

Flagstaff Carbon Neutrality Plan

May 25, 2021





Discussion Agenda

1. Climate Emergency Declaration
2. Technical Analysis
3. Community Conversations
4. Carbon Neutrality Plan





First a Thank You

Thank you to the Flagstaff community members that actively engaged in the development of the Flagstaff Carbon Neutrality Plan.

This Plan represents the intersection of science, data, technology, innovation, best practices, community recommendations, and leadership.



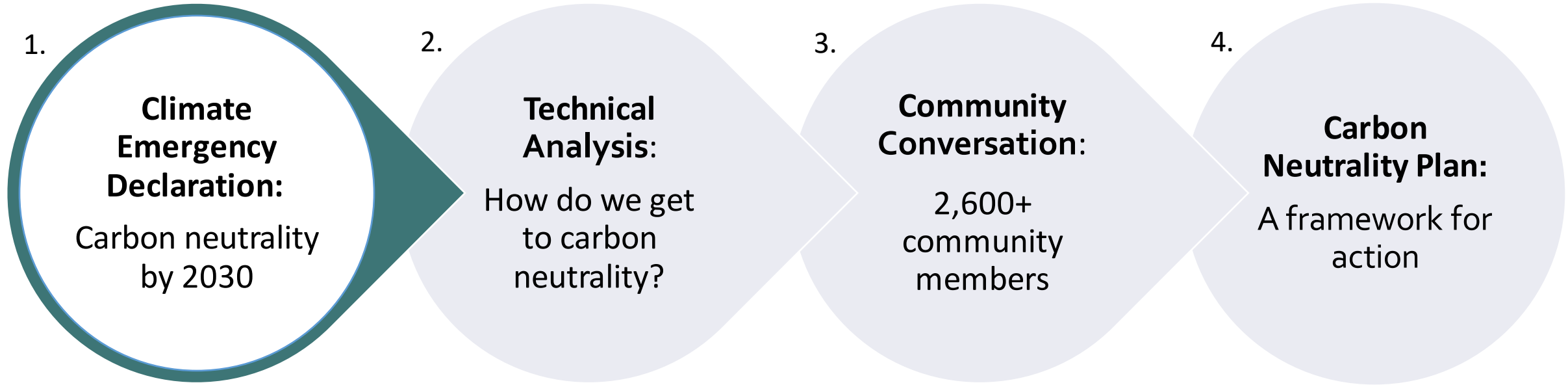
The Flagstaff Carbon Neutrality Plan

An Evolving Framework for Action

DRAFT - May 2021



Climate Emergency Declaration



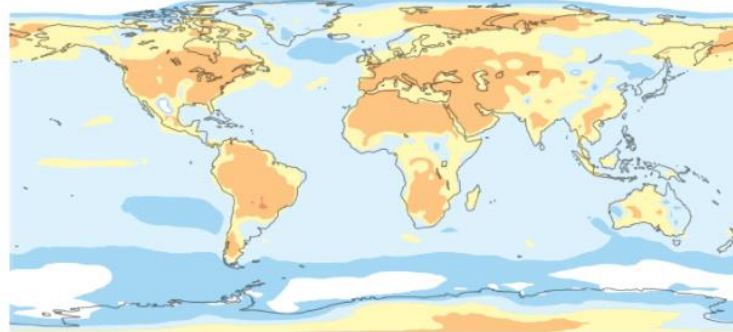


How We Got Here

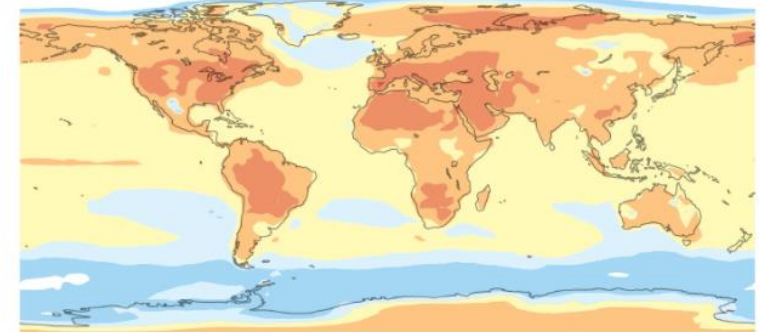
October 2018: The International Panel on Climate Change (IPCC) published the Special Report on Global Warming which compares average warming scenarios of 1.5°C/2.7°F and 2.0°C/3.2°F

November 2018: The Flagstaff Climate Action Adaptation Plan was passed

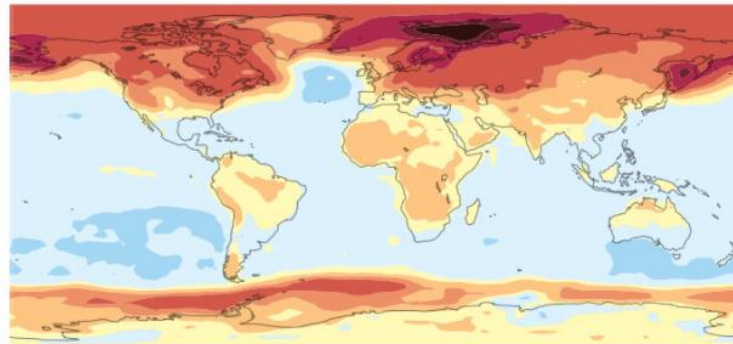
+ 1.5°C: Change in average temperature of hottest days



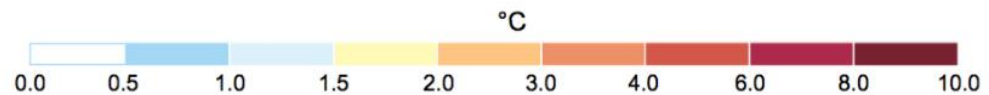
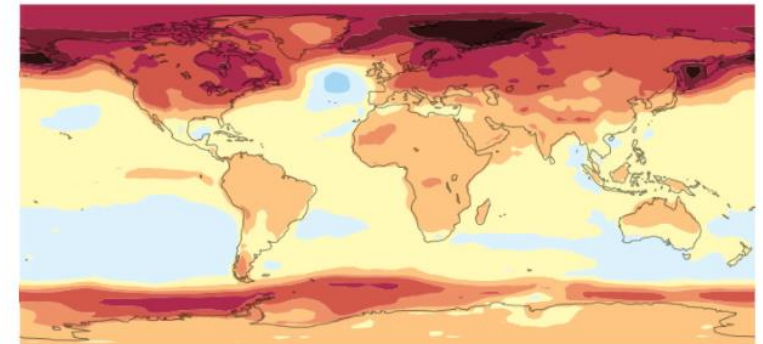
+ 2.0°C: Change in average temperature of hottest days



+ 1.5°C: Change in average temperature of coldest nights



+ 2.0°C: Change in average temperature of coldest nights





How We Got Here

September 2019: Global Climate Strike catalyzes global and local climate action

November 2019: The United Nations Emissions Gap Report clarified need for urgent action to reduce emissions 7.6% every year until 2030

January 2020: Hundreds of well-organized community members spoke at City Council, making the case for the Climate Emergency Declaration

June 2020: Resolution 2020-09 was adopted unanimously by City Council





Climate Emergency Declaration

1. Dramatic increase in ambition to combat climate change
2. Commits to City-wide climate emergency mobilization
3. Commits to educating residents and especially youth
4. Underscores the need for full community participation
5. Commits to keeping vulnerable communities at the forefront of decision making
6. Joins a nationwide call for mobilization
7. **Advance the Climate Action and Adaptation Plan's goals to achieve carbon neutrality by 2030**
8. Calls on all governments to initiate a transition



Climate Emergency Declaration

Carbon Neutrality by 2030 ...

- Requires **leadership** and focused commitment
- Requires widespread and transformative **action**
- Requires **continuity** of decision-making through the carbon neutrality lens
- Requires **improvement** of existing systems and policies
- Requires a framework for action that is **constantly evolving** and responding to changing conditions and **opportunities**
(The Carbon Neutrality Plan)



We Are Not Alone in Our Commitment



2021 Federal Agenda

1. Center the Climate Crisis in U.S. Foreign Policy and National Security Considerations
2. Take a whole government approach to the Climate Crisis
3. Leverage Federal footprint and buying power to lead by example
4. Rebuild our infrastructure for a sustainable economy
5. Advance conservation, agriculture, and reforestation
6. Revitalize energy communities
7. Secure environmental justice and spur economic opportunity
8. Make evidence-based decisions guided by the best available science and data



We Are Not Alone in Our Commitment

Climate emergency declarations in 1,940 jurisdictions and local governments cover 826 million citizens

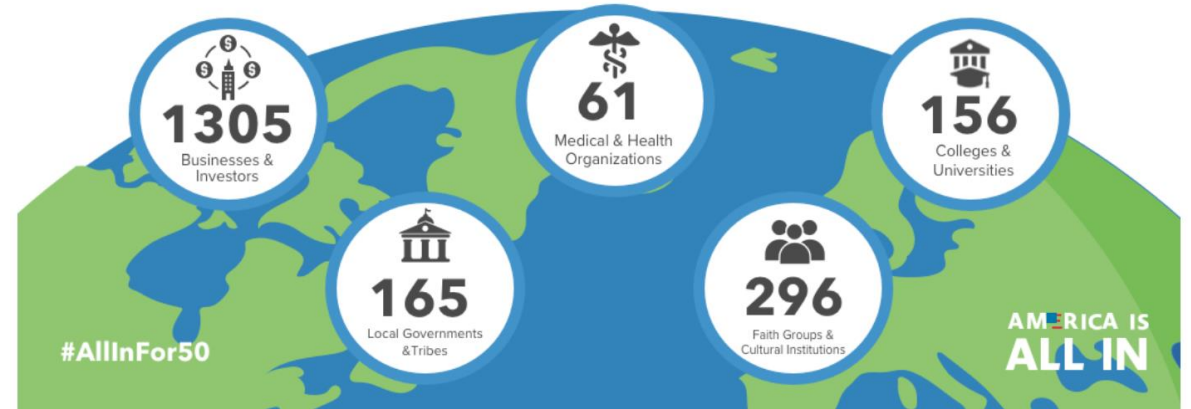
Posted on 14 May 2021

GLOBAL COVENANT of MAYORS
for CLIMATE & ENERGY

The largest global alliance for city climate leadership across the globe.

[Learn More About Us](#) [Watch The Video](#)

10709 CITIES **981 MN** PEOPLE **24 BN** TONS CO2 E BY 2030 **100+** GLOBAL PARTNERS



The We Mean Business coalition is catalyzing business action and driving policy ambition to accelerate the zero-carbon transition.

[Learn More](#)

LEADING COMPANIES ARE COMMITTING TO BOLD CLIMATE ACTION THROUGH THE COALITION PARTNERS' INITIATIVES

2,262 Commitments to bold action

1,788 Companies leading the way

\$24.8 Trillion market cap



We Are Not Alone in Our Commitment

Shout out to some of Flagstaff businesses that are committed to Sustainability including:

The Arboretum at Flagstaff

Brix

Drury Inn & Suites

Cozy Homes

E3

Hampton Inn & Suites

Mother Rd Brewery

Museum of Northern Arizona

Prometheus

Rooftop Solar

Shift Kitchen & Bar

If you are a member of the Chamber of Commerce or ECoNA – please take their upcoming survey to help us better capture information on what our local businesses are doing.

Clarifications

1. Why should Flagstaff do this if China put 38.4 gigawatts (GW) of new coal-fired power capacity into operation in 2020
2. Carbon Neutrality is too aggressive



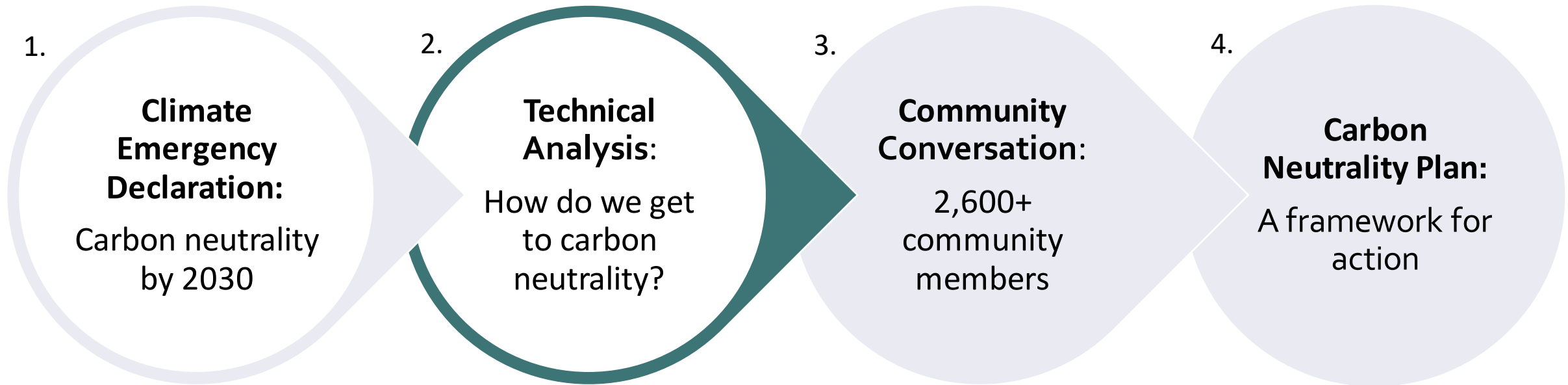
Opportunities

1. Leadership
2. Collective action
3. Business innovation and development





Technical Analysis



Carbon Neutrality – “Rules of the Game”

Step 1:
Reduce emissions

Step 2:
Measure the emissions
still produced each year

Emissions still
produced
(after reductions)

Carbon Dioxide
Removal (CDR)
initiatives



Step 3:
Balance with Carbon
Dioxide Removal (CDR)

(Note: Mechanical Tree illustration on right side of scale comes from <https://research.asu.edu/capturing-carbon>)



Emission Reductions – How?

First we must **reduce** ...
Then we must **clean** ...

