

# Introducing the draft Flagstaff Carbon Neutrality Plan

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# We are here to...

1. Introduce you to the Draft Carbon Neutrality Plan
2. Get your feedback on the Plan: are we on the right track?
3. Ask for your help in spreading the word

# Background: Climate Action in Flagstaff



# Climate Change in Flagstaff

Compared to today, by 2050, on average we can expect to see...



- Hotter temperatures.
- Increased aridity and more severe drought conditions.



- Less snowpack.
- More precipitation as rainfall instead of snowfall.



- Increased wildfire risk.

# Vulnerabilities: What's at Risk?

Climate change will have cascading impacts in our community from health to housing.



Water



Land Use & Housing



Tourism & Economy



Health

# Flagstaff's Greenhouse Gas Emissions

## Powering Buildings



## Transportation Emissions



## Consumption & Landfill



# Climate Action History



## November 2018

Adoption of Flagstaff's first Climate Action and Adaptation Plan.

## January 2020

Hundreds of well-organized community members spoke at City Council, making the case for the climate emergency declaration.

## June 2020

The [Climate Emergency Declaration Resolution 2020-09](#) was adopted unanimously by City Council.

# The Climate Emergency Declaration

1. Calls for a dramatic increase in **ambition and** city-wide **mobilization**.
2. We'll need **full community** participation, and to prioritize **vulnerable communities**
3. Sets a goal of **carbon neutrality by 2030**
4. Requires a framework for action that is constantly evolving and responding to changing conditions and **opportunities** – this is the **Carbon Neutrality Plan**.

# Flagstaff Carbon Neutrality Plan

*draft review*



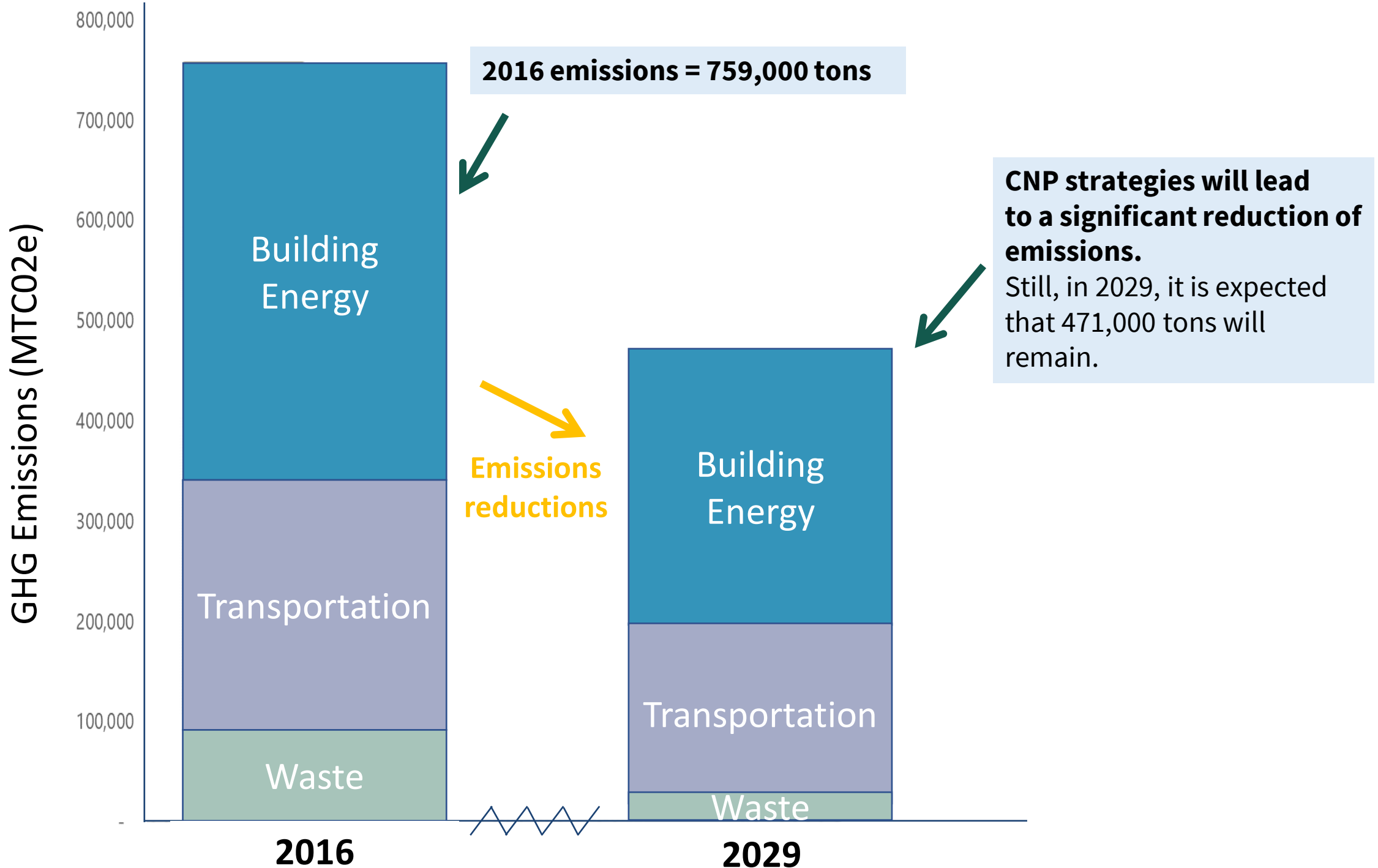
# Carbon Neutrality means...

