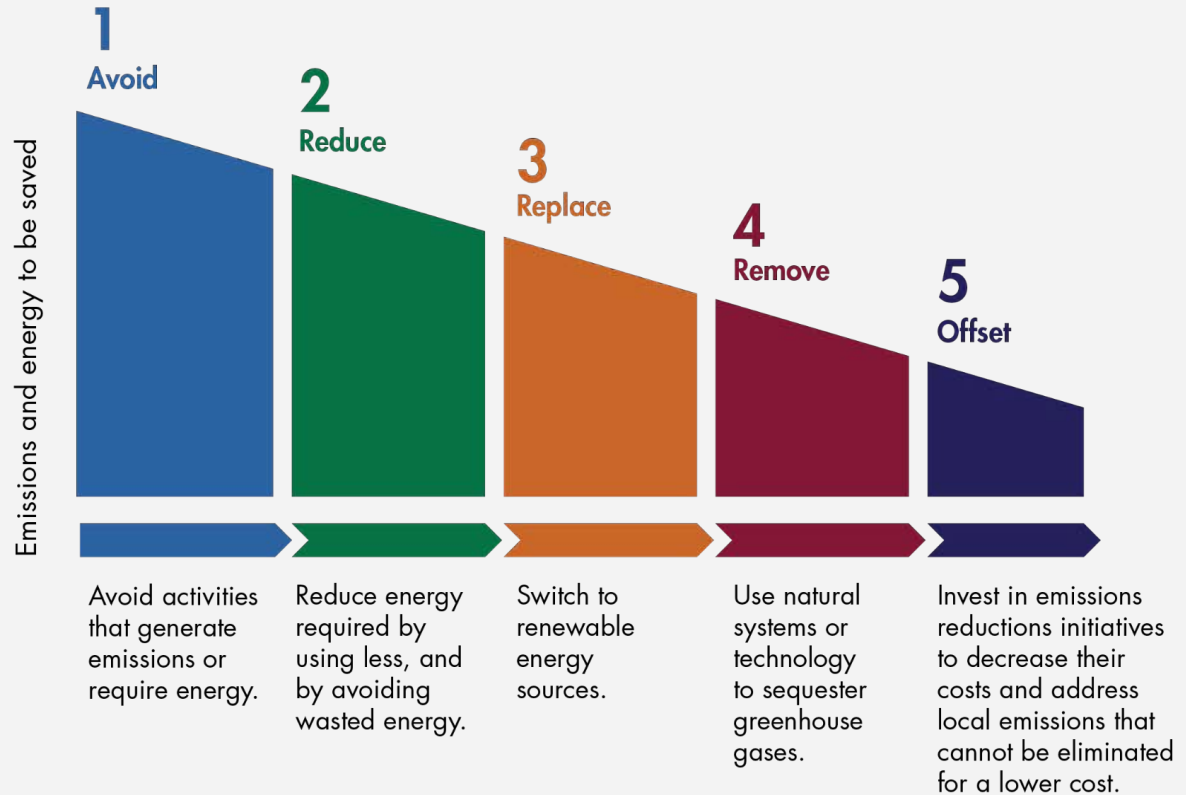


Energy Transition

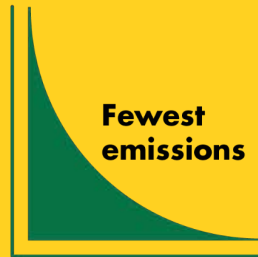


Paradigm of Actions

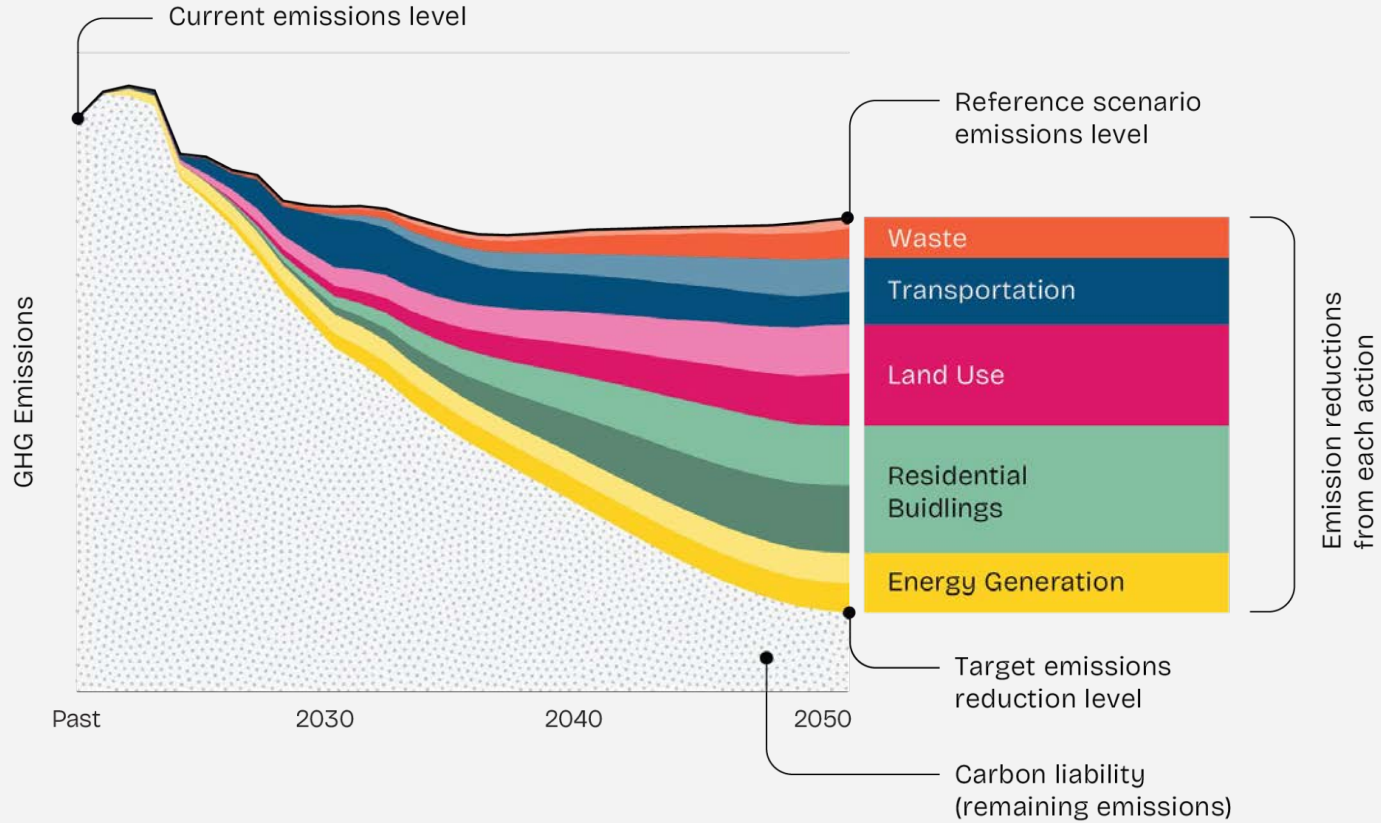
Avoid, Reduce,
Replace, Remove and
Offset



The later actions are implemented, the more emissions will be released into the atmosphere by 2050.

