

Flagstaff Carbon Neutrality Plan Biannual Update

September 26, 2023



TODAY'S DISCUSSION

1. Foundations of climate action
2. Carbon Neutrality Plan action update
3. What's next



OUR CLIMATE TEAM



**BELLA
BOWMAN**

*Youth Climate
Leadership VISTA*



**CHRISTIAN
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*Sustainable Workforce
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**NICOLE
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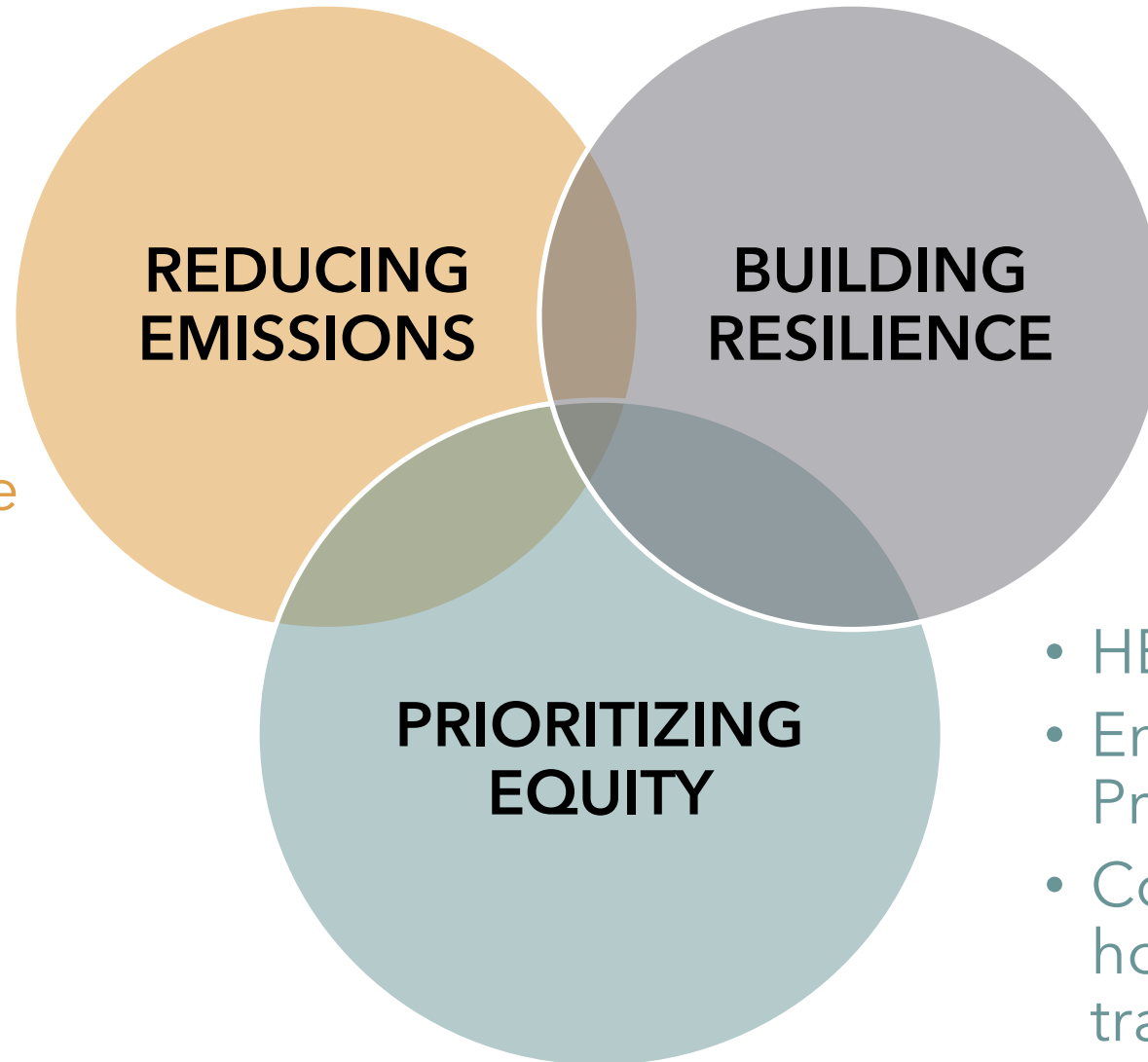
*Sustainability Division
Director*