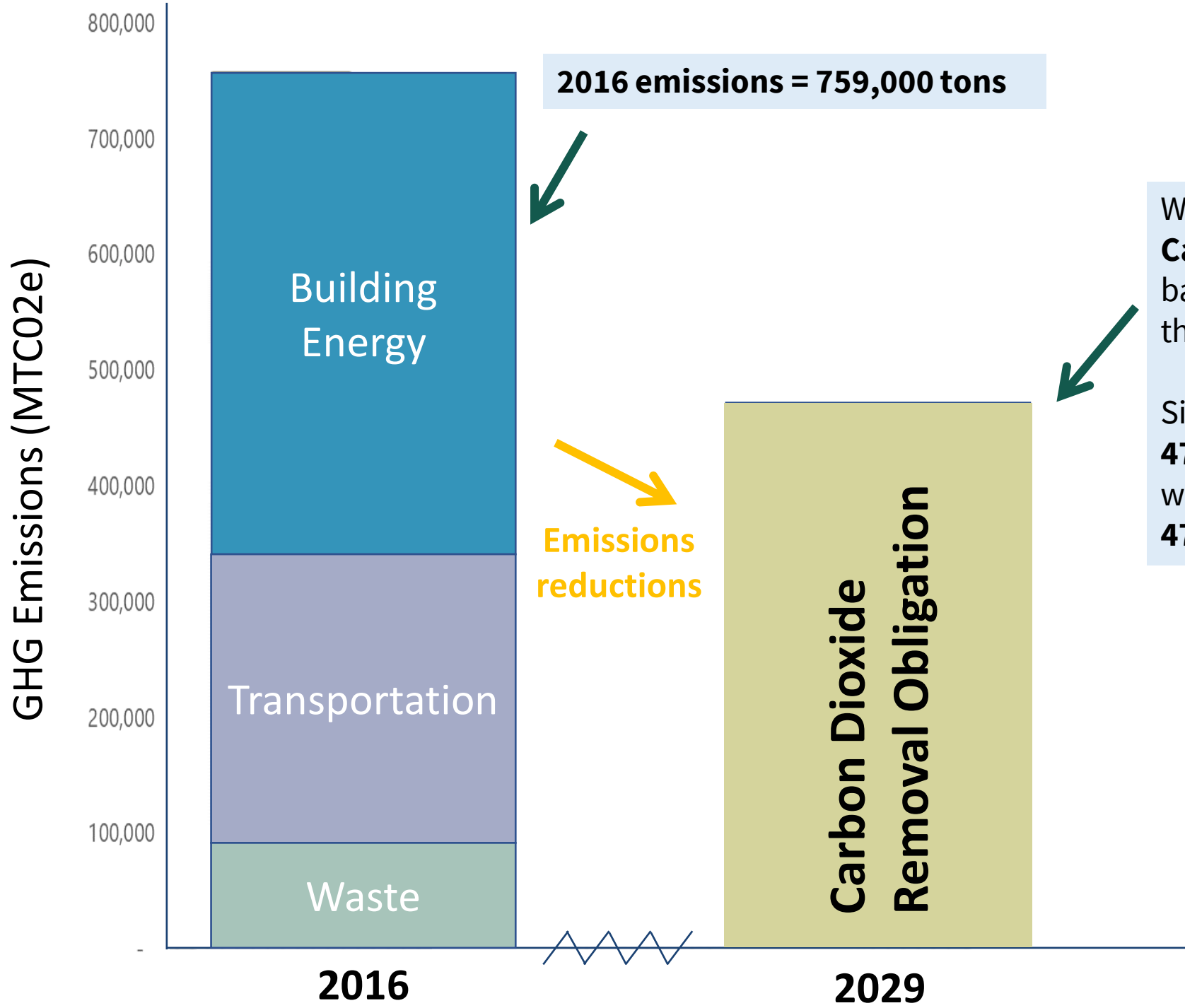
1. Reducing our community emissions (our impact) as much as possible.
2. Balancing the remaining emissions with projects that **REMOVE carbon dioxide** from the atmosphere – to achieve ‘neutrality’ – or zero NET impact.