**Powering
Buildings**



**Transportation
Emissions**

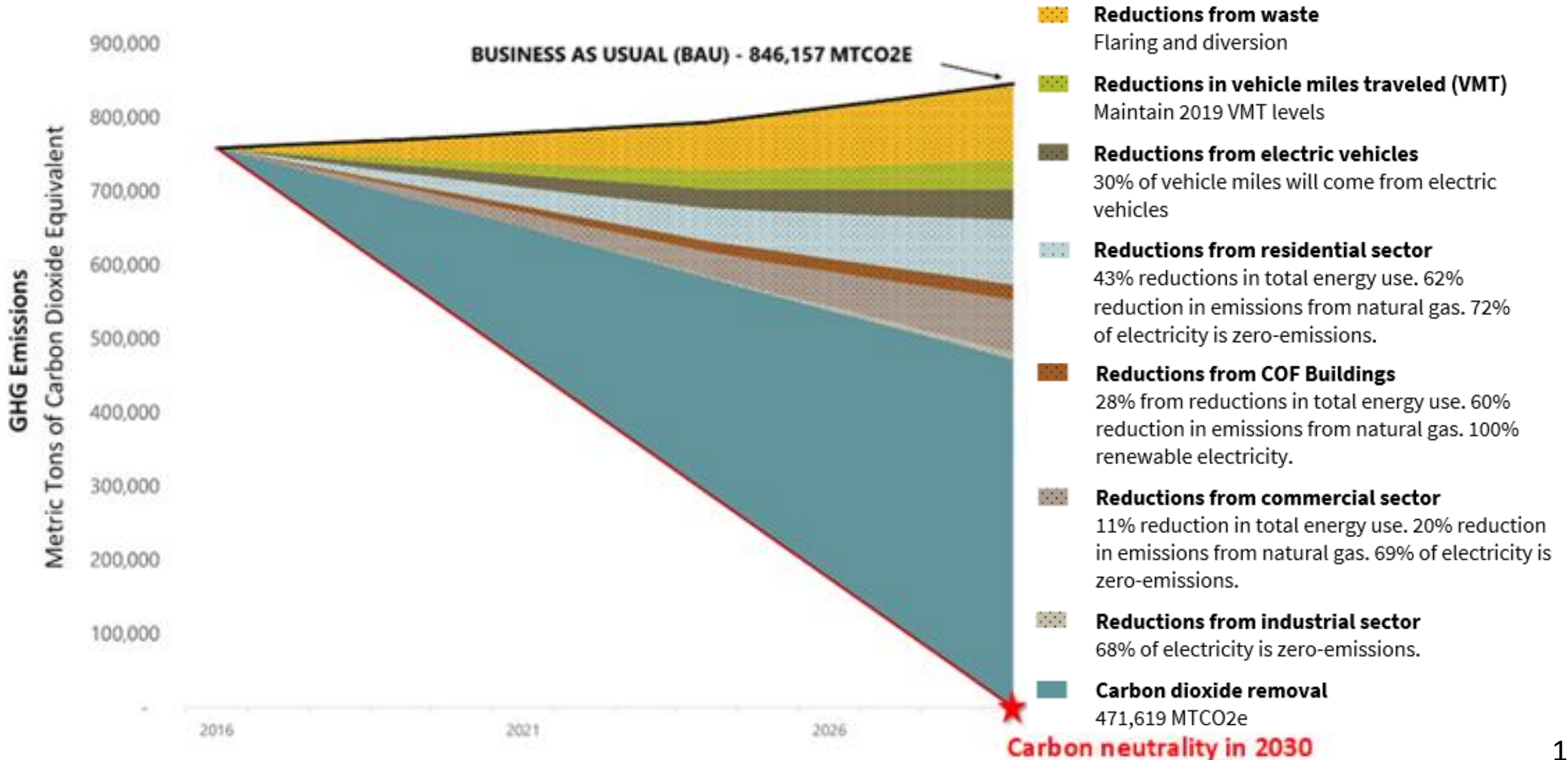


**Consumption
& Landfill**



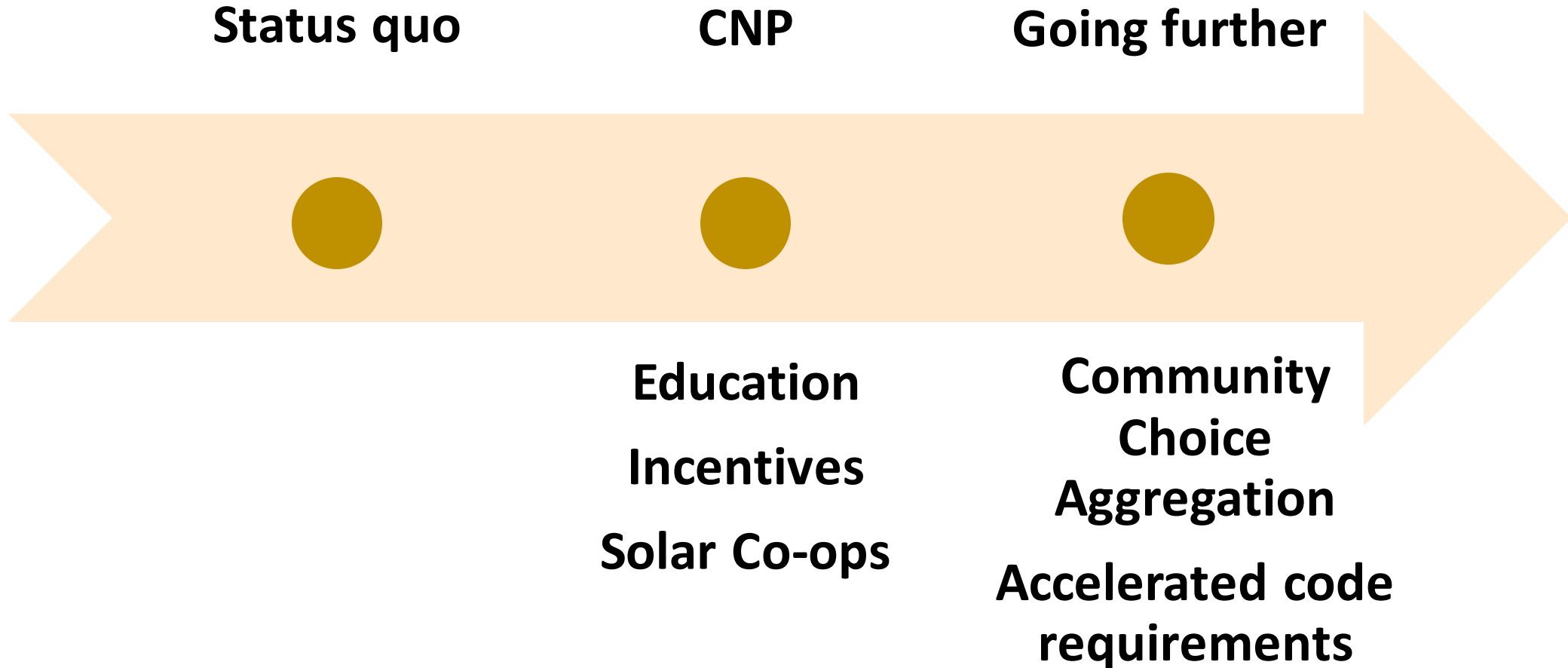


Emissions Reductions and CDR Obligation



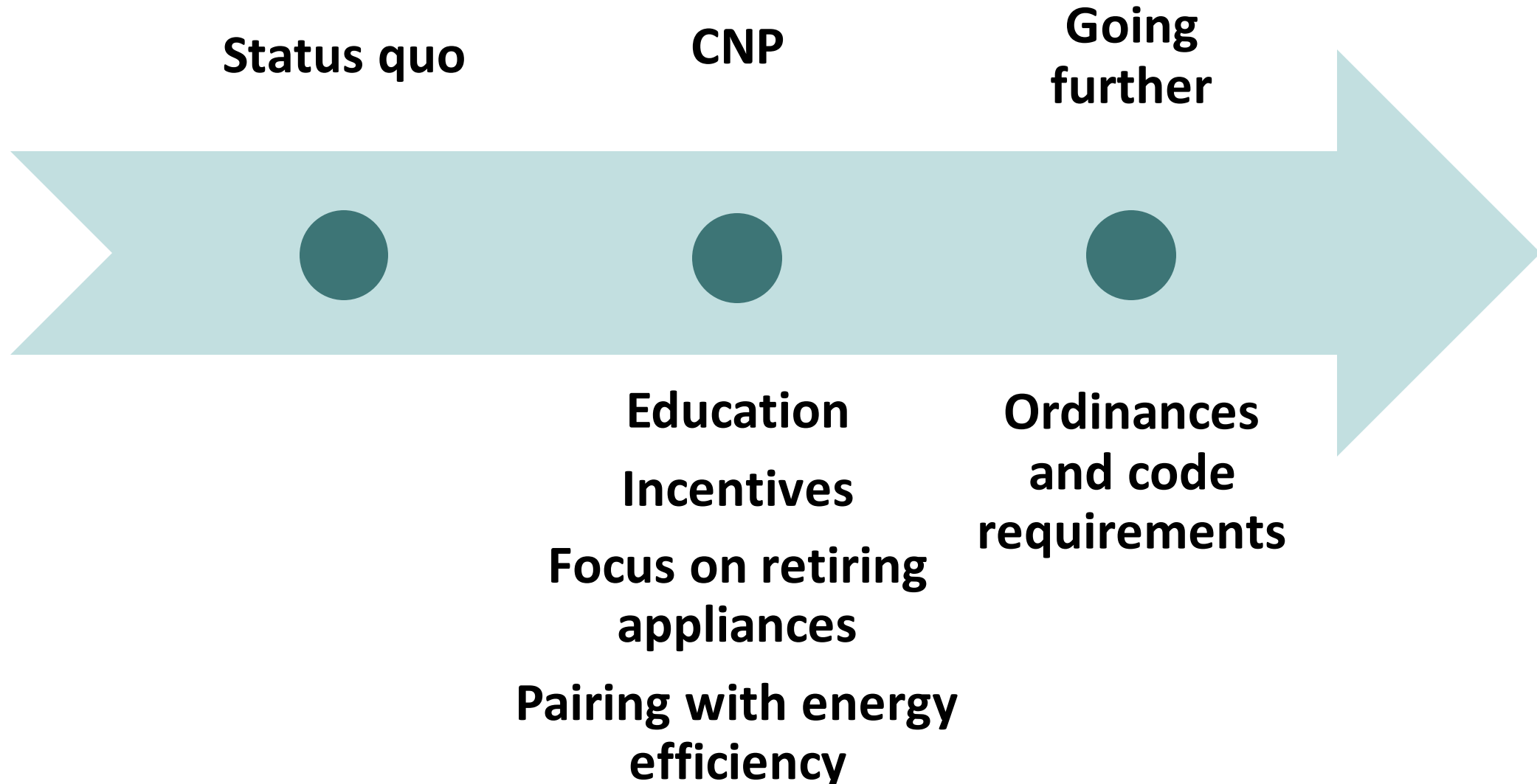


Middle of the path: Clean Electricity



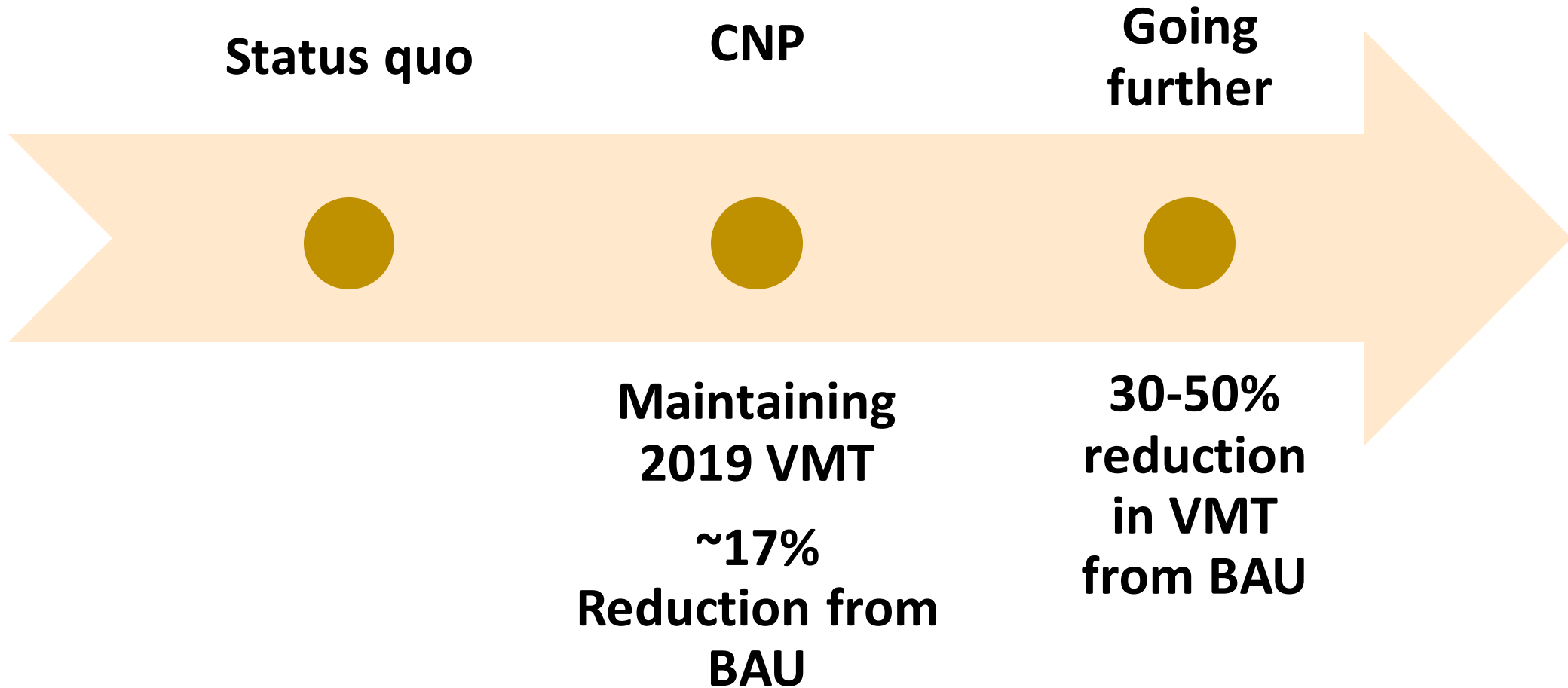


Middle of the path: Fuel Switching





Middle of the path: Vehicle Miles Traveled

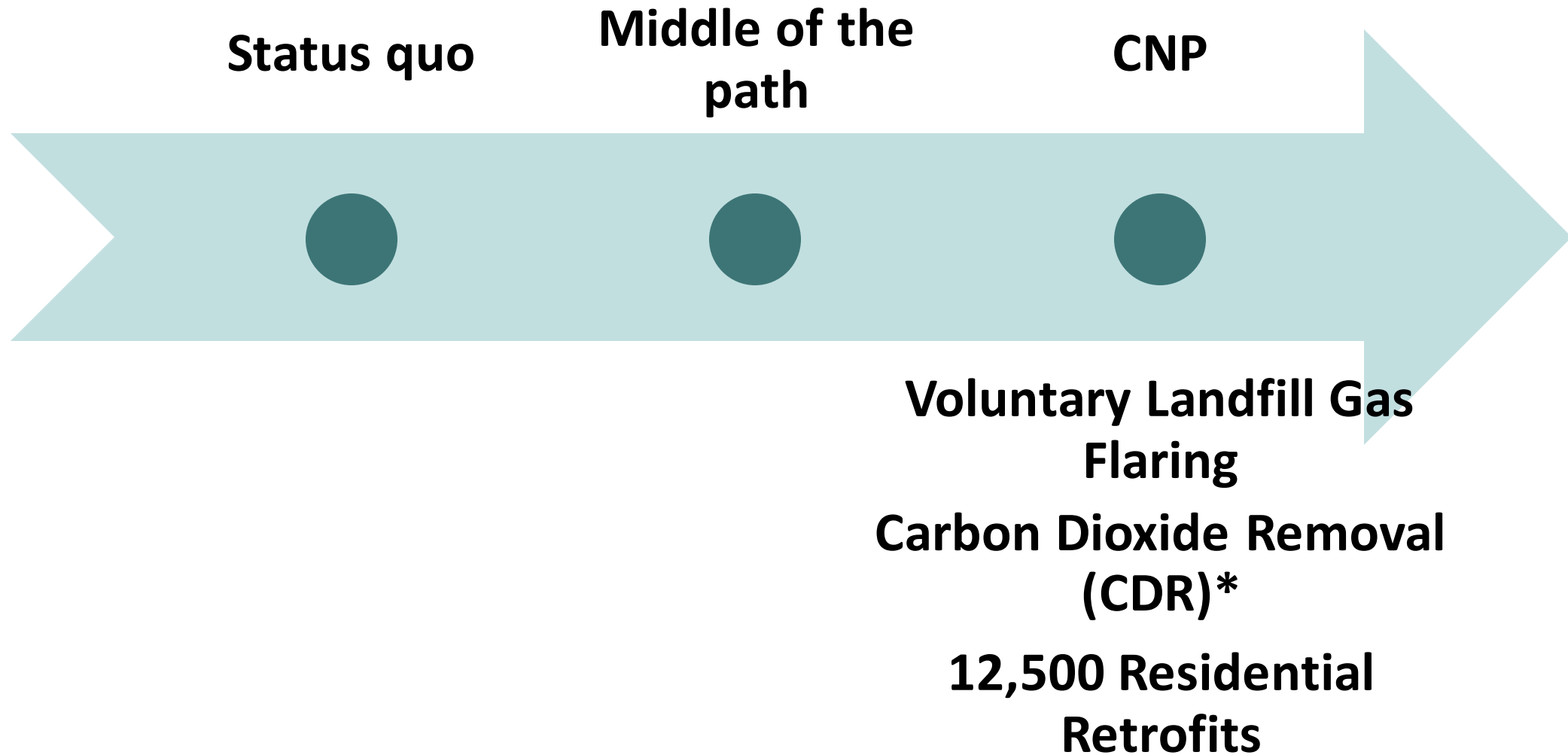