FOUNDATIONS OF CLIMATE ACTION

FLAGSTAFF'S CLIMATE GOALS

With project examples

- Community solar infrastructure
- Incentives for electric vehicles, e-bikes, and home electrification
- COF Energy Conservation Project



- Floodproofing materials grants
- Forest health collaborations
- Flagstaff Climate Resilience Project

- HEPA filter distribution
- Energy Retrofit Program
- Code analysis project: housing, climate, and transit lenses

CNP TARGET AREAS

Neighborhoods

- Community Resilience
- Equitable Systems
- Decreased Dependence on Cars
- Housing for All
- Inclusive Recreation

Energy

- Electric Mobility
- Clean Electricity
- Building Fuel Switching

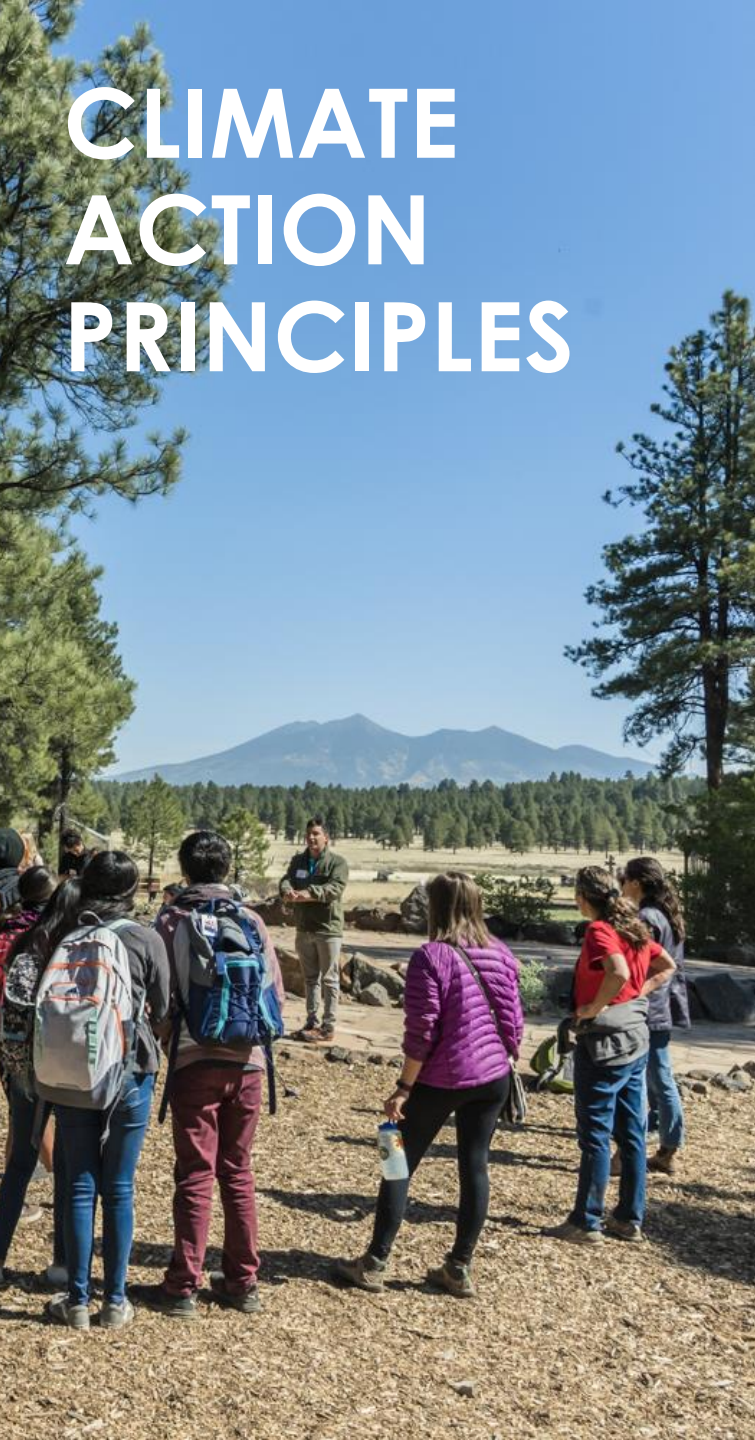
Consumption

- Reduced Building Energy Use
- Sustainable Consumption
- Water Security

Commitments

- Carbon Dioxide Removal
- Healthy Forests and Open Spaces
- Health and Safety
- Economic Prosperity

CLIMATE ACTION PRINCIPLES



Carbon neutrality is:

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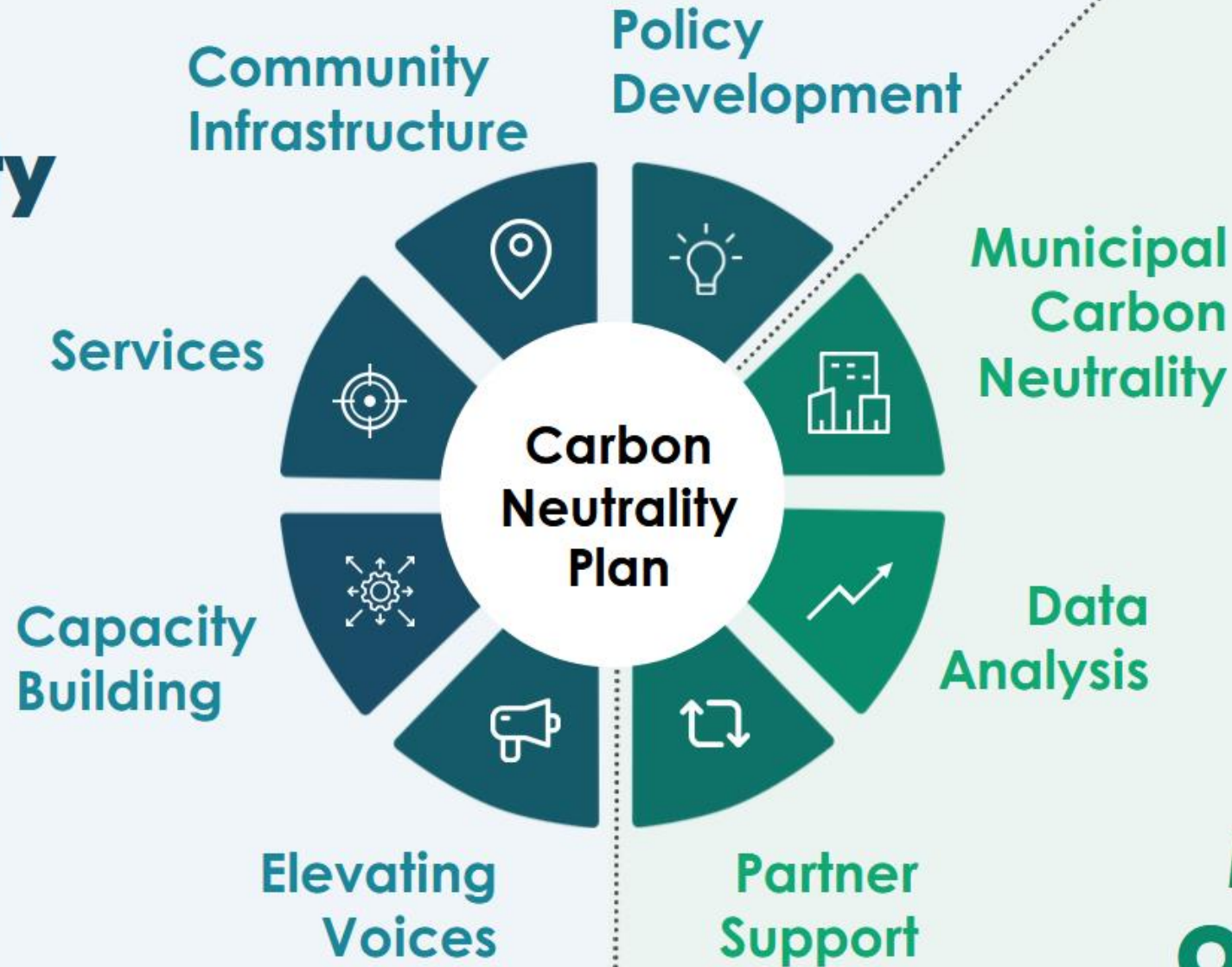
Flagstaff will:

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

Climate action in Flagstaff will:

11. *Produce co-benefits*
12. *Rely on partnerships*
13. *Priorities incentives*
14. *Iterate and adapt over time*

Community Action



Municipal Operations

COMMUNITY ACTION

POLICY DEVELOPMENT



Transportation

- Big Shift transportation policy development → In progress
- Active Transportation Master Plan Review of Engineering Standards → In progress

Zoning and Building Codes

- Land Availability and Suitability Study / Code Analysis Project ✓ Launched
- The Resilient Southwest Building Code Collaborative, to improve building codes across Arizona ✓ Federally funded

Resilience and Equity

- Catastrophic leave policy ✓ Approved and in effect

COMMUNITY INFRASTRUCTURE

COF EV charging stations

- Data analysis and stakeholder engagement → In progress
- Commission presentations → In progress
- Council discussion on **November 14th**

Community recycling

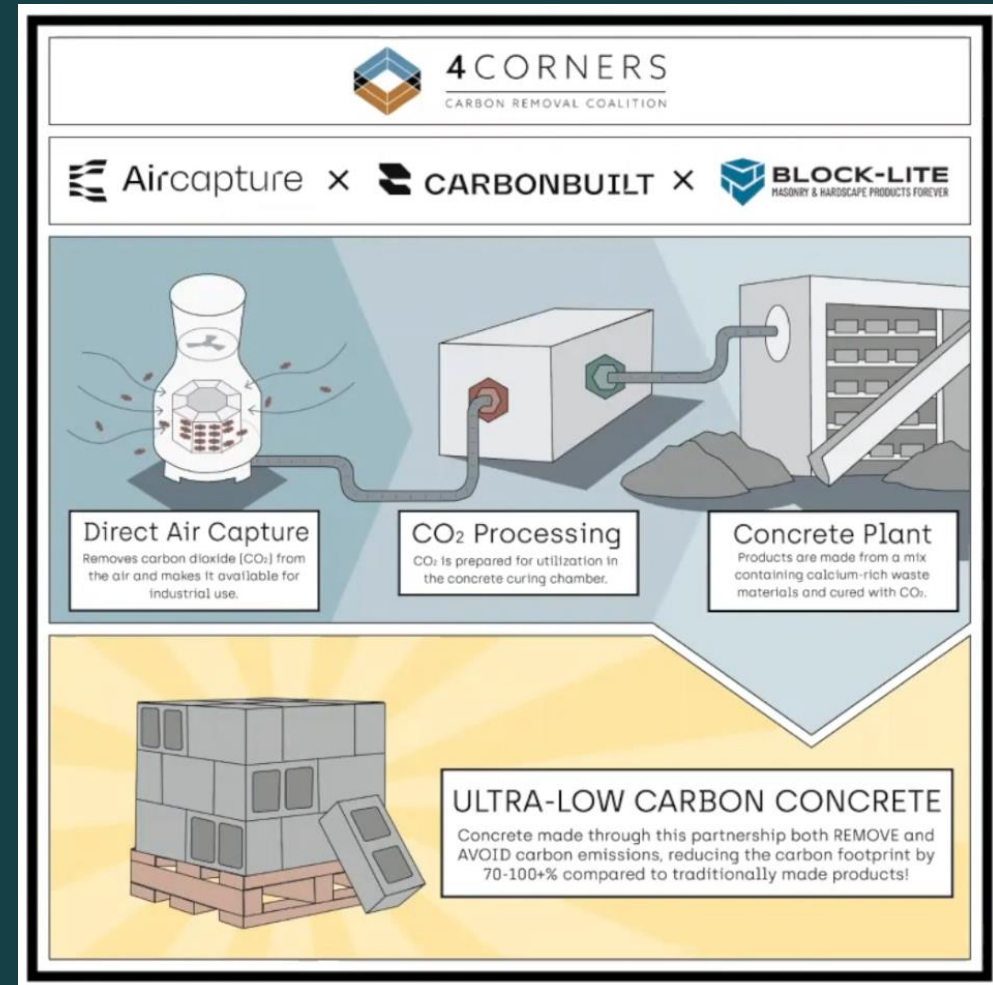
- Recycling services were quickly resumed after Spring interruption. Shout out to the Solid Waste Collections Team! ✓ Resumed and improved
- The "Flagstaff Recycles" campaign has engaged over 16,000 households → In progress