Unavoided CO2 emissions remaining

Sequestration and other negative emissions initiatives







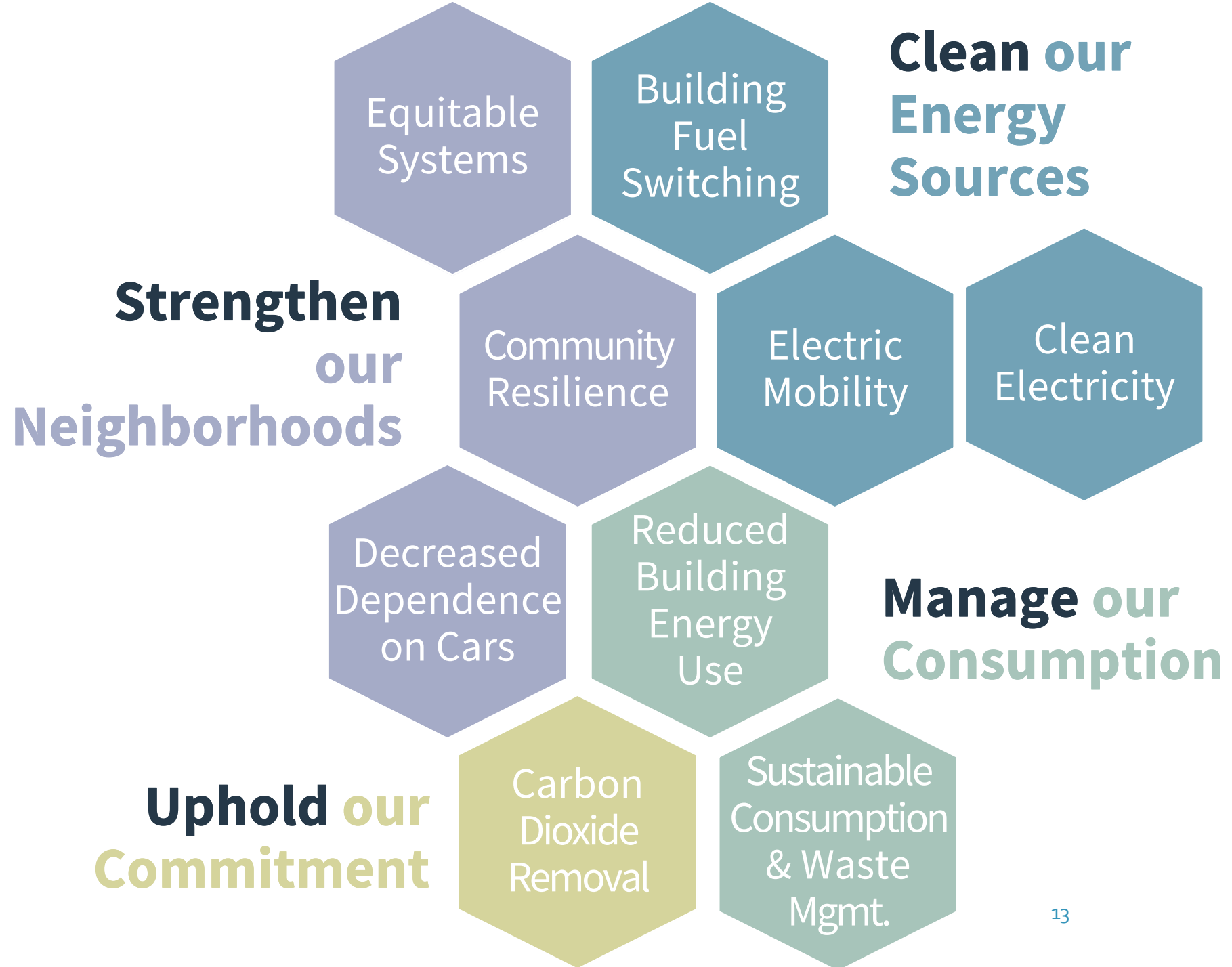
We will use **Carbon Dioxide Removal** to balance the unavoided emissions that we create in 2029.

Since we will still produce **471,000 tons** of emissions... we will invest in removing **471,000 tons** from the atmosphere.

# Outcomes of the FCNP:

<b>Miles we travel</b>	<b>Vehicle Miles Traveled (VMT)</b> hold steady at 2019 levels [ <b>1.59M/day (internal)</b> ].
	30% of our miles traveled will be in <b>electric vehicles</b> (or have zero tailpipe emissions).
<b>Solar in the community</b>	<b>2,000 home solar systems</b> are installed for <b>10MW</b> in power from residential solar. <b>10MW of solar</b> on commercial buildings. <b>5MW of solar</b> on industrial buildings.
<b>City of Flagstaff: Renewable Energy + Energy Use</b>	COF <b>100% renewable electricity</b> by 2025. 50MW Solar installation at <b>Red Gap Ranch</b> and a 10MW solar at <b>landfill</b> .
	Energy efficiency and fuel switching in <b>municipal buildings</b> .
<b>Retrofits and electrification</b>	<b>Retrofit ~50% of existing homes</b> (12,500 total residential retrofits) to reduce energy use and electrify homes. City directly supports 4,000 – 5,500 of these retrofits.
	25% of all commercial buildings get a <b>deep energy efficiency retrofit</b> . 15% of commercial buildings <b>fully electrify</b> .

