CITY OF SEDONA

Climate Action Plan 2020

Overview

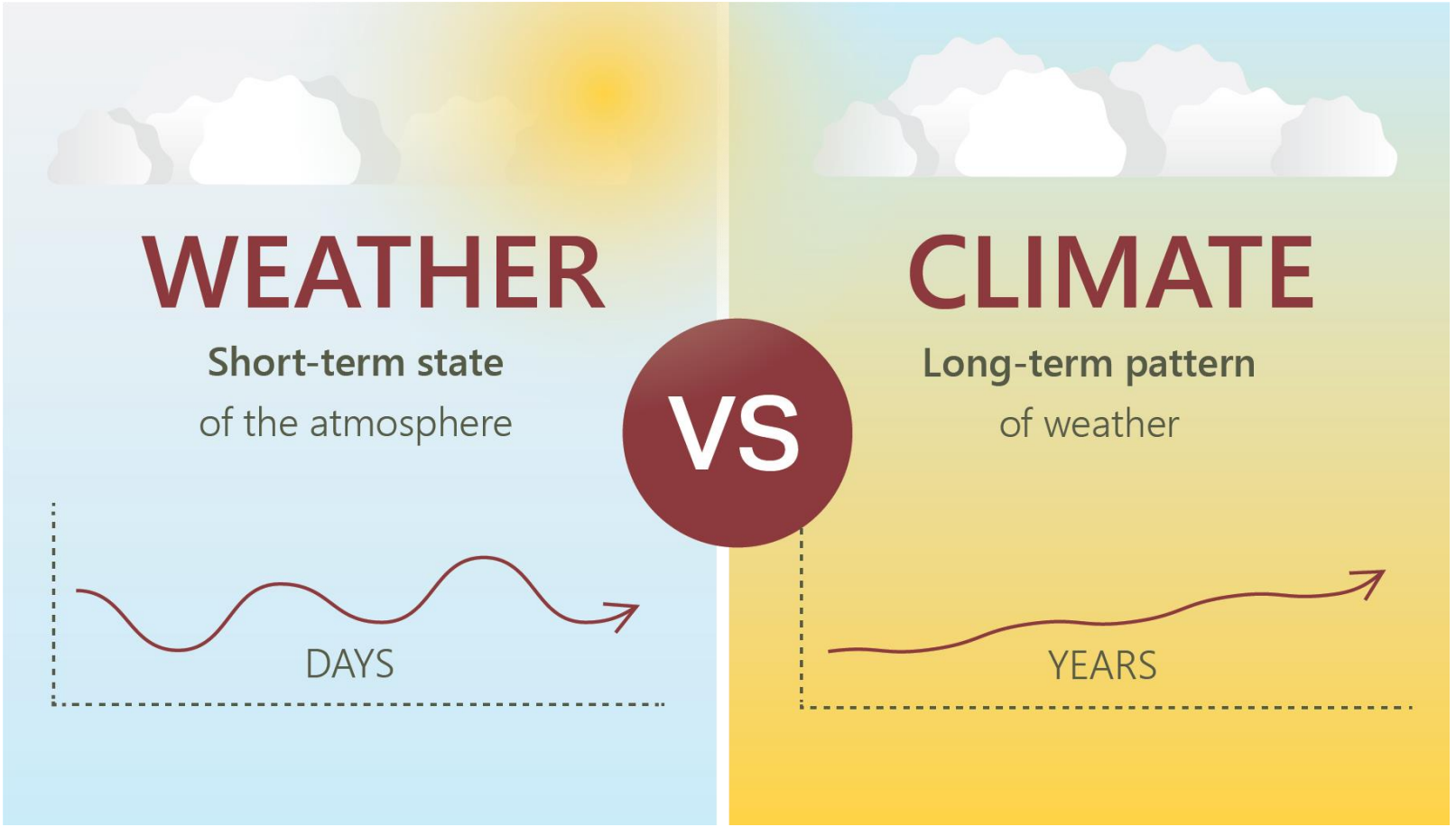
- Baseline Conditions
- Plan Development Process
- Target Setting
- Next Steps

Baseline Conditions

What is **climate change**?