FY22 – FY23 Charging Station Data

Location	Activation Year	Charges	Energy Use (MWh)
City Hall	2020	3,102	45.7
Aquaplex	2021	1,094	10.3
Visitor's Center	2022	1,081	9.6
Airport	2022	157	2.3
Total:		5,434	67.9

SPOTLIGHT: FOUR CORNERS CARBON COALITION (4CCC)

- 4CCC's inaugural campaign provided \$390,000 in grant support for real-world projects that integrate carbon removal and concrete.
 - Concrete has the potential to durably store billions of tons of carbon dioxide removed from the air.
- **Project highlight:** CarbonBuilt's partnership with AirCapture and Block-Lite concrete will retrofit Block-Lite's Flagstaff masonry plant.
 - This project will be a first-of-its-kind in the world, reducing the concrete's carbon footprint by 50-100%, and avoiding up to 3,000 tons of emissions per year.



SERVICES



Waste

- 380 residents came to April's Drop-off Day event, in partnership with the Police Department and Public Works
- 434 households participated in the Residential Food Scraps Drop-off program (last six months)

- ✓ Diverted 12,500 lbs. from the landfill
- ✓ Diverted 19,000 lbs. of food scraps

Food

- Constructed a new community garden at Hal Jensen Rec. Center - thank you PROSE!

- ✓ 18 new garden plots

HEPA air purifiers

- In the fourth round of grant-funded air purifier distribution, for vulnerable households.

- ➔ Ongoing distribution

SPOTLIGHT: FLOODPROOF ASSISTANCE PROGRAM

- Floodproof Assistance Grants help residents protect their homes from flooding.
- Up to \$2,500 per household to purchase floodproofing materials.
- All residents are eligible to apply; funds will be prioritized for those who have experienced flooding, face potential future flooding, and demonstrate the greatest need.
- Round two will open in October.

www.flagstaff.az.gov/floodproof



SPOTLIGHT: ENERGY REBATES

Community members received \$100,000 in energy rebates in fiscal year 22-23.

- The City increased incentives for energy efficiency and home electrification, directly benefitting Flagstaff residents.
- Larger rebates are provided for lower-income households.

Coming soon:

- Enhanced wood stove rebates.
- E-bike rebates for low- and middle-income households.
- An improved process for electric upgrade panel rebates, to support solar systems.

In FY22-23, 88 households completed 221 home upgrades	#
Attic and Crawl Space Insulation	73
Air and Duct Sealing	96
Cold climate air source heat pumps	26
Heat pump or smart water heaters	3
Induction stoves	6
Electric panel or outlet upgrades	17

SPOTLIGHT: SOLAR UNITED NEIGHBORS (SUN)

- The third round of the SUN Northern Arizona (NAZ) co-op launches October 2, 2023.
- Partners: Coconino County and City of Sedona.
- Installations projected to begin in early 2024.
- FSO will run a concurrent consumer protection education campaign.