# To achieve carbon neutrality, we will...



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

**Strengthen  
our  
Neighborhoods**

Equitable  
Systems

Community  
Resilience

Decreased  
Dependence  
on Cars

# Equitable Systems

## What it means

Ensuring fair distribution of resources, access and opportunities. Ensuring we do not cause harm – and ensuring climate action benefits all.

## How we get there

- Equity review of projects
  - Internal and external review
- Increasing partnership and collaboration
- Targeting programs at vulnerable communities



# Community Resilience

## What it means

Preparing for change, increased volatility, and long-term shifts. Improving our ability to bounce forward after events and challenges.

## How we get there

- Resilient Neighborhood Network
- Increasing connections between neighbors and groups
- Looking at our systems for weaknesses and vulnerabilities
- Helping families and businesses to build resilience



# 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:** Transform our transportation and land use systems.

**DD-2:** Encourage vibrancy, appropriate density, and attainability in existing neighborhoods, so that more residents live within walking distance of daily needs.

# Decreased Dependence on Cars - continued

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- DD-3:** Create inclusive networks for walking and biking that are continuous, attractive, safe, and comprehensive for all ages.
- DD-4:** Encourage Flagstaff residents and visitors to walk, bike, roll and take the bus.
- DD-5:** Transform transportation policies and planning to incorporate greenhouse gas emissions analysis and reduce dependence on driving.
- DD-6:** Support transit operations.
- DD-7:** Avoid Congestion Mitigation and Air Quality (CMAQ) non-attainment status.

**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:** Electrify busses across flagstaff.

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

**EM-3:** Support residents, companies & institutions in the transition to 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 buildings.



# Building Fuel Switching

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

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



**To achieve  
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# Reduced Building Energy Use

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

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**BE-1:** Achieve net zero energy homes in Flagstaff.

**BE-2:** Reduce energy use in existing buildings.

**BE-3:** Achieve net zero City of Flagstaff facilities by 2030.

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# 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.

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- MM-1:** Manage emissions from the Cinder Lakes Landfill.
  - MM-2:** Encourage sustainable consumption.
  - MM-3:** Divert more waste from the landfill.
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**To achieve  
carbon  
neutrality,  
we will...**

**Uphold our  
Commitment**



Carbon  
Dioxide  
Removal

# Carbon Dioxide Removal (CDR)

The process of removing carbon dioxide from the atmosphere.

Carbon dioxide removal must be part of any carbon neutrality portfolio.

Flagstaff will measure the remaining community emissions not reduced through target strategies, then balance with an equivalent amount of CDR.

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**CD-1:** Establish and support a portfolio of CDR and negative emission initiatives.

Prioritize regional initiatives and collaborations to handle as much of Flagstaff's CDR obligation as possible.

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# Climate Action Makes Life Better

- 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



# Funding

Funding for climate action could come from a variety of sources:

- Increase existing City **fees** on certain activities, such as increasing the Environmental Management Fee.
- Propose a new **sales tax** that would have to be approved by voters, similar to how Cities pay for road projects, municipal buildings, and other large city investments.
- Issue **bonds**, a mechanism for the City to pay for large infrastructure projects.
- Apply for **grants** from the federal government and private organizations or foundations.
- **Allocate** City resources to climate-focused initiatives.

# What does carbon neutrality look like for the City?

- Review and update internal policies.
- Prioritize climate action, adaptation and mitigation in all City processes and decisions.
- Prioritize appropriate funding for implementation of climate goals.
- All electricity to come from renewable resources.
- Analysis of building electrification.
- Transition fleet to electric vehicles.
- Encourage continuation of remote work for non-essential employees.

# What's next

# How to get involved

**Now:** Review of the **Draft** Climate Neutrality Plan

**May 18 - City Council Meeting** to review and adopt the Flagstaff Climate Neutrality Plan

Go to [www.Flagstaff.az.gov/Climate](http://www.Flagstaff.az.gov/Climate) to:

- **Review** the Plan
- **Take the** Community Forum **Survey - by April 20<sup>th</sup>!**
- Visit the **Open House website**

# Questions

# & discussion

# Thank you!

[www.Flagstaff.AZ.gov/Climate](http://www.Flagstaff.AZ.gov/Climate)

**Contact me any time:**

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