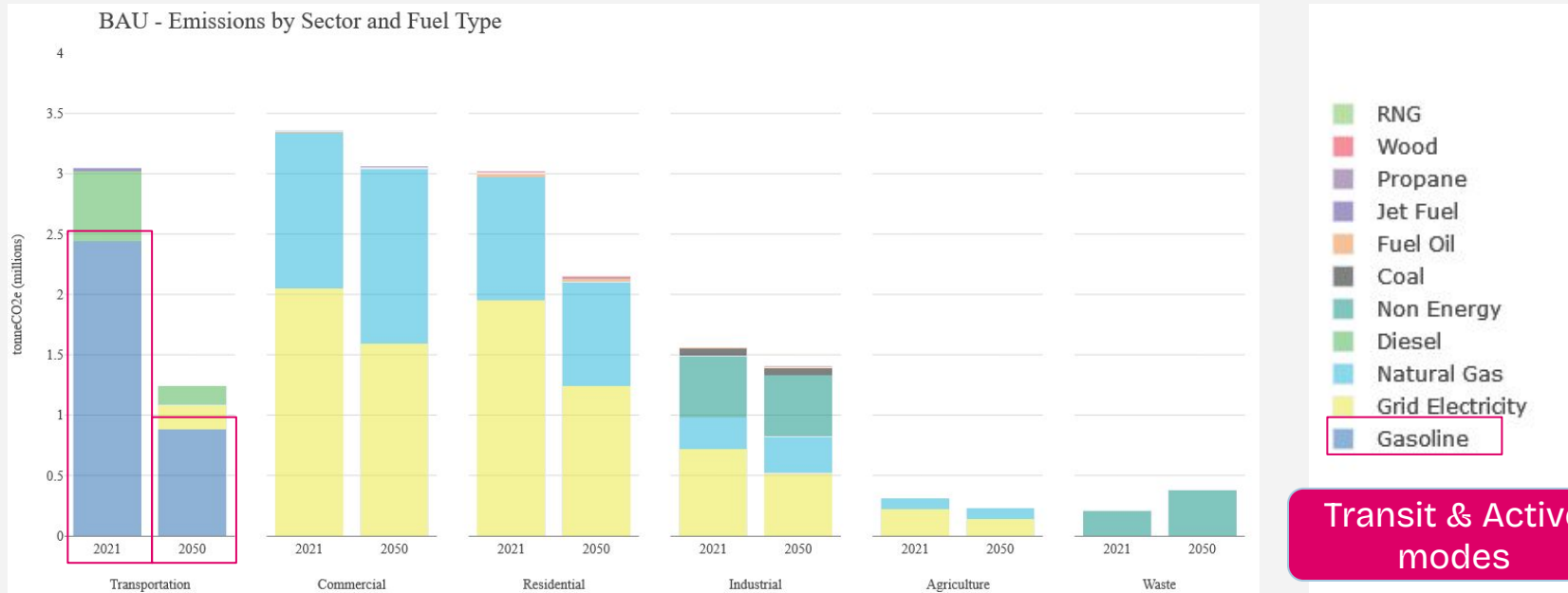


Scenario Outcomes



Key emitting sectors in Miami Valley

Actions in Municipal Operations can stimulate community action.

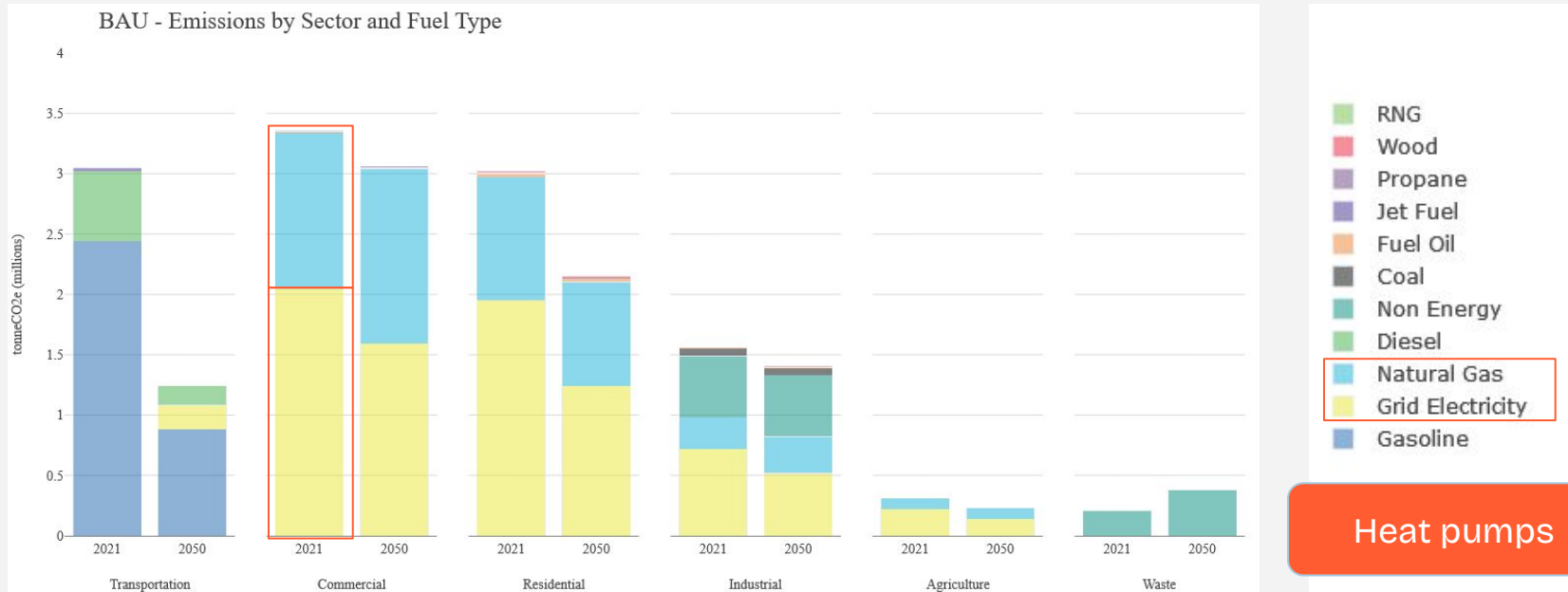


Transit & Active modes

Vehicles electrification

Key emitting sectors in Miami Valley

Actions in Municipal Operations can stimulate community action.