VMT = Vehicle miles traveled

BAU = Business as usual



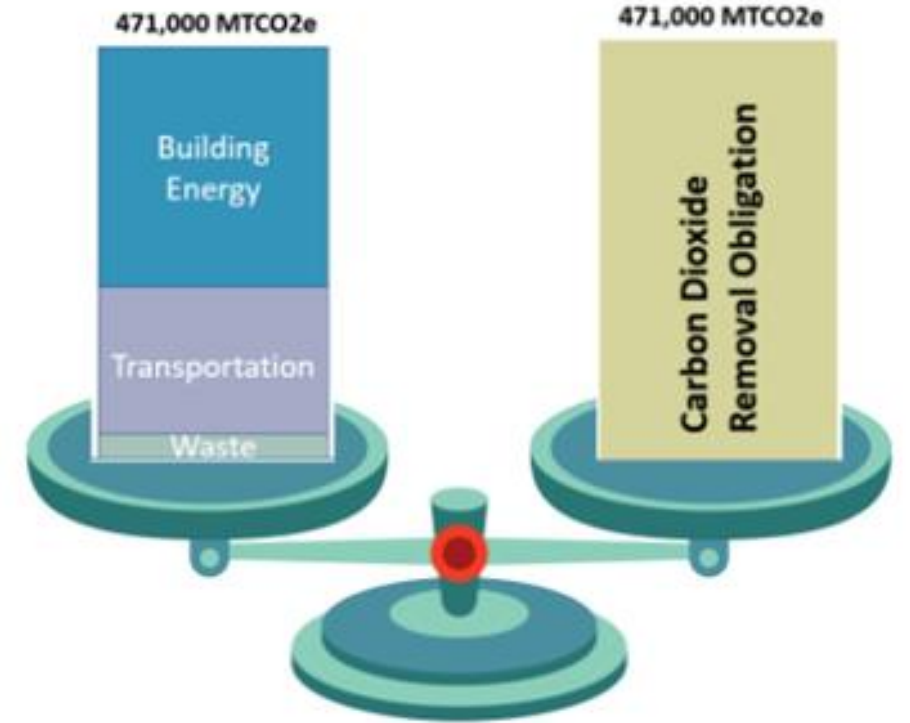
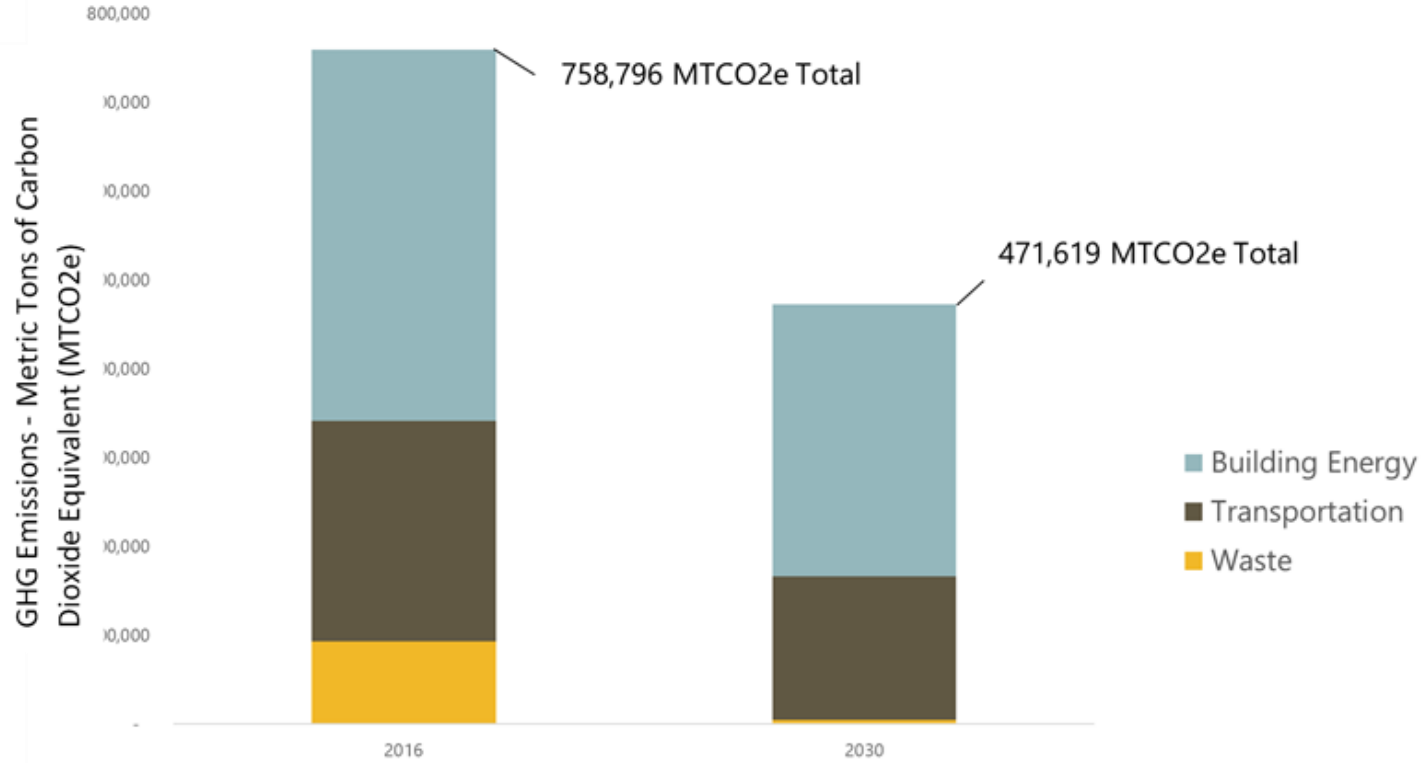
Further down the path





Remaining Emissions and CDR Obligation

Emissions Produced: Total and Sector

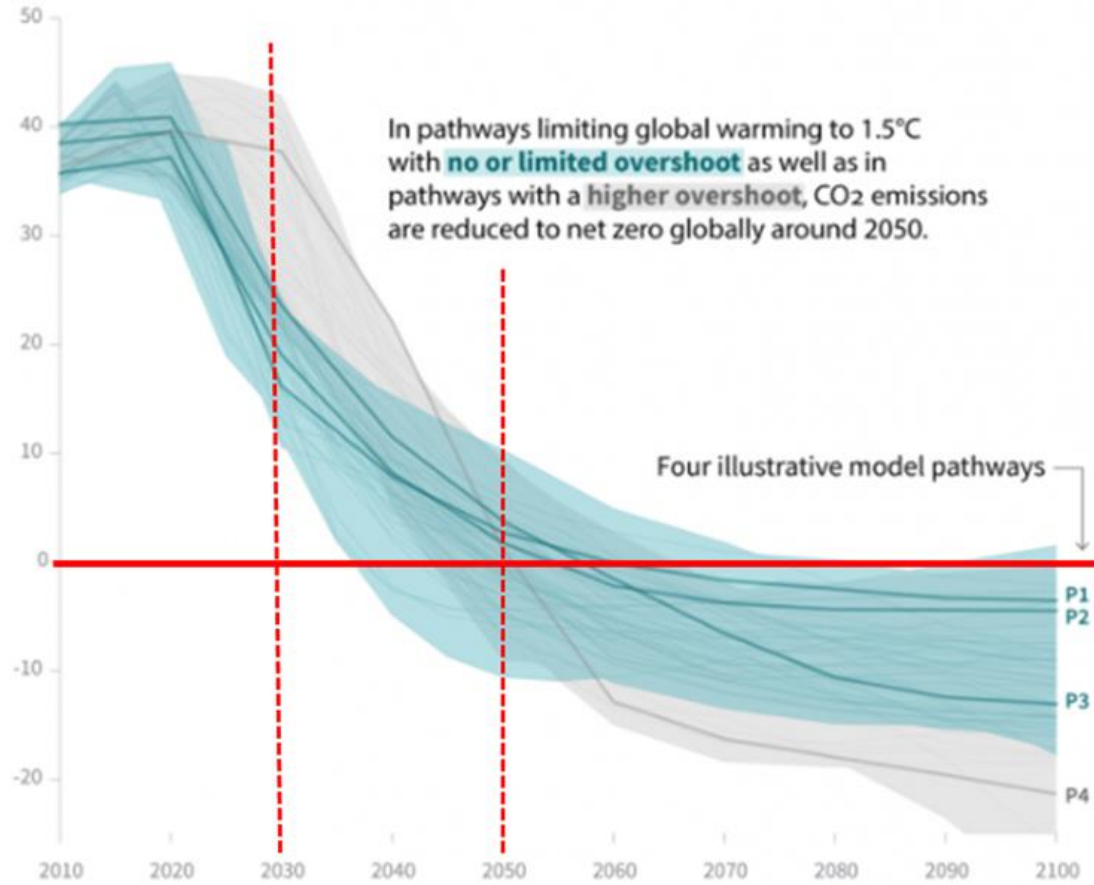




Why This Decade – A Limited Window

Global total net CO₂ emissions

Billion tonnes of CO₂/yr



“All pathways [that limit warming to 1.5C or 2.7F] use Carbon Dioxide Removal (CDR)....”