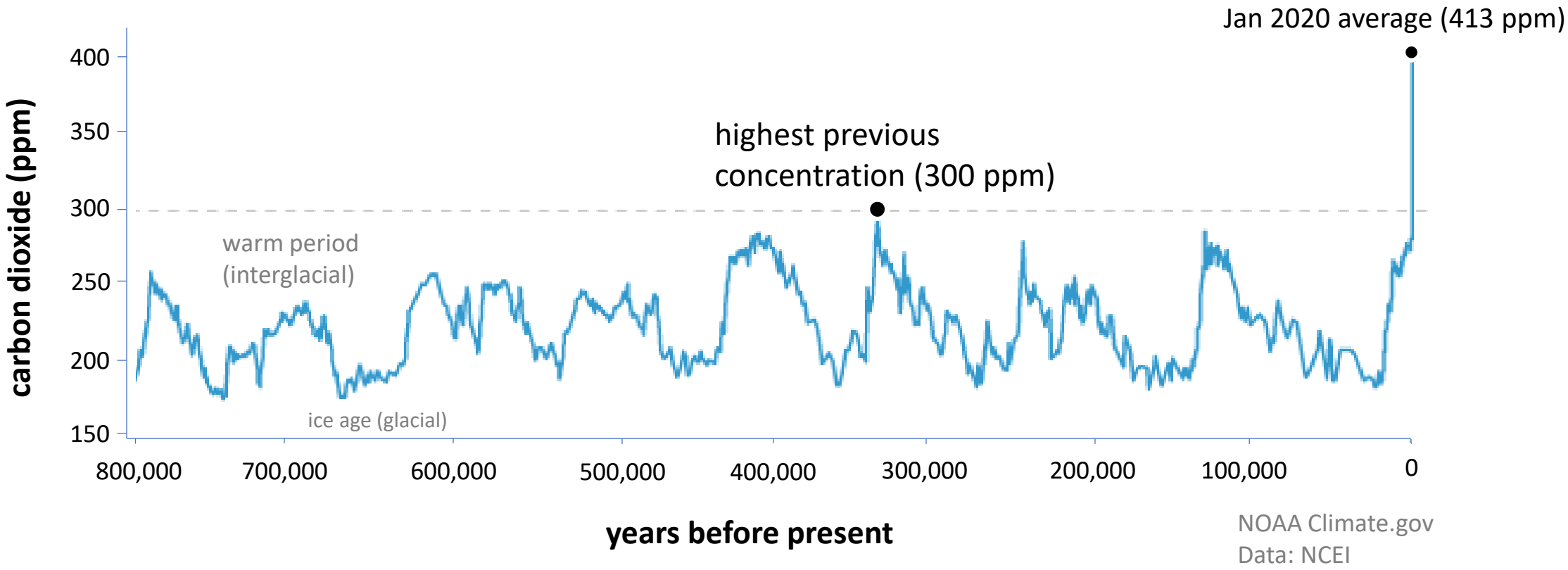
Climate change is a shift in the long-term, average weather pattern.

There is still some variability (e.g., some cooler years during the long-term upward trend in temperature).



Human-caused emissions—especially from burning fossil fuels—are driving climate change

CO_2 during ice ages and warm periods for the past 800,000 years



NOAA Climate.gov
Data: NCEI

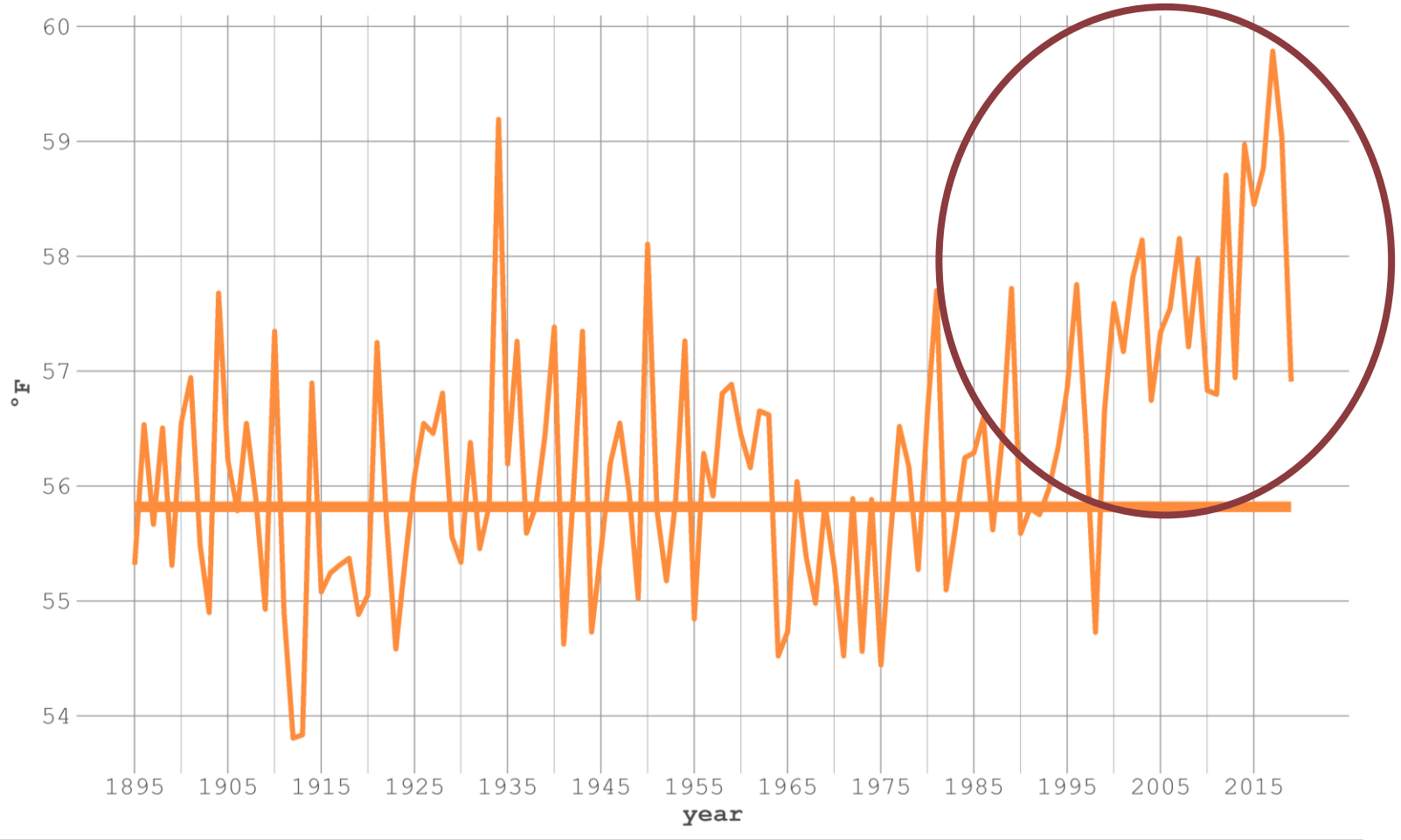
How is the climate changing in Sedona?