Results from the first two rounds of SUN NAZ:

- 117 Flagstaffians installed solar through the solar co-ops.
- 878.01 kW of solar added to the grid.
- \$4,683,289 in energy savings over the lifespan of the solar systems (25 yrs).
- 12,956 tons of CO2 offset.



AZ Daily Sun / San Diego Tribune

CAPACITY BUILDING

Neighborhood Grants

- Neighborhood Sustainability Grant program
- application period is OPEN! **Apply today:**
www.Flagstaff.AZ.gov/AlbertsGrant



Deadline
September
30th

Resilience

- **Climate Resilience Project**
Recent community discussions: fire-adapted communities, housing, carbon dioxide removal, gardens, watershed health
- **Streams Stewards Program:** Four watershed clean-ups this summer
- July's **Fix-it Clinic** was attended by 70 residents and 54 items were fixed.



First year
complete



First season
complete



Diverted 500
lbs. from the
landfill



SPOTLIGHT: YOUTH CLIMATE SUMMIT

In April, 100 students competed in the 3rd Flagstaff Youth Climate Summit.

Student-led climate projects competed for mini-grant funding:

- Active Transportation at NPA
- Composting at FJA
- Drip Irrigation at FJA
- Hopi House at FHS
- School Garden at FALA
- Zen Garden at FJA



\$3,805 in grants were awarded to support student projects

MUNICIPAL OPERATIONS

DATA ANALYSIS

City fleet electrification

The **APS Fleet Electrification Assessment** will analyze the City's vehicle fleet, assess the economic impacts, and evaluate charging infrastructure needs and costs at:

- Core Services
- Thorpe Park
- Police Station
- City Hall

➔ In progress

At Council
Jan. 2024

Barriers to ADUs

Upcoming community survey: **barriers to ADU construction.**

- Data will be used to inform the ADU pilot project.

➔ In progress



SPOTLIGHT: EV PROCUREMENT

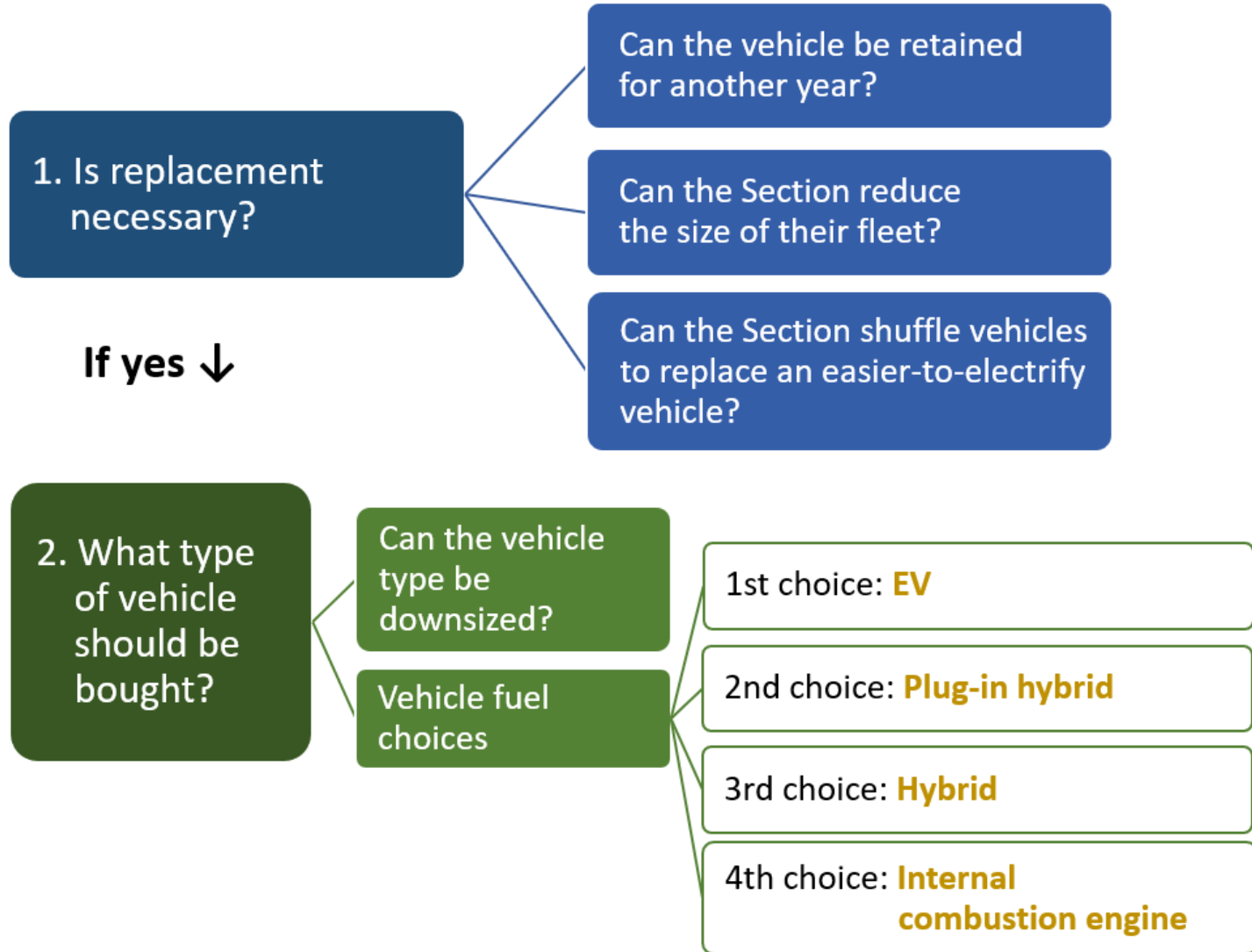
The City of Flagstaff has an EV-first policy, with guidelines by vehicle type:

Vehicle Type	Policy and Guidance
Sedans and SUVs	Starting in 2022, all new sedans and SUVs purchased by the City of Flagstaff will be EVs.*
Other light-duty vehicles	When replacing pick-up trucks and other light-duty vehicles, the City will consider EVs as the first option, followed by plug-in hybrid and hybrid options.
Medium-duty and heavy-duty vehicles	The City will monitor, test, evaluate, and, where feasible, acquire EVs for medium-duty and heavy-duty fleet vehicles and equipment categories.

* Exceptions are made on a case-by-case basis, through an EV exemption form.

SPOTLIGHT: EV PROCUREMENT

Fleet replacement decision process



SPOTLIGHT: EV PROCUREMENT

The auto industry is developing electric vehicles (EVs) in a wide range of makes and models.

- 12 manufacturers offer 40 EVs and 33 plug-in hybrid models across the US.
- EV's have performance, fuel savings and maintenance benefits.

In 2021 and 2022, demand for EVs outpaced supply, while manufacturers struggled with supply chain challenges and other issues. Consequently, manufacturers have supplied fewer EVs than predicted – leaving cities across the country searching for EVs.

The City has experienced long delays and even cancellations on EV orders. To address this issue, we are working to:

- Increase efforts to locate currently available EVs at dealerships on Arizona cooperative contracts.
- Increase collaboration with staff to identify alternative options.

MUNICIPAL CARBON NEUTRALITY

Employee transportation

- COF employee electric bike and scooter fleet ✓ Launched
- Electric Vehicles: Recent acquisitions despite industry-wide procurement challenges → Ongoing efforts

Sustainable procurement

- Working with the procurement team to update the procurement code → In progress



SPOTLIGHT: ENERGY CONSERVATION PROJECT

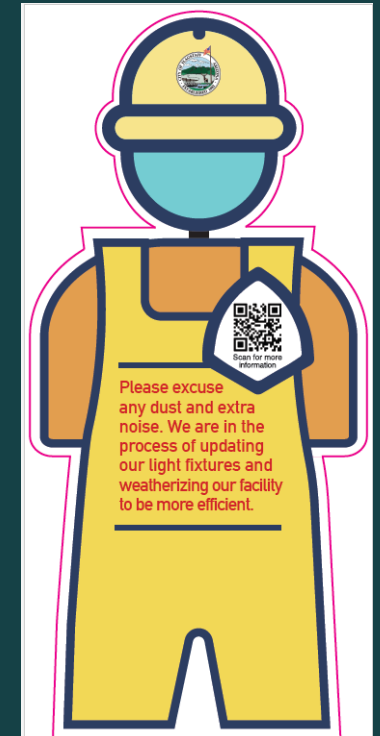
Began September 5th with lighting retrofits in City Hall