Timing of net zero CO₂
Line widths depict the 5-95th percentile and the 25-75th percentile of scenarios

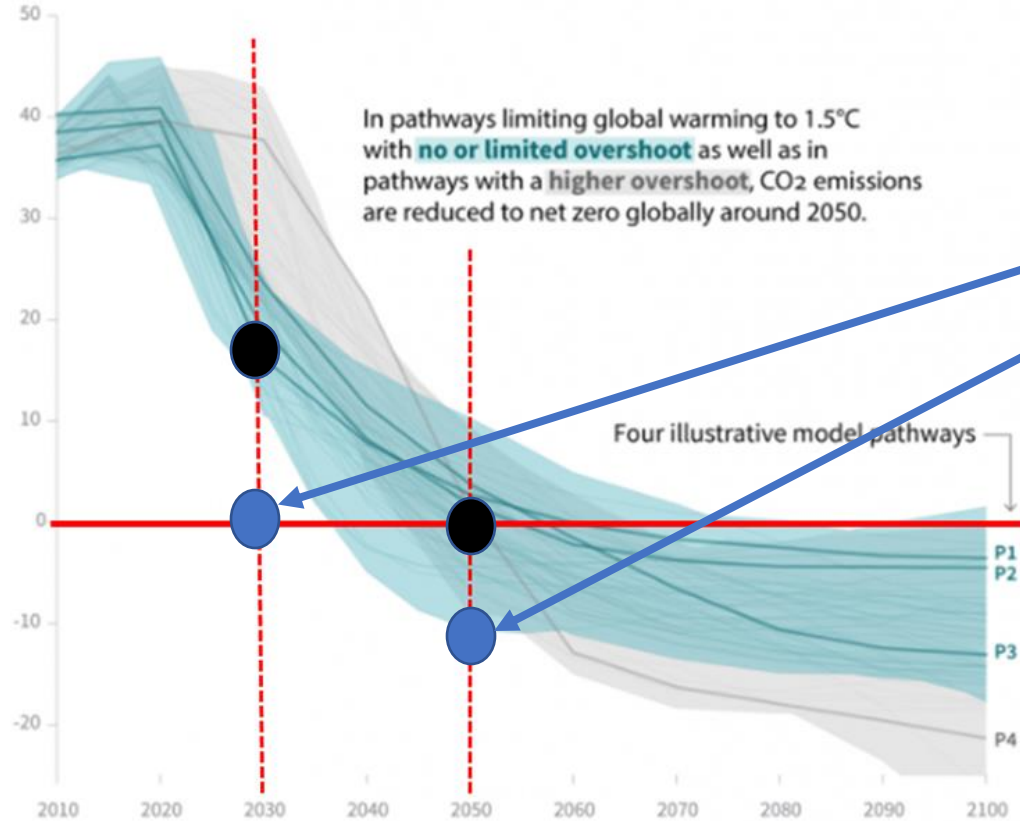




Why This Decade – Leadership Needed

Global total net CO₂ emissions

Billion tonnes of CO₂/yr



Timing of net zero CO₂
Line widths depict the 5-95th percentile and the 25-75th percentile of scenarios



Leadership Needed

“...we can be a **leader** in addressing climate change issues and at the same time invest in the mitigation and adaptation strategies outlined in our City’s existing CAAP, thereby reducing future risks and costs.”
Flagstaff RES 2020-09

Clarifications

1. We don't yet measure any existing nature-based CDR happening in our community.
 - *Some* of the projected 471,000 MTCO₂e CDR obligation may already “be on the scale.”
2. VMT Metric being utilized is “Internal Trips”
 - Trips that both start and end within the boundary
3. 0% reduction in Industrial Natural Gas usage in the model
 - Limited information and opportunity to support by COF



Opportunities

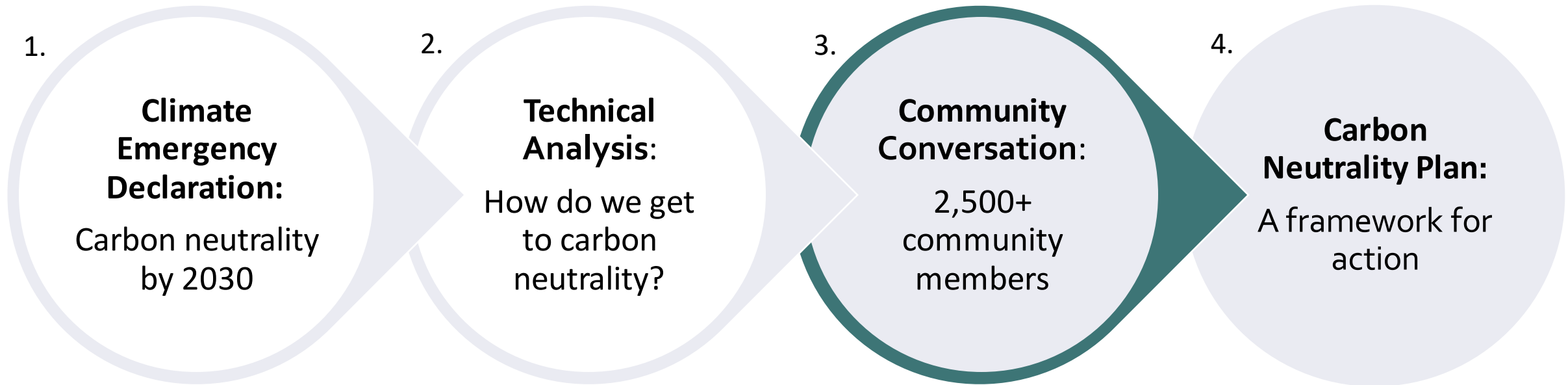
Work with partners and leading organizations and researchers to continue to develop and refine inventory methods

- Existing CDR
- Consumption-based emissions
- Distributed solar
- Etc.





Community Conversation





Community Conversations

Climate Emergency Engagement Framework

1. Communicate about the City's Climate Emergency Declaration
2. Climate Emergency Steering Committee
3. Engage community members to participate in providing input

Earning trust and providing leadership in a virtual landscape *Situational SWOT Analysis*

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<ul style="list-style-type: none">• Climate Emergency Declaration had overwhelming community support at Council.• Puts us in line with IPCC recommendations.• Unanimous support from Council.	<ul style="list-style-type: none">• Planning for spending and aggressive action during recession.• Actions will require a lot of work from City organization and community.• Level of commitment necessary is high; unclear if community leaders / members understand the scope of transformation required.	<ul style="list-style-type: none">• Staff is well-suited to community outreach and building connection.• New team members bring new engagement ideas.• New partners can be brought in• Overall turmoil – good situation to continue change.	<ul style="list-style-type: none">• Engagement during covid has been low for all events and programs.• In-person events and flyering will be limited in the foreseeable future.• Uncertainty due to COVID / recession.



Community Conversations



1. Communicate about the City's Climate Emergency Declaration

Public-Input Gathering

Levels come from the IAP2 [levels of public participation](#) (used by the City)

Method	Inform	consult	Involve	Date or Frequency	TOPIC	Lead	Budget Needs
Steering Committee	x	x	x	7 meetings over 4 months		DC	minimal
Flagstaff Community Forum:	x			Advertising options:	1. July (VISION) 2. August (IDEAS) 3. Sept/Oct Feedback on revisions	Jillian	Social media boost (\$50)
1) Idea solicitation					• Press release • Video		
2) Feedback on Plan							
Climate Emergency Open Forums	x	x		7/9 Week of 8/17 Monthly at minimum; try various days and times to increase engagement; including at least one Saturday	1. July 9: INTRO 2. August 18 2PM: What is carbon neutrality? (and what are your ideas) 3. September 12 11AM (Saturday): 4. October 2 at noon: 5. October 14 th 5:30-6:30pm	Jillian	Staff time

- Engagement plan developed immediately following the June 2020 Climate Emergency Declaration passed
- Communication efforts
 - Person to person
 - Group presentations
 - Social media campaigns
 - Community surveys
 - Virtual open houses
 - City's website
 - Print/digital media
 - Newsletters



Community Conversations

Survey 1

- July through August 2020
- 49 responses
- One open-ended Q: **What is your vision for a carbon neutral flagstaff?**

Survey 2

- August to September 2020
- 51 responses
- One open-ended Q: **Imagine it is 2030 and Flagstaff is carbon neutral. What actions did we take to get there?**

Survey 3

- September through November 2020
- 549 responses
- Survey asked:
 - Level of agreement with each Target Area
 - Specific Qs within each Target Area, i.e.
 - I would choose to walk/ride/take bus rather than drive to work if _____
 - The payback period would need to be _____ for me to consider investing \$1500 in weatherization



Community Conversations

Survey 4

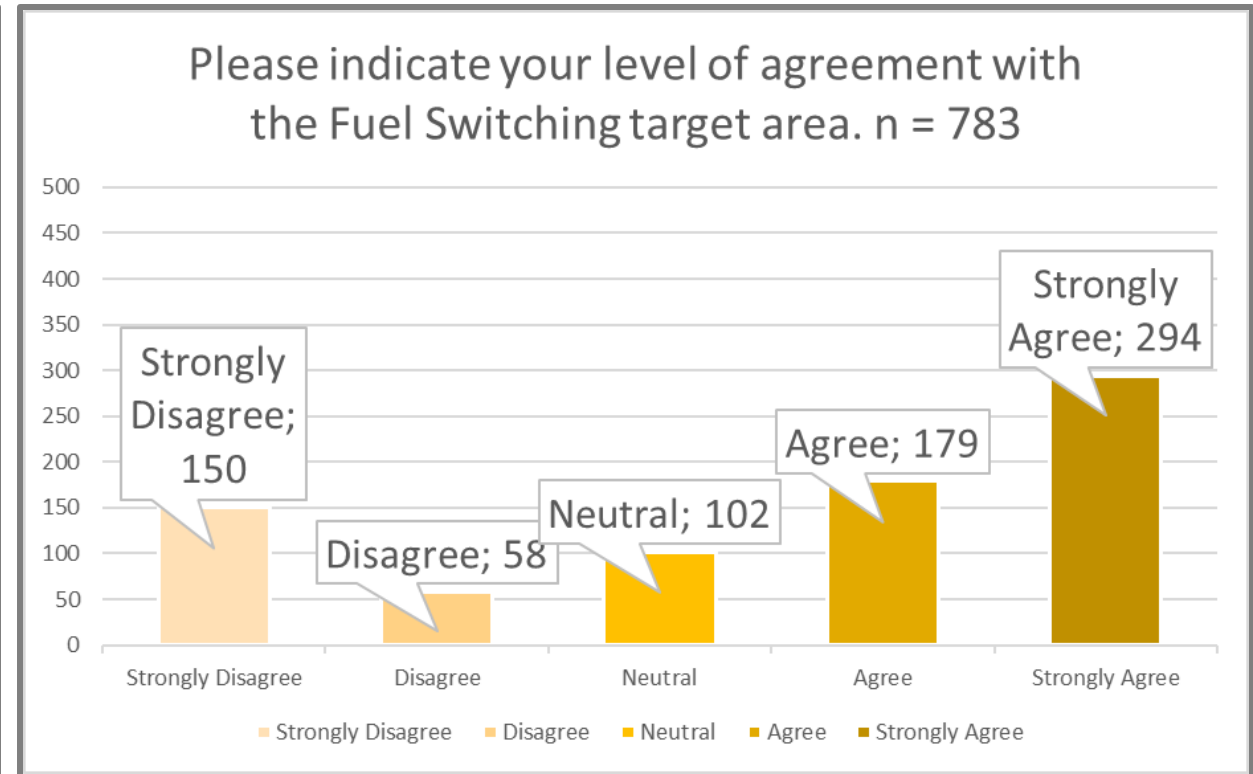
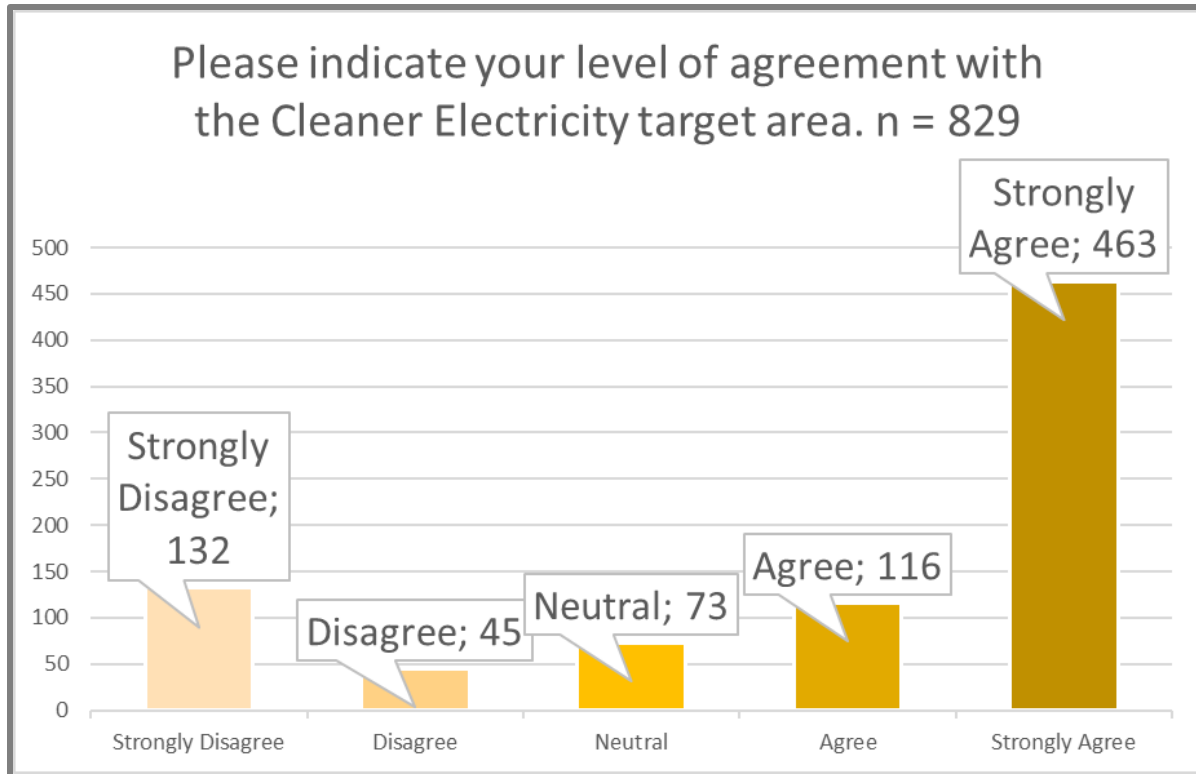
- January through March 2021
- 302 responses
- Survey asked:
 - Level of agreement with the Target Areas
 - Open ended questions about the direction of our work

Survey 5

- March to April 2021
- 226 responses
- Survey asked numerous Qs to gauge attitudes towards climate change and climate action
 - Q: I am personally concerned about the consequences of Climate Change.
- Survey allowed 'dot spending' based on the draft CNP - prioritizing actions within Target Areas.