Temperatures have increased in the Verde Valley

Annual average temperature

Verde Valley, AZ

1961-1990 average: 55.8°F

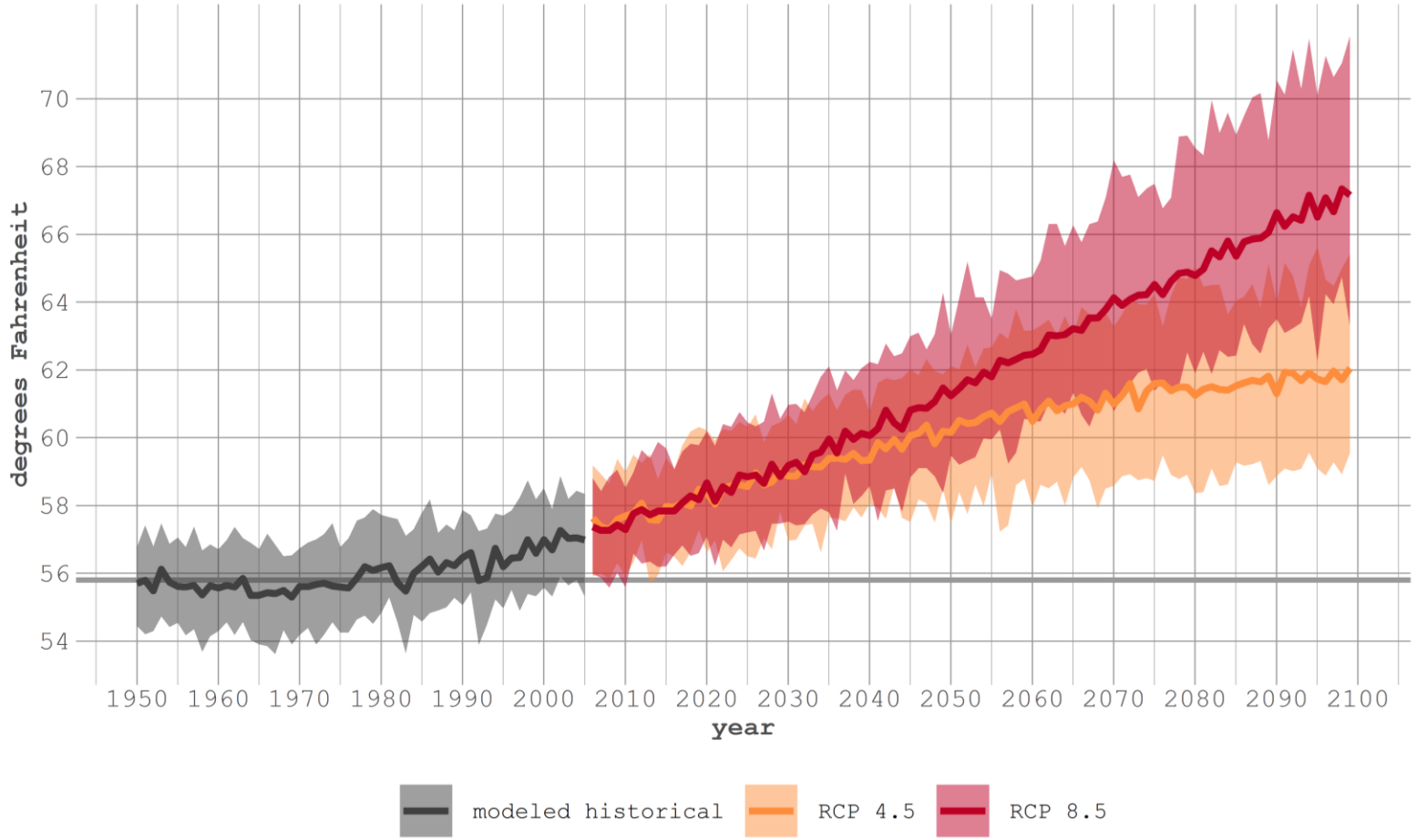


Temperatures will continue to increase

Projected changes in annual average temperature

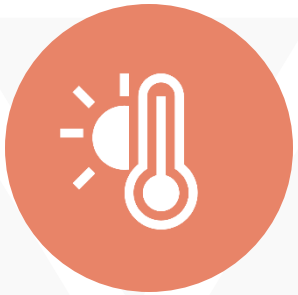
Verde Valley, AZ

1961-1990 average: 55.8°F



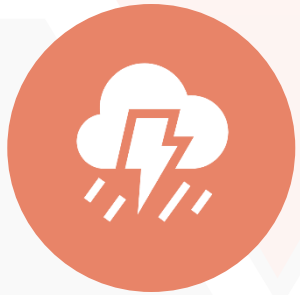
How could climate change **affect Sedona**?

Compared to today, by 2050 we expect to have, on average:



Hotter temperatures

More severe drought conditions



More intense storms and variable precipitation

Increased wildfire and smoke risk

Increased damage from pests due to hotter temperatures and drought-stressed vegetation

More severe erosion from extreme precipitation events

Lower water quality

What do the changes mean?