Heat pumps

Solar rooftops

Low Carbon Scenario: Community First

Moderate economic and population growth

Urban intensification with local community hubs (hub and spoke model of development)

Equity-focused investments in decentralised renewables
Emphasis on household affordability over the long-run

01

Updating Building energy code

02

Expanding EV infrastructure

03

Electrification of fleets

04

Adopting heat pumps

05

Ramp up of Renewable energy adoption

06

Buildings retrofits

Net-zero new building construction



Retrofit existing buildings



Fuel switching heating and energy efficiency



Increase renewable energy



Vehicle electrification



Increase transit and active modes



Re-energized, clean industry



Enabling action: Compact cities

**Community
First**

Low Carbon Scenario: Energy Transition

High economic and population growth

New industries including server farms, microchips, vehicle manufacturing

Rapid adoption of EVs, renewable energy, storage

01

Updating Building energy code

02

Expanding EV infrastructure

03

Electrification of fleets (light & heavy-duty, municipal, transit)

04

Adopting heat pumps

05

Anaerobic digestion (waste and wastewater)

**Net-zero new
building
construction**



**Fuel switching
heating**



**Increase
renewable
energy**



**Emissions free
vehicles**



**Re-energized,
clean industry**



**Anaerobic
digestion of
waste**



**Energy
Transition**

PART 3

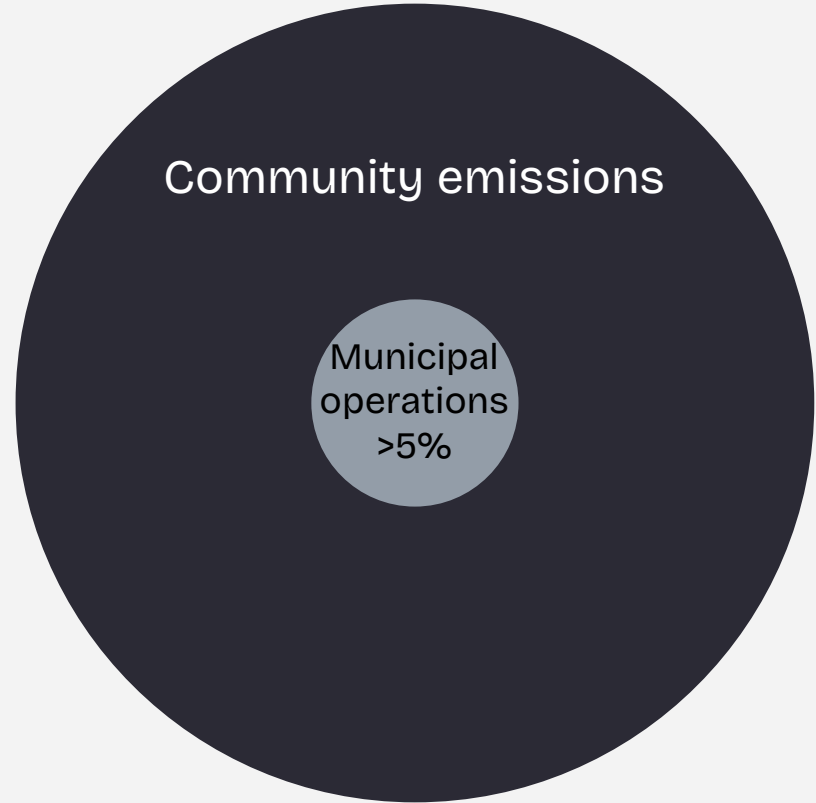
Implementation approaches

**Local governments
directly or indirectly
influence >60% of GHG
emissions.**



A Focus on Community Emissions

Actions in Municipal Operations can stimulate community action.



Increase renewable energy



Explore **affordable, green energy options** for the community and businesses **with the utilities.**

Partner with appropriate organizations to develop **group buy programs** for solar and energy storage systems.

Support partner organizations in establishing **workforce development programs** to build local capacity and expertise for renewable energy installations.

Net-zero new building construction



Develop a **high-performance building performance standard (BPS)** for new residential and commercial buildings.

Incorporating **low-carbon considerations into planning approvals.**

Advocate for the State to update its building code to enhance energy performance and ensure safe buildings.

Support **educational sessions for builders** on net-zero design principles and funding opportunities.

Renewable Energy Generation

“What new policies,
programs, and
investments should we
consider? ”



Renewable Energy Generation

“What new policies,
programs, and
investments should we
consider? ”



Thank you