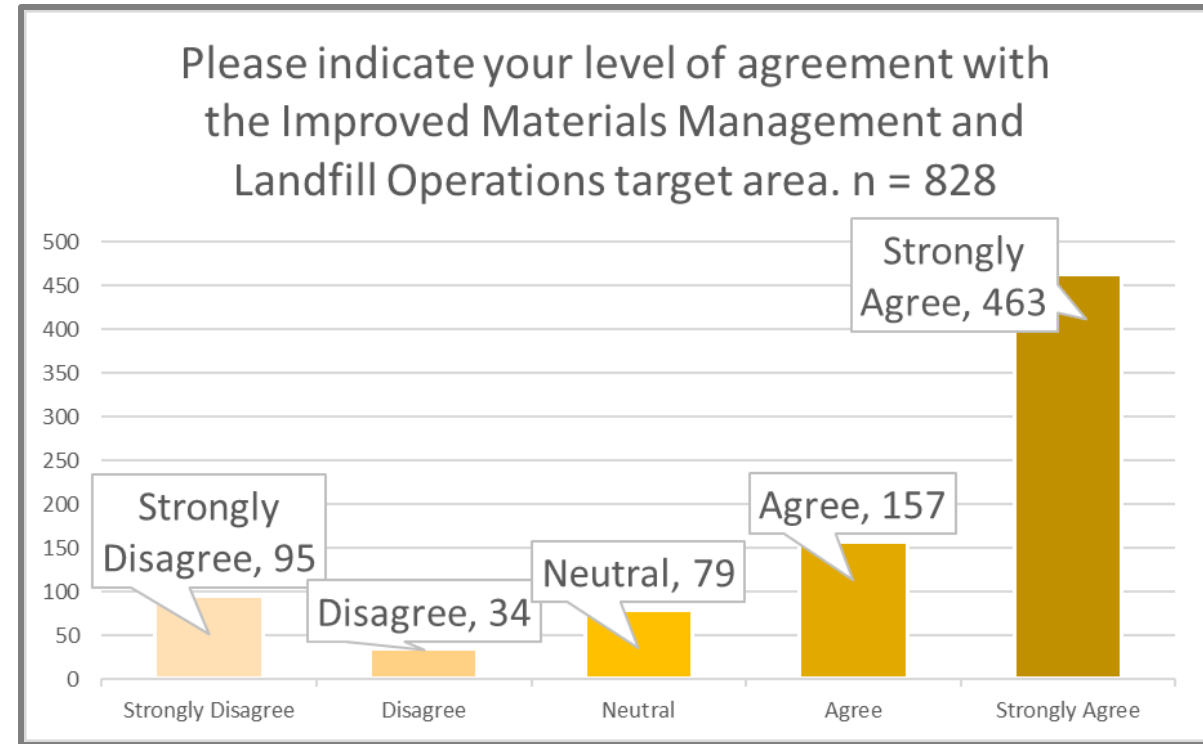
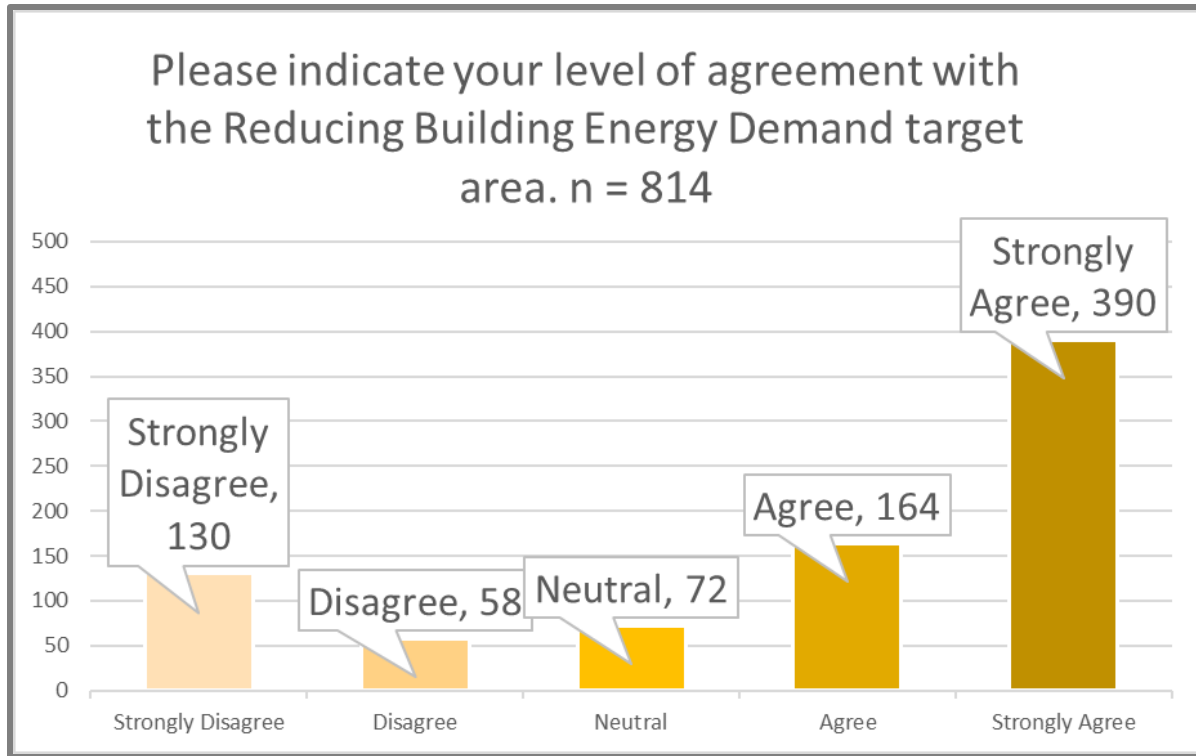


Target Area Feedback: Surveys 3 and 4



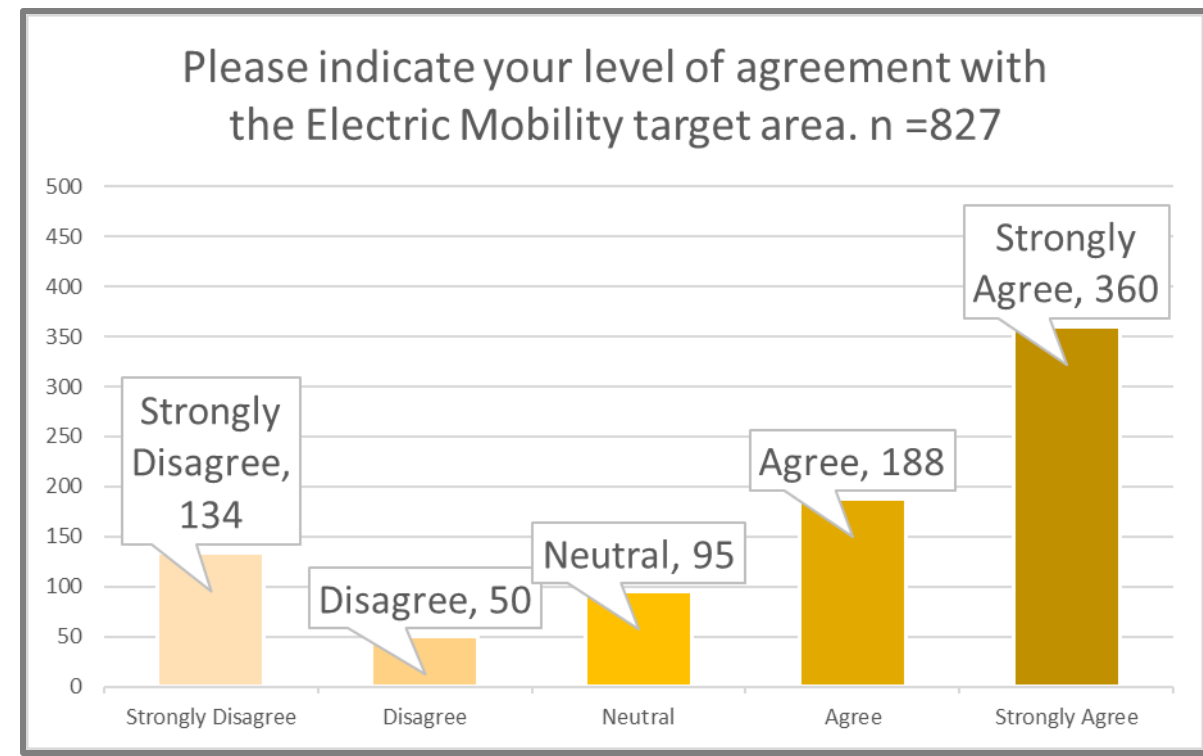
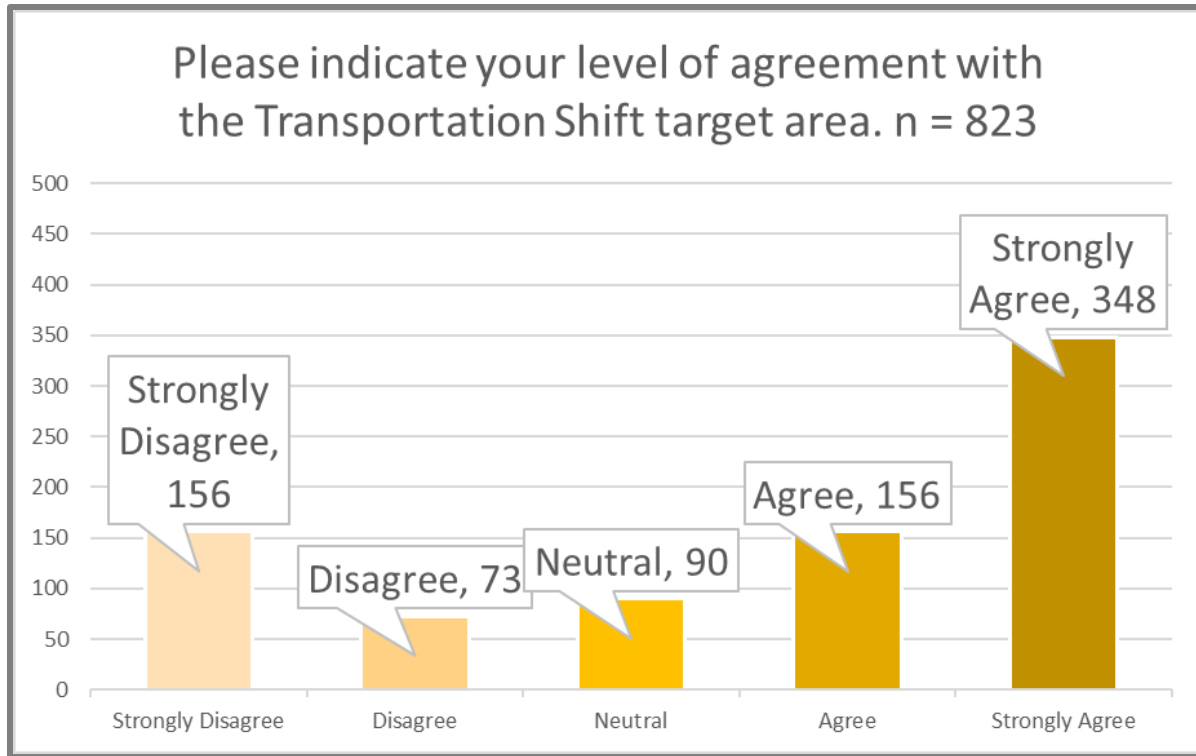