More insect-borne diseases and respiratory health concerns

More extreme heat and drier conditions

More intense rainstorms are possible

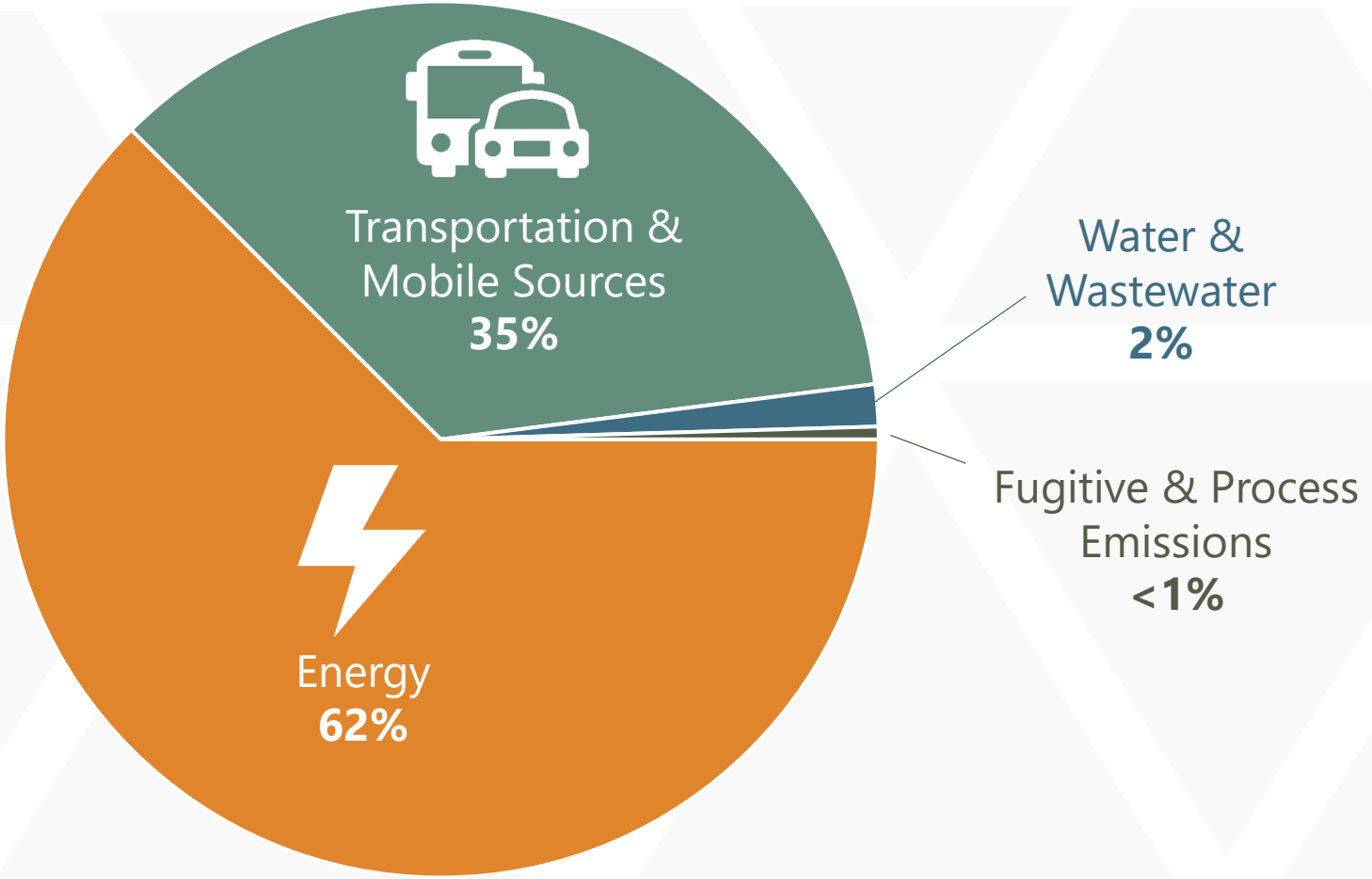
Potential for less tourism

Emissions in Sedona are contributing to climate change

Sedona's Top Emissions Sources

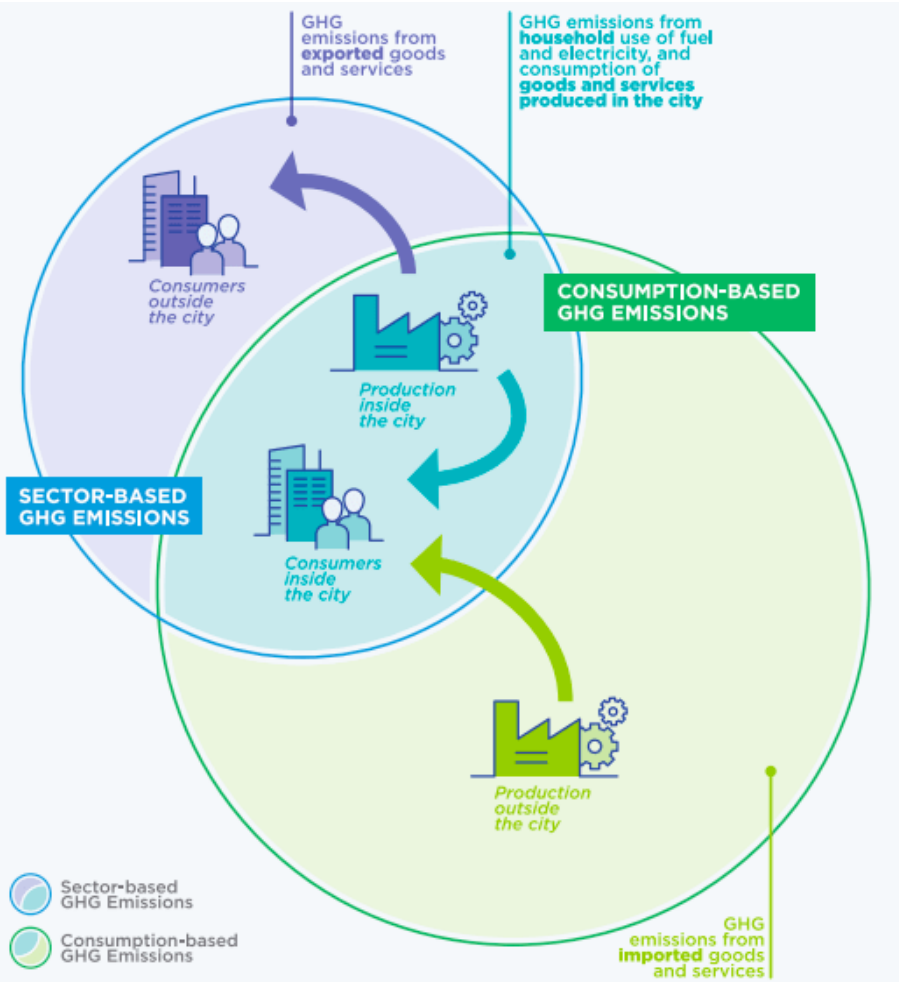
#1
Powering Buildings
(including heating & cooling)

#2
Vehicle Emissions



Consumption-Based Emissions

- Sector-based emissions: ~210,400 $MTCO_2e$
- Consumption-based: ~240,660 $MTCO_2e$



So **why** do we need a **Climate Action Plan**?

Climate change poses risks to everything from our **health** and our **infrastructure** to local **ecosystems**

The **benefits** of a plan for Sedona are **broad**

Enhancing local habitat and recreational opportunities.

Supporting low-income and disadvantaged communities.

Improving quality of life, well-being, and the local economy.

Promoting healthier lifestyles and public health.

A Sedona Climate Action Plan will establish a **clear road map** of priority actions and projects