Project elements:

- 6,000 light retrofits to LEDs
- 30 buildings will be weatherized
- Six new EV charging stations
- Irrigation controls recommissioning
- Smart water meter testing
- Electric HVAC for Joe C. Montoya Community Center

Impacts:

- 3% reduction in municipal emissions - 864 Metric Tons of CO₂e annually
- ~\$305,000 annual utility savings



ZOOMING OUT

		Direct Impact	Policy Development	Resilience and Equity Impact
Buildings	City	<ul style="list-style-type: none"> • Energy Conservation Project • Green Power Partners renewable energy purchase 	Sustainable Building Resolution	Lower-cost and more resilient facilities Increasing energy source diversity
	Community	<ul style="list-style-type: none"> • Rebates and rebates • Solar co-op • Flood grants 	<ul style="list-style-type: none"> • LASS CAP • Building code update 	More affordable living; healthier and more comfortable homes
Transportation	City	EV fleet and infrastructure	EV procurement improvements	Lower-cost fleet
	Community	<ul style="list-style-type: none"> • EV charging • EV rebates • Coming soon: E-bike rebates 	ATMP and Engineering Standards updates	More affordable living; cleaner air
Waste	City	Operating the Materials Recovery Facility	Procurement code updates	Waste reduction
	Community	Food Scraps Drop-offs	MRF transition - increase in diverted materials	Circular economy benefits

WHAT'S NEXT

GRANT APPLICATION UPDATE

Awarded and Awaiting Funding	Project
Department of Energy	Resilient Southwest Building Code Collaborative
Department of Housing and Urban Development	Flagstaff Home Energy Retrofit Program
Submitted Applications	
National Renewable Energy Laboratory	Buildings UP Grant
Environmental Protection Agency	Flagstaff Resilience Hub Grant Solid Waste Infrastructure for Recycling Grant Program
Applications in Development	
Environmental Protection Agency	Solar for All statewide coalition
Department of Energy	Energy Efficiency Conservation Block Grant



UPCOMING COUNCIL PRESENTATIONS

- November 14
 - Moving the Needle
 - Land Availability and Assessment Study and Code Analysis Project (LASS/CAP)
 - EV Charging Stations
- December 12
 - NAU Collaboration - Equity Mapping Project
- January 30
 - Fleet Electrification Assessment

IMPORTANT DATES

- September 30 – Neighborhood Sustainability Grants application deadline
- October 2 – Solar United Neighborhoods – Northern Arizona round 3 launch



HELP BUILD A STRONGER FLAGSTAFF

We need your...

- Leadership
- Support
- Engagement of the community
- Creative ideas
- Involvement
- Personal action

Need inspiration? Visit www.flagstaff.az/climate

THANK YOU

www.Flagstaff.AZ/Climate



Please reach out!

Jenny Niemann

Climate Action Section Director

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A blue banner for "FLAGSTAFF RECYCLES". At the top, a dark blue ribbon contains the text "• FLAGSTAFF RECYCLES •". Below this, a smaller line of text reads "Recycle items loosely in the bin, without a bag." The banner is divided into three circular sections, each containing different types of recyclable items: the first section shows metal cans and a metal lid; the second section shows a newspaper titled "SPECIAL NATURE TODAY" and cardboard boxes; the third section shows plastic bottles and containers. A right-pointing arrow is visible on the far right side of the banner. At the bottom, a dark blue bar contains the text "To learn more about recycling visit: flagstaff.az.gov/recycle" and a small circular logo on the right.