Target Area Feedback: Surveys 3 and 4



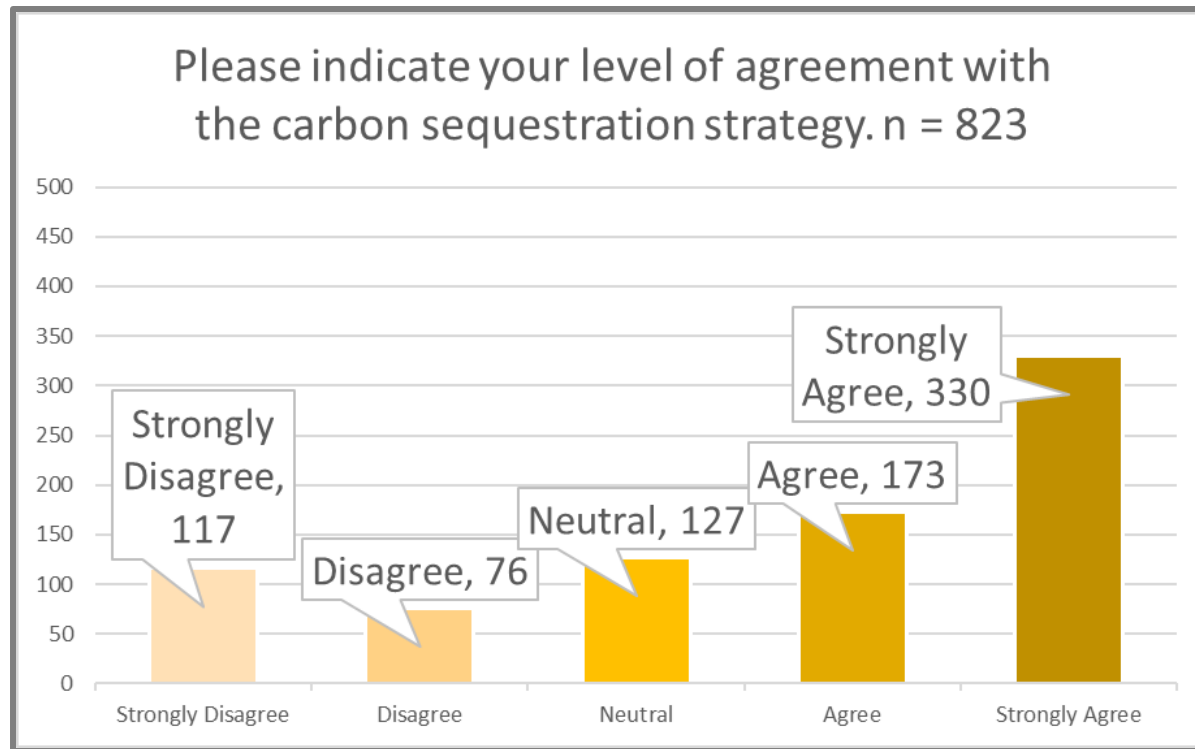


Target Area Feedback: Surveys 3 and 4





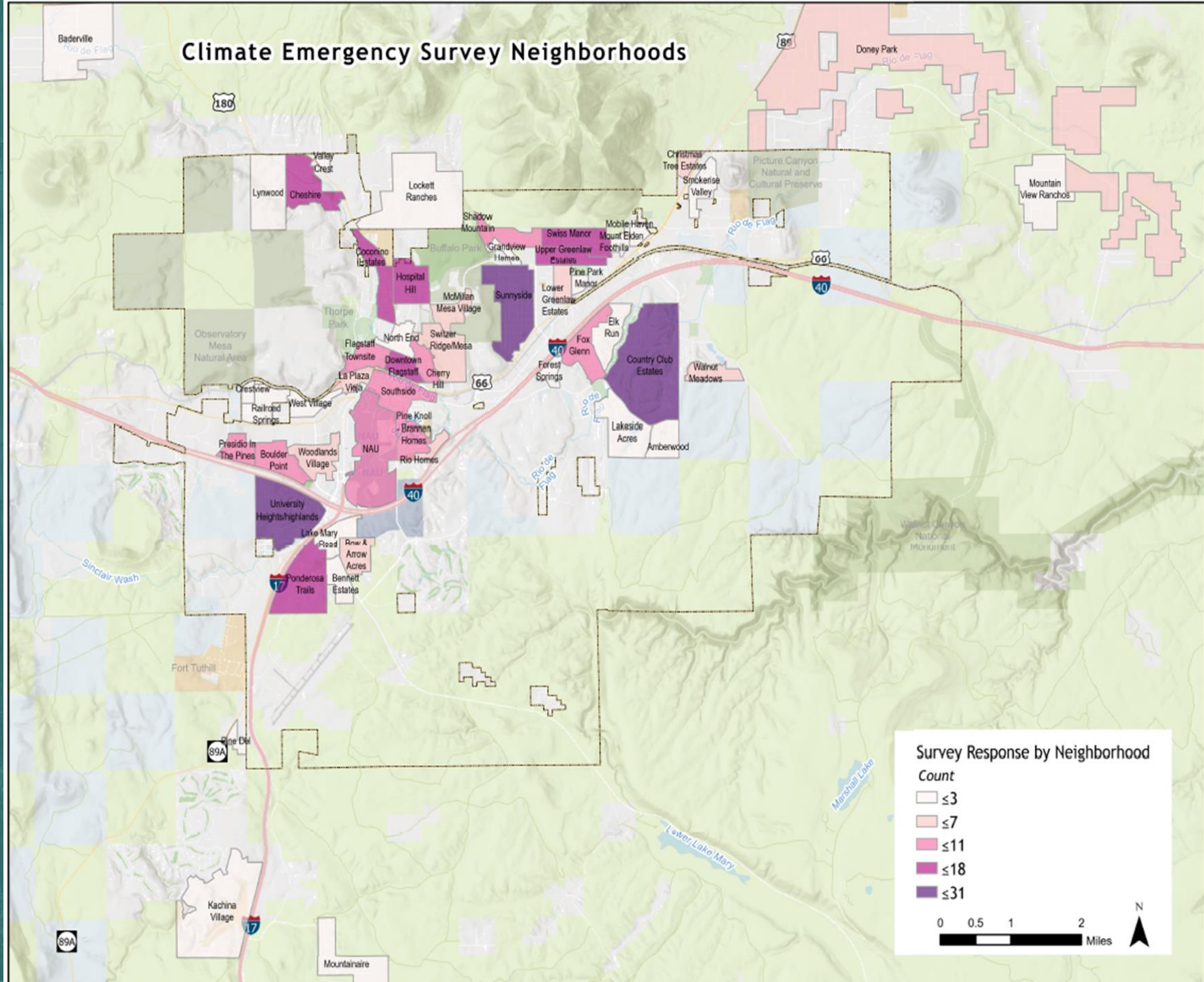
Target Area Feedback: Survey 3 & 4



Note: since this survey, we have broadened our approach from carbon sequestration to carbon dioxide removal.

Flagstaff Carbon Neutrality Survey 3 Results

Survey 3:
n=549



Flagstaff Carbon Neutrality Survey 4 Results

Survey 4:
n=302



Race:

	Response Percent
American Indian/Native Alaskan	4.4%
Asian	0.8%
Black/African American	2.0%
Native Hawaiian/Pacific Islander	1.2%
White	74.6%
Two or more races	14.7%
Other	6.7%

Ethnicity:

	Response Percent
Hispanic/Latinx	9.3%
Not Hispanic/Latinx	67.5%
Other	4.1%
Decline to specify	19.1%

Age Range:

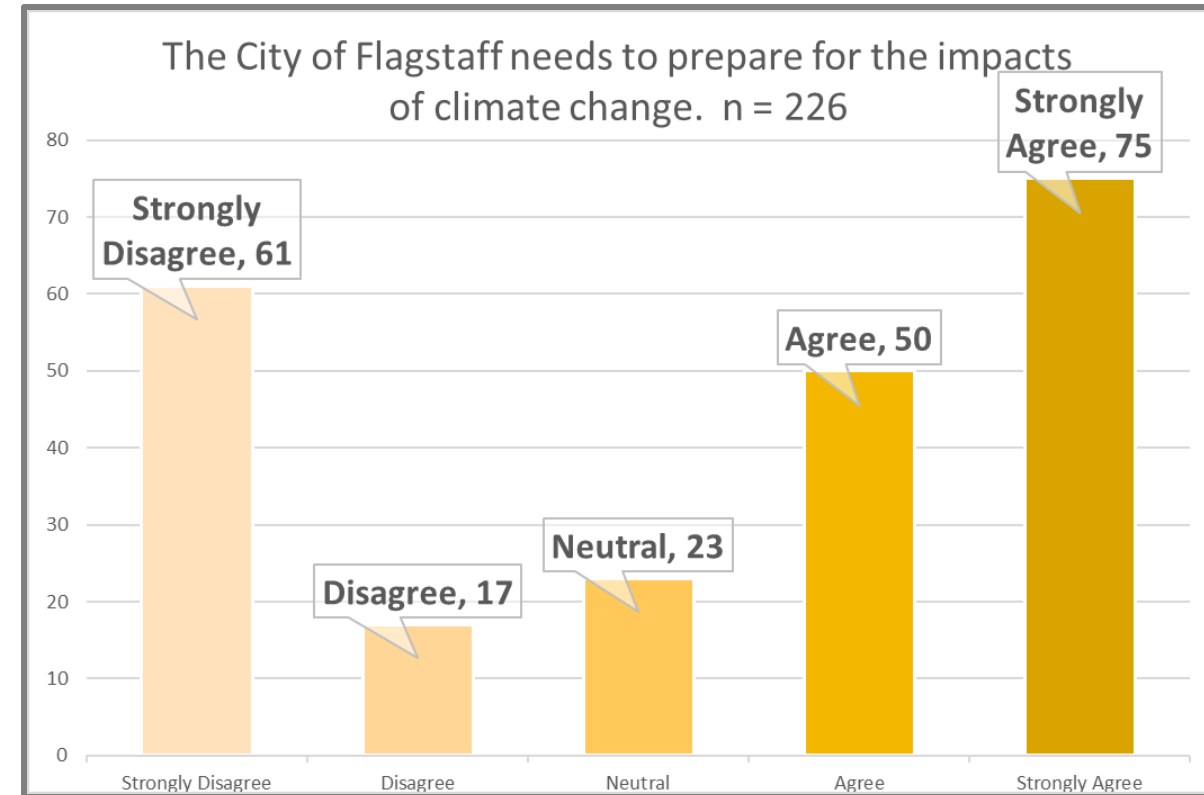
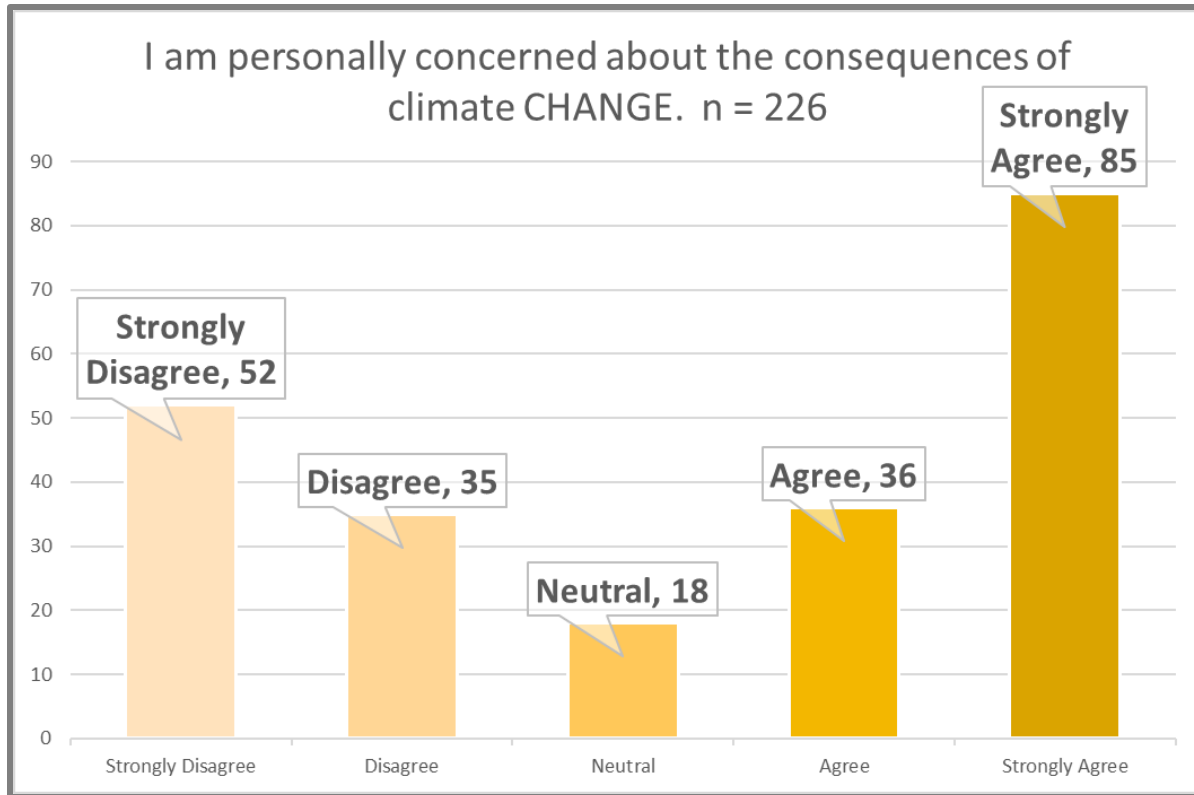
	Response Percent
15-19	1.5%
20-29	16.7%
30-39	29.2%
40-49	19.7%
50-59	10.2%
60-69	8.0%
70 years or older	8.3%
Decline to Specify	6.4%

Household Income Range

	Response Percent
Less than \$25,000	6.9%
\$25,000-\$49,999	13.8%
\$50,000-\$74,999	18.8%
\$75,000-\$99,999	16.1%
\$100,000-\$199,999	28.0%
\$200,000 or more	5.0%
Decline to specify	11.5%

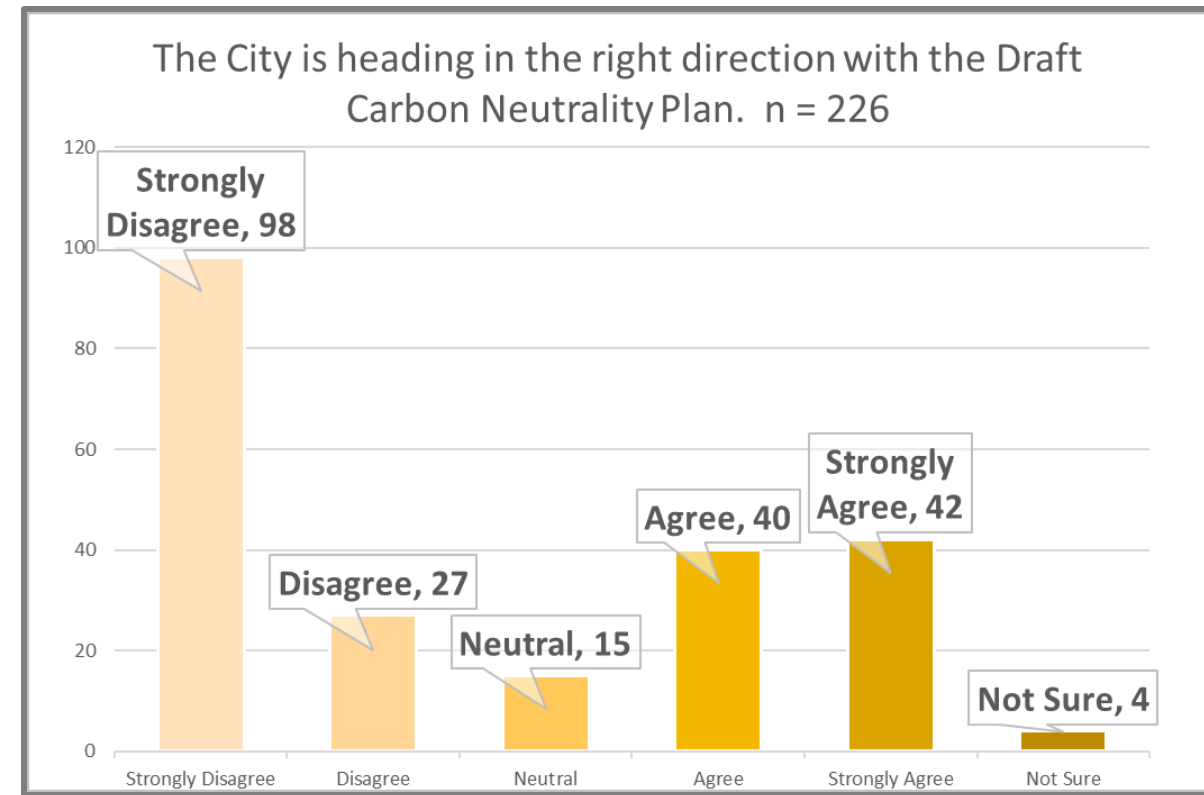
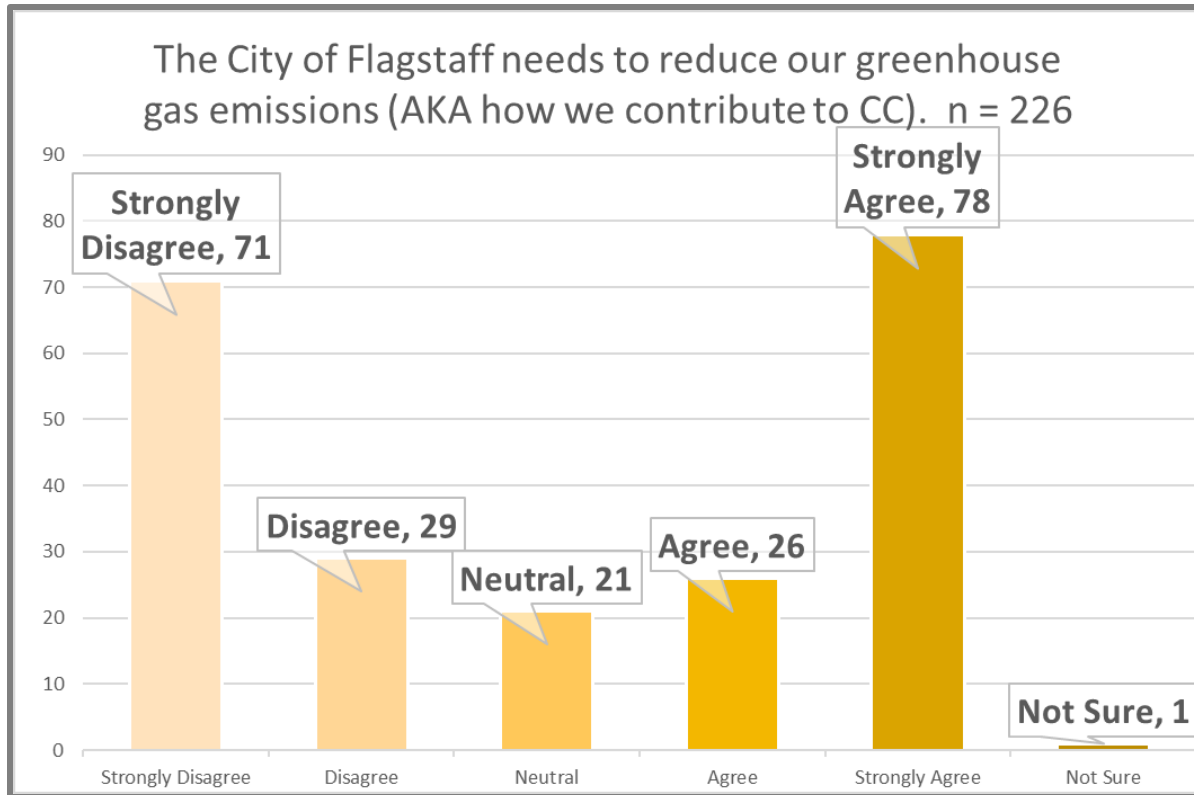


Survey 5 Responses





Survey 5 Responses



Flagstaff Carbon Neutrality Survey 5 Results

Survey 5:
n=226



What is your race?