Areas of Focus

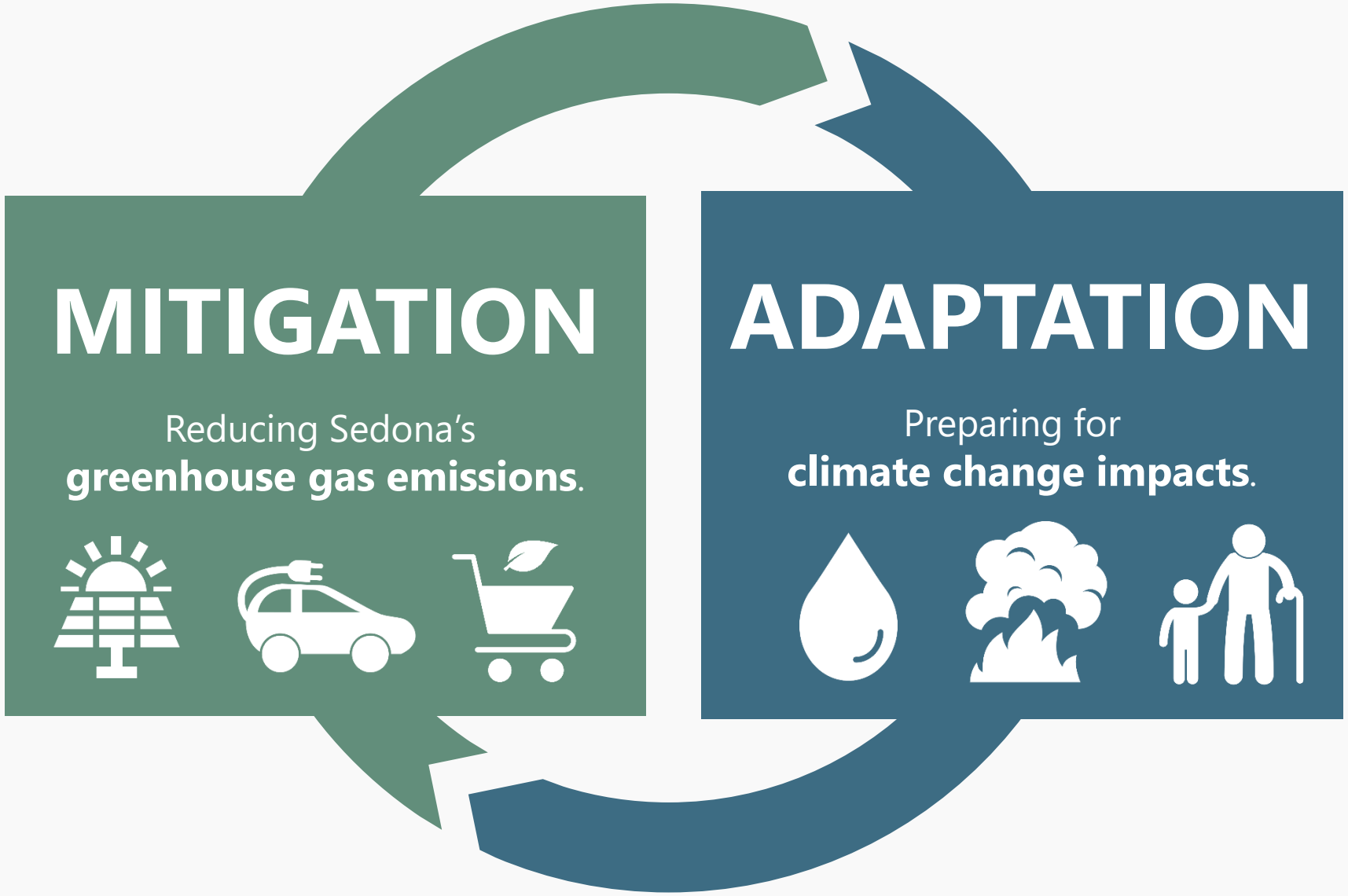
Transportation & Land Use

Natural Resources

Community Resiliency

Waste & Consumption

Buildings & Energy


MITIGATION
Reducing Sedona's
greenhouse gas emissions.
ADAPTATION
Preparing for
climate change impacts.

Diversity, Equity and Inclusion (DEI)

- The Climate Action Plan (CAP) prioritizes strategies and actions that are result outcomes that promote **diversity**. All focus areas were evaluated to promote **equity** in the distribution of benefits and to ensure the **inclusion** of disadvantaged populations.

Timeline & Process Overview

Characterize climate changes and plan public engagement

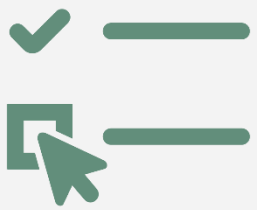
Identify vision, goals, priorities, and challenges

Identify, prioritize, and evaluate strategies

Draft action plan

Finalize action plan and implementation strategy

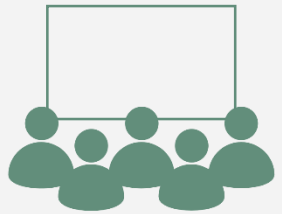
SPRING 2020 ..... FALL 2020



Online surveys

Stakeholder workgroups*

Updates*



Workshops*

Pop-up events & open houses*

*These events will occur throughout the CAP process.

Advisory Committee

Arizona Public Service

Arizona Water Company

Coconino National Forest

Coconino County

Friends of the Verde

Healthy World Sedona

Northern Arizona Climate Change Alliance

Sedona Chamber of Commerce

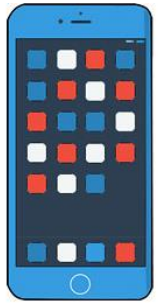
Sedona Fire District

Sedona XYZ

Sustainability Alliance

Yavapai County Emergency Management

This plan will build on the great work that the City and community have already been doing… and identify additional opportunities



Household hazardous waste and electronics recycling

Sedona and Yavapai County host free household hazardous waste and electronics collection events.

The Verde Valley Sustainability Alliance

collaborates with non-profits to foster sustainability take action on climate change.