	Response Percent
Asian	1.2%
Black/African American	2.4%
Native Hawaiian/Pacific Islander	1.2%
White	68.2%
Two or more races	14.1%
Other	17.6%

What is your ethnicity?

	Response Percent
Hispanic/Latinx	8.6%
Not Hispanic/Latinx	69.1%
Other	22.2%

What is your age range?

	Response Percent
Under 15	1.1%
15-19	2.2%
20-29	8.9%
30-39	16.7%
40-49	15.6%
50-59	17.8%
60-69	25.6%
70 years or older	12.2%

What is your household income range?

	Response Percent
Less than \$25,000	3.8%
\$25,000-\$49,999	16.3%
\$50,000-\$74,999	21.3%
\$75,000-\$99,999	18.8%
\$100,000-\$199,999	31.3%
\$200,000 or more	8.8%



Community Conversations

3. Climate Emergency Steering Committee

- Reengaged Climate Action and Adaptation Plan Steering Committee and invited new members to participate
- Following technical analysis, the committee:
 - Reviewed prescriptive target areas
 - Informed design of target strategies and actions prior to going to the community for public comment
 - Provided perspective on guiding principles to rely on and community tensions that the City should consider



Community Conversations

3. Climate Emergency Steering Committee

- Rick Barrett, City Engineer
- Greg Clifton, City Manager
- Justin Emerick, City Water Services
- Dan Folke, City Planning Director
- Joe Galli, Chamber of Commerce
- Geoffrey Gross, Coconino County
- Todd Hanson, City Solid Waste Director
- Gail Jackson, Economic Collaborative of Northern Arizona (ECONA)
- Natalie Jacobs, Citizens' Climate Lobby
- Megan Kelly, Grand Canyon Trust
- Dara Marks Marino, Climate Activist
- Dave McCain, City of Flagstaff Sustainability Commission
- Dave McIntire, City Economic Vitality Director
- Kate Morley, Mountain Line
- Matt Muchna, Northern Arizona University
- Amanda Ormond, Ormond Group, LLC
- Judson Tillinghast, APS
- Jed Westover, Loven Contracting



Community Conversations

3. Engage community members to participate in providing input

- Community Forum Surveys
- Virtual climate forums
- Virtual open houses
- Online open house

Timeline

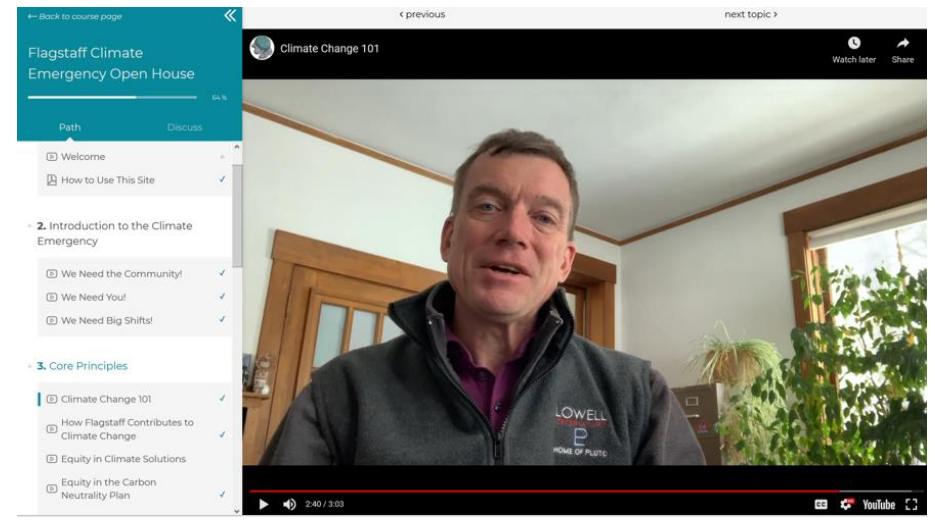
How to get involved

Now Review of the **Draft** Carbon Neutrality Plan

May 18 **City Council Meeting** to review and adopt the CNP.

Go to www.Flagstaff.az.gov/Climate to:

- Review the Plan
- Take the **Community Forum Survey** - by April 20th!
- Visit the **Open House website**
- Attend an **Open House**:
 - Thursday, April 15th, 6:00-7:00pm.
 - Saturday, April 17th, 10:00-11:00am.



The Numbers ... more than 2,600 Community Members Engaged



1. Community Forum Surveys
 - 6 surveys
 - 1,190 responses
2. Climate Emergency Forums
 - 5 forums
 - 47 participants
3. Carbon Neutrality Plan Open Houses
 - 7 open houses
 - 267 participants
4. Presentations
 - 72 presentations
 - 787 participants - Community groups and organizations
 - 373 participants - City Commissions and staff

Clarifications

1. When checking the Community Forum Website, the public only sees “registered” responses

Public View

Climate Emergency - Extended Survey



How will our community achieve carbon neutrality?

This topic has **784 visitors** and **162 responses**. This topic is closed

Staff View

Survey Climate Emergency - Extended Survey



How will our community achieve carbon neutrality?

This topic has **784 visitors** and **549 responses**: **162 registered responses** and **387 unregistered responses**.

This topic is closed



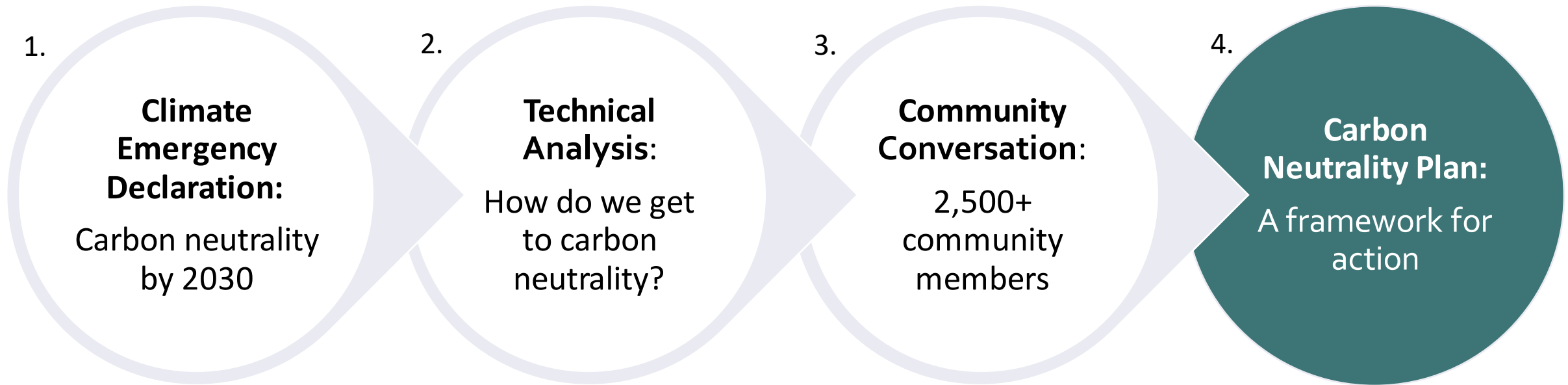
Opportunities

1. Continue on-going dialogues with the Flagstaff community and various sectors to inform program and policy development, and implementation schedules
 - *Remember this is an evolving framework*
2. Increase engagement and education to meet community members where they are at
 - Business advisory committee
 - Equity advisory committee
 - Youth advisory committee





Carbon Neutrality Plan



Carbon Neutrality Plan Goals

Mitigation

- Achieve carbon neutrality by 2030

Adaptation (2018 CAAP)

- Prepare the city's communities, systems, and resources to be more resilient to climate change impacts

Equity (2018 CAAP)

- Address climate change in a manner that prioritizes those most impacted and ensures the costs and benefits of climate adaptation and mitigation are equitably distributed





Our Approach



Carbon neutrality is:

1. Community-driven
2. Motivated by urgency
3. Prescriptive measures
4. A commitment to accountability
5. An investment in our future
6. Supported by market leaders





Our Approach



Flagstaff will:

7. Be a leader
8. Embrace the Big Shift
9. Balance community tensions and create opportunities
10. Center equity and adaptation





Our Approach



Climate action in Flagstaff will:

11. Produce benefits
12. Rely on partnerships
13. Prioritize incentives
14. Iterate and adapt over time



**To achieve
carbon
neutrality,
we will...**

**Strengthen
our
Neighborhoods**

**Clean our
Energy
Sources**

**Manage our
Consumption**

**Uphold our
Commitment**

To achieve carbon neutrality, we will...



**To achieve
carbon
neutrality,
we will...**

**Strengthen
our
Neighborhoods**

Equitable
Systems

Community
Resilience

Decreased
Dependence
on Cars

Community Resilience

What this means

Flagstaff will increase our ability to anticipate, accommodate, and positively adapt to and thrive amidst changing climate conditions or hazard events while enhancing quality of life, reliable systems, economic vitality, and conservation of resources.

CR-1: Ensure all mitigation actions improve Flagstaff's ability to adapt to the future

CR-2: Strengthen existing community systems to create resilience to both short-term shocks and long-term change



Equitable Systems

What this means

Flagstaff will ensure the fair and just distribution of the benefits of climate action and strive to reduce the unequal burdens created by climate change

ES-1: Incorporate equity as a foundational element of every climate action the City develops and implements

ES-2: Proactively engage community members on an ongoing basis

ES-3: Design targeted climate policies and programs to serve vulnerable communities first

ES-4: Actively seek to recognize past harms, repair trust, and build deeper relationships with community members



Decreased Dependence on Cars

What this means

Flagstaff will depend far less on cars, reducing vehicles miles traveled (VMT) and shifting many more trips to walking, biking and the bus. This also means changes in land use, like accepting and incorporating appropriate density.



DD-1: Encourage vibrancy, appropriate density, and attainability in existing neighborhoods, so that more residents live within walking distance of daily needs

DD-2: Create inclusive networks for walking and biking that are continuous, attractive, safe, comprehensive, and convenient for people of all ages

Decreased Dependence on Cars - continued

- DD-3:** Encourage Flagstaff residents and visitors to walk, bike, roll and take the bus
 - DD-4:** Transform transportation policies and planning to incorporate greenhouse gas emissions analysis and reduce dependence on driving
 - DD-5:** Invest in comprehensive and equitable transit
 - DD-6:** Proactively invest to protect Flagstaff's clean air status
-

Highlights

What is needed to make the Big Shift

- **Reduce parking requirements** across all building types
- **Increase density** in residential neighborhoods by 20%
- Increase the amount of **accessory dwelling units** in neighborhoods
- **Integrate density** into residential neighborhoods through more flexible zoning codes that allow more housing options including duplexes, triplexes, etc
- **Convert some car lanes** into micro-mobility zones
- Reclaim neighborhood streets through slow **‘safe and social’ zones** that allow for play areas, socializing, etc
- **Prioritize transit** over car movements in transportation operations and planning
- Shift City transportation **policies** to manage transportation demand and reduce VMT



Clarifications

1. Integrating GHG emissions into traffic impact analyses is **critical** to understanding how projects will impact our goals
 - This calculation will not be a large burden
2. Carbon neutrality alignment statements for developments will be a **communications tool for clarity and transparency**
 - This can be an opportunity for developments to communicate how they are taking climate action
3. We must be **clear-eyed** about coming growth and pressures on our housing market



Opportunities

1. The Housing Emergency and the Climate Emergency have many of the **same solutions**
2. Shifting our transportation systems is about providing **more good options**
3. We will work with **all groups** in Flagstaff to change transportation behaviors: residents, visitors, students
4. Changes to zoning codes, parking requirements, and density can provide **cost savings and business opportunities**
5. We can support businesses and residents in **preparing for a changing climate** through education and workshops



**To achieve
carbon
neutrality,
we will...**



Electric Mobility

Flagstaff will embrace the electrification of mobility options, shifting to vehicle-replacing e-bikes and bike share, electrifying buses and taking advantage of the rapidly evolving vehicle market.

EM-1: Advance the electrification of busses across Flagstaff

EM-2: Welcome electric micro-mobility devices as legitimate, healthy, affordable and low-carbon modes of transportation

EM-3: Support residents, businesses & institutions in the transition to electric vehicles



Clean Electricity

Flagstaff will obtain as much of its electricity as possible from sources that do not produce greenhouse gas emissions.

- CE-1:** Produce 100% renewable electricity to cover all City of Flagstaff municipal electricity needs
 - CE-2:** Increase renewable energy installations and usage in new buildings
 - CE-3:** Support solar installations on existing residential and commercial buildings
-



Building Fuel Switching

Flagstaff will shift building fuel sources from fossil fuels to electricity enabling us to take advantage of increasingly cleaner electricity.