The Municipal Sustainability Plan

which outlines clear steps to addressing sustainability and resilience in City operations over the next two years.

Sedona in Motion

focuses on projects that reduce environmental and visitor traffic impacts, improve traffic flow, support transit, and expand walking and bike-riding infrastructure and safety.

Oak Creek Watershed Council

and Friends of the Verde River work to protect the health of our watershed and coordinate watershed cleanups and activities.

Sedona Recycles

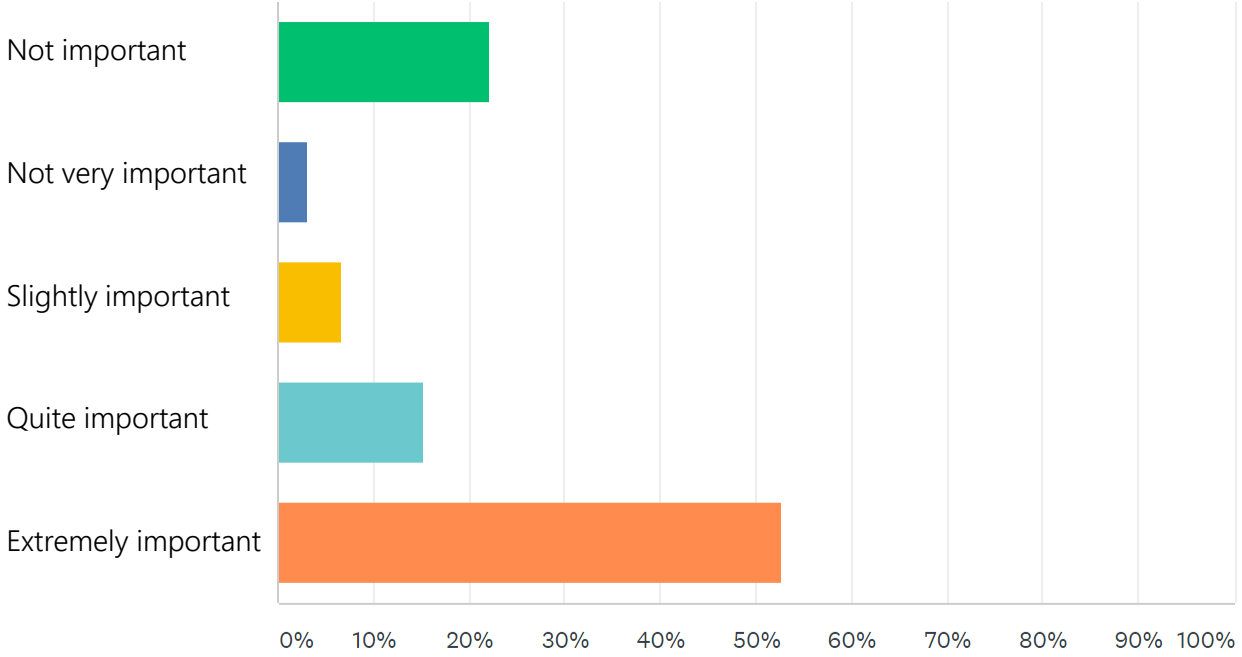
which provides recycling drop-off locations and educates the community on waste reduction, reuse, and recycling.

Community Engagement

- 3 Virtual Open Houses
- 2 Community Surveys
- 3 Non-profit Presentations
- Over **600 community members** participated in a survey, open house, or non-profit presentation

Initial Findings

- How important is it to you that the City of Sedona take action on climate change?



- 53% answered "**Extremely important**"
- 15% answered **"Quite important"**
- 7% answered **"Slightly important"**
- 3% answered **"Not very important"**
- 22% answered **"Not important"**

Target Setting

What's Needed to Manage Emissions

- **Popular Target Options:**
  - **80x50:** 80% reduction by 2050
  - **Carbon neutral:** by 2045 or another year
- **Target Drivers:**
  - What's needed to avoid catastrophic climate change impacts
  - Peer city comparison, desire to be leader
  - Social pressure

80x50 Target

- Until recently, scientists believed that the world would need to hold global average temperature increases to below 2°C above preindustrial levels.
- Achieving this would require an **80% reduction in global emissions by 2050**.
- Since then, governments around the world have adopted the "80x50" target.

Sedona's Context – Relevant City Targets

- Flagstaff, AZ: **Carbon neutral** by **2030**
- Park City, UT: **Carbon neutral** by **2030**
- Boulder, CO: **80% reduction** in emissions by **2030**
- Durango, CO: **80% reduction** in emissions by **2050**
- Missoula, MT: **Carbon neutral** by **2050**
- Salt Lake City, UT: **80% reduction** in emissions by **2040**