- FS-1:** Reduce or remove natural gas usage in municipal buildings
- FS-2:** Encourage new buildings to rely on the electric grid as their main power source
- FS-3:** Support fuel switching in existing residential and commercial buildings
- FS-4:** Provide training and education on fuel switching



Clarifications

1. Electric home heating technology has improved dramatically, and studies have found that electrification can reduce costs over the lifetime of appliances
2. **Heat pumps** can heat homes in cold climates at comparable costs. They are highly efficient: compared to a gas furnace, a heat pump delivers the same amount of heat using two to five times less energy
3. Our fuel switching activities will focus on **education, providing resources, and introducing incentives**. There will not be penalties for natural gas use



Clarifications

5. Equity will be a critical component of our home electrification work, to ensure that electrification does not result in higher utility bills for low-income families
6. Adding EV level-II charging capabilities into new homes is a \$200 upgrade
7. There are negative impacts of all energy generation types. However, the negative impacts of wind and solar are far lower than those for fossil fuel energy generation
8. The City will carefully weigh competing values when considering solar needs as compared to existing mature trees

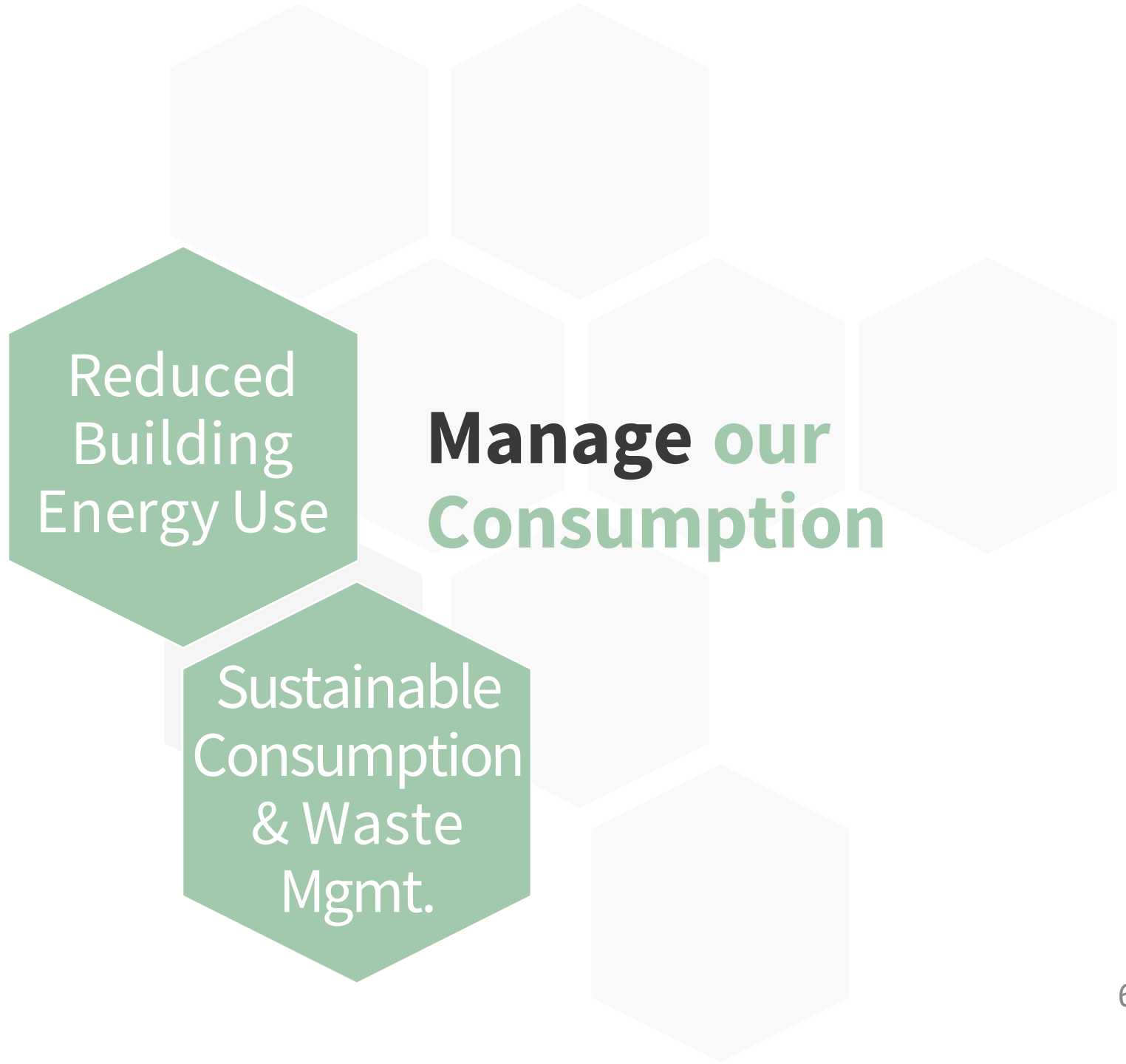


Opportunities

1. We do not model / predict natural gas reductions in the industrial sector – any reductions that are achieved will help us get to carbon neutrality more quickly
2. We could go beyond EVs: Hydrogen fueled vehicles present another emerging technology that may play a role in our electric future
3. The Northern Arizona Solar co-op is already leading to \$1.8 million invested in local businesses, jobs, and clean electricity
4. This focus area is all about jobs and cost savings. Running an EV is like buying gas for \$1.00 / gallon



**To achieve
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neutrality,
we will...**



Reduced Building Energy Use

Flagstaff will significantly reduce greenhouse gas emissions from heating, cooling and powering buildings.

BE-1: Achieve net zero City of Flagstaff facilities

BE-2: By 2030, require new homes in Flagstaff to be net zero energy homes

BE-3: Reduce energy use in existing buildings



Sustainable Consumption and Waste Management

Flagstaff will move towards sustainable consumption, divert more materials from the landfill through reuse and recycling, and then reduce emissions from the landfill.

MM-1: Manage emissions from the Cinder Lake Landfill

MM-2: Encourage sustainable consumption

MM-3: Divert more waste from the landfill

MM-4: Reduce organic waste going to the landfill and feed people in need



Clarifications

1. Transitioning the Flagstaff materials recovery facility (MRF) to a transfer station will not lead to a significant change in emissions, this will allow Flagstaff to recycle more materials



Opportunities

1. The City can build off the success of the Innovate Waste Challenge to combine innovation, waste reduction, and support for emerging businesses
2. Net zero energy homes are quickly becoming more widespread, and have significant comfort, health and economic benefits
3. Reducing building energy use is an opportunity to reduce the cost of living in Flagstaff



**To achieve
carbon
neutrality,
we will...**

**Uphold our
Commitment**

Carbon
Dioxide
Removal

Carbon Dioxide Removal (CDR)

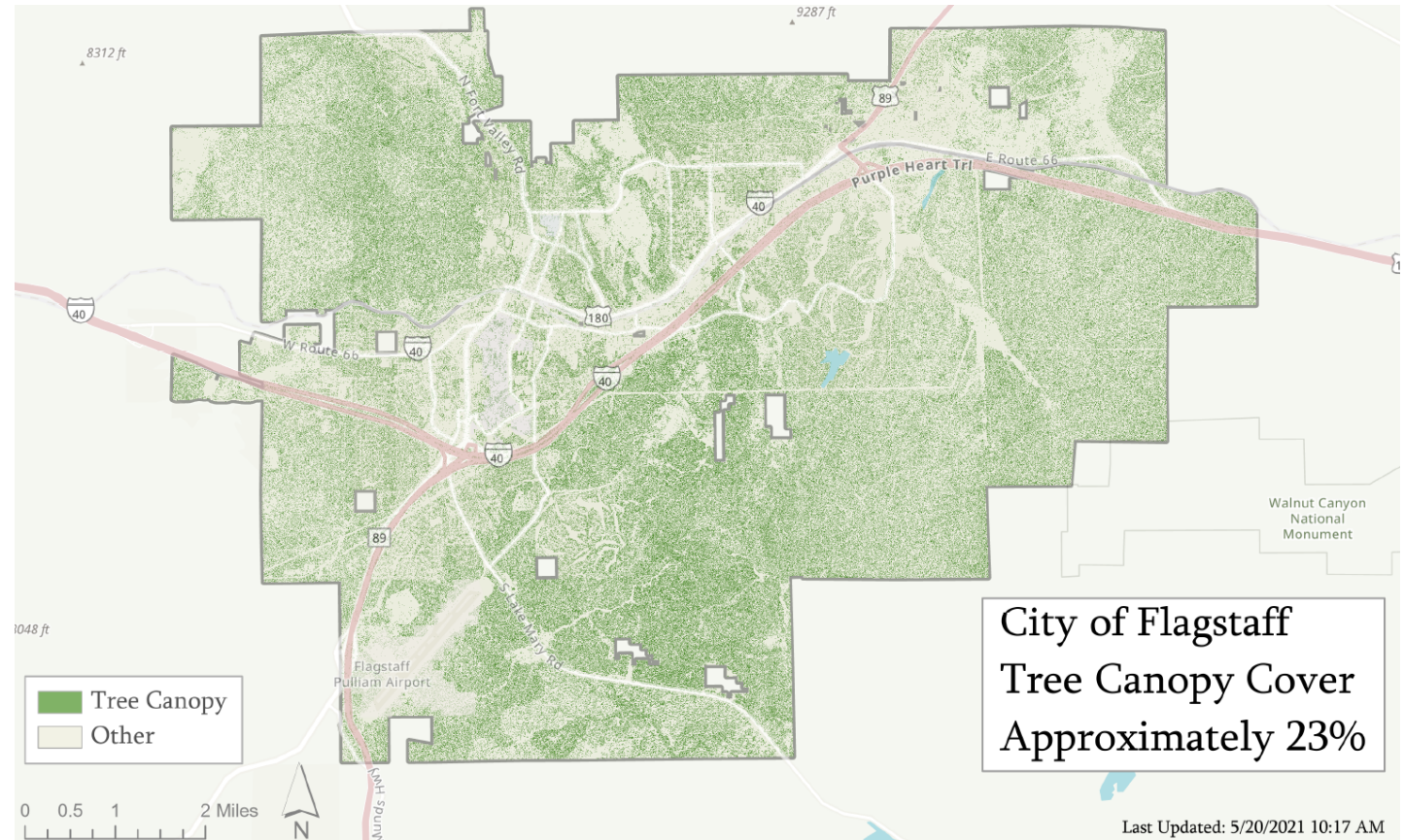
Flagstaff will first measure the remaining emissions produced by our community each year, and then balance with an equivalent amount of carbon dioxide removal (CDR) through local and regional initiatives.

-
- CD-1:** Develop a portfolio of local and regional carbon dioxide removal initiatives to meet Flagstaff's commitment to carbon neutrality
 - CD-2:** If local carbon dioxide removal projects are insufficient, obtain high-quality carbon offsets and CO2 Removal Certificates (CORCs)



Clarifications

1. The City's natural landscapes act as carbon sinks – forests, wetlands, and open spaces



Opportunities

1. Work with technical partners to advance protocols for calculating nature-based CDR
2. There is opportunity for CDR initiatives in northern Arizona – businesses could take advantage of the accelerating national search for CDR solutions
3. The City can collaborate with NAU researchers and regional partners on CDR pilots



Implementation 2021-2023

Community Resilience	Expand the Flagstaff HEPA Purifier Program
	Expand the Resilient Neighborhoods Network
	Incorporate of adaptation elements into the CNP
	Support community-led resilience project through the Neighborhood Sustainability Microgrant Program
Equitable Systems	Launch a wood stove rebate program*
	Launch youth Advisory Committee
	Launch Equity Advisory Committee
Decreased Dependence on Cars	Adopt and implement the Active Transportation Master Plan
	Launch the protected bike lane pilot
	Improve COF regulations to allow for more infill housing and greater density
	Analyze and update COF street engineering standards to consider how street design affects travel choices and contribute to GHG emissions

Implementation 2021-2023

Decreased Dependence on Cars

Analyze and update the COF traffic impact analysis process to incorporate consideration of GHG emissions & transportation demand management analysis

Policy changes to remove barriers and incentivize accessory dwelling units (ADUs)

Analyze and reduce or remove parking requirements

Adopt and implement the 2021-2031 Flagstaff Housing Plan

Adopt an air quality protection ordinance for idling and loading zones

Electric Mobility

Facilitate an E-bike collective purchasing cooperative

Launch new micro-mobility share program

Provide 14 new EV charging stations at City facilities

Adopt a City electric vehicle procurement policy

Complete an audit of COF policies

Implementation 2021-2023

Clean Electricity	Facilitate a solar panel purchasing co-op for businesses and residents
	Install solar and battery back-up power microgrids for Flagstaff fire stations*
	Develop and install a solar project at Red Gap Ranch
Fuel switching	Develop a building electrification information hub website
	Provide electrification incentives for homes and businesses
Reduced Building Energy Use	Launch a residential energy efficiency retrofit incentives*
	Refine and expand the residential energy rebate program
	Provide small business energy efficiency building retrofit incentives
	Launch a Building Code Advisory Group
	Complete an energy audit of City of Flagstaff (COF) buildings

Implementation 2021-2023

Reduced Building Energy Use	Implement energy retrofits and conservation projects identified by the energy audit
	Update the Sustainable Building Resolution for COF buildings
	Implement a City of Flagstaff electricity rate optimization program
Sustainable Consumption and Waste Management	Launch the pay as you throw recycling and trash collection pilot
	Launch Community compost drop-off pilot
	Expand the Neighborhood Sustainability Grant program
	Transition the Materials Recovery Facility (MRF) to a transfer station
CDR	Carbon dioxide removal feasibility analysis
	Develop or support a pilot carbon dioxide removal project in northern Arizona

Implementation 2021-2023

Partnerships

Launch a Business Sector Advisory Committee

Finalize the new NAU Climate Action Plan

Design and deliver business support tools to assist with advancing climate action

Recognize local businesses showing climate leadership

Internal COF

Develop and encourage a COF Remote Work Policy

Develop a long-term investment plan for carbon neutrality goals and avoided cost for City Council consideration

Consider developing a climate bond for voter approval



Let's Build a Stronger Community



- Renewable energy
- Reduced waste
- Healthy forests
- Thriving economy
- An inclusive community
- Secure water resources
- Connected neighborhoods
- Resilience for all communities
- Affordable, accessible, and multimodal transportation
- Neighbors helping neighbors



Discussion

- Any comments on the Carbon Neutrality Plan Draft?
- The Plan is currently scheduled for adoption on June 15, 2021



Thank you