Community Survey Results

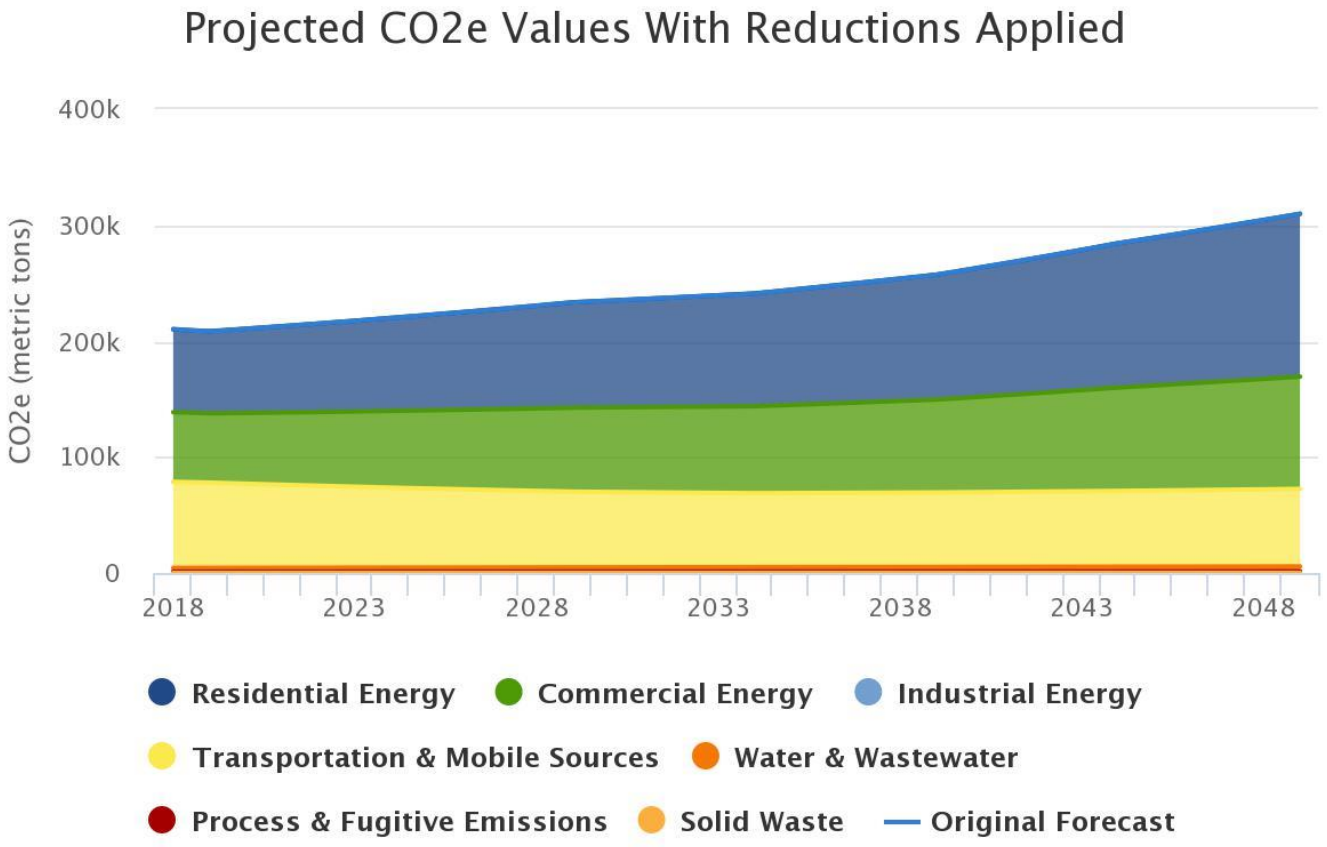
What methodology should Sedona take when developing a greenhouse gas emissions target?

- 63% thought Sedona should do what is necessary to control global temperature rise.
- 23% thought Sedona should not set a target.

Science-based Target

- 50% reduction in emissions by 2030
- 90% reduction in emissions by 2050

Sedona's Context - Forecast



- **68%** increase in emissions by **2050** (99,307 $MTCO_2e$)
- **Major increases/decreases:**
  - Residential energy
    - 51% increase by 2050
  - Commercial energy
    - 62% increase by 2050
  - Transportation & mobile sources
    - 11% decrease by 2050

Next Steps

Impactful Actions

- Expand and improve **bicycle and pedestrian facilities**
- Require and encourage **EV adoption**
- Power government operations from **renewable energy**
- Replace **fossil fuel-fired space and water heating systems**
- Require/incentivize **energy upgrades**, benchmarking, and reporting
- Adopt near-zero net energy/fossil fuel-free **building codes**
- Implement organics (**food waste, yard waste**) collection
- Major **public transit** investments

Multi-criteria Analysis

Effectiveness	How likely is it the action will work to address plan goals and targets? Is the action addressing a major sustainability need?
Cost	What is the relative ease of covering the costs of the action with City budget, grants, etc.? Is the cost of inaction significant? How affordable is the action to residents/businesses?
Feasibility	Is it possible to implement the action with current capacities within the City? Are there regulatory, political, or technological constraints?
Support	Is there strong support for action from the resident and business community?
Equity	Does the action address the needs of vulnerable and historically marginalized populations? Does the action reduce vulnerability for all populations?
Co-benefits	Does the action address multiple goals, or other City or community objectives? Does the action work with other City activities to amplify the collective impact?

Questions?