

# PUBLIC MEETING AGENDA



## Sustainability & Resilience Commission

### MEETING DATE

Monday, April 11, 2022  
4:30 pm – 6:30 pm

### MEETING LOCATION - Virtual Meeting

Microsoft Teams meeting  
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[+1 480-498-8745,238090030#](tel:+14804988745238090030) United States, Phoenix

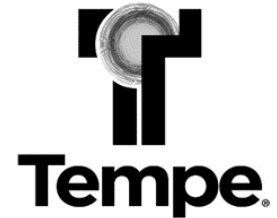
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AGENDA ITEM	PRESENTER	ACTION or INFORMATION
<b>1. Public Appearances</b> The Sustainability Commission welcomes public comment for items listed on this agenda. There is a <i>three-minute time limit</i> per citizen.	Kendon Jung, Commission Chair (4:30 – 4:33 pm)	Information
<b>2. Approval of Meeting Minutes</b> The Commission will be asked to review and approve meeting minutes from the March 14, 2022 meeting.	Kendon Jung, Commission Chair (4:33 – 4:35 pm)	Action
<b>3. Community GHG Emissions Wedge Analysis</b> Staff will provide updates.	Braden Kay, Sustainability and Resilience Director  Mike Steinhoff, Kim Lundgren Associates (4:35 – 5:05 pm)	Information
<b>4. 2022 Water, Wastewater and Stormwater Rate Study</b> Staff will provide updates.	Tara Ford, Municipal Utilities Interim Director (5:05– 5:30 pm)	Information
<b>5. Resilient Tempe Master Plan and Utility Feasibility Study</b> Staff will provide updates.	Braden Kay, Sustainability and Resilience Director (5:30– 6:00 pm)	Information
<b>6. Fiscal Year 22-23 Budget Supplemental Updates</b> Staff will provide updates.	Brianne Fisher, Climate Action Manager (6:00 – 6:15 pm)	Information
<b>7. Housekeeping Items</b> Neighborhood Celebration March 26th	Kendon Jung, Commission Chair (6:15 – 6:25 pm)	Action
<b>8. Future Agenda Items</b> Commission may request future agenda items.	Kendon Jung, Commission Chair (6:25 – 6:30 pm)	Action

**According to the Arizona Open Meeting Law, the Sustainability Commission may only discuss matters listed on the agenda. The City of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-2775 (voice) or 350-8400 (TDD) to request an accommodation to participate in a public meeting.**



## Minutes

### City of Tempe Sustainability Commission March 14, 2022

Minutes of the Tempe Sustainability Commission meeting held on Monday, March 14, 2022, 4:30 p.m. at a virtual meeting on MS Teams, through City Hall, 31 E. 5<sup>th</sup> Street, Tempe, Arizona.

**(MEMBERS) Present:**

Kendon Jung (Chair)  
Natalie Mendoza  
Stephanie Milam-Edwards  
Joyce Vesper  
Katja Brundiers

Meaghan Coon  
Shawn Swisher  
Jake Swanson  
Ryan Mores  
Barbie Burke

**(MEMBERS) Absent:**

**City Staff Present:**

Braden Kay  
Brienne Fisher  
TaiAnna Yee  
Julian Dresang  
Dino Accardo  
Shelly Seyler  
Donna Hancock-Sullivan  
Robert Yabes

**Guests Present:**

David Sokolowski  
Matt Smith

Chair Jung called the meeting to order at 4:35 p.m.

### **Agenda Item 1 – Public Appearances**

David Sokolowski commented on green construction codes and the EnVision Center. He said that he believes that the city needs to reduce the regulatory burdens on developers and exclude residential properties. Developers always find ways to recuperate costs and the developer will have to maintain the property even if car chargers are not being utilized. They will expect residents to pay for the additional charges incurred even if they are unable to utilize the green building additions. This will burden low-income renters. He is not interested in saving developers money. He knows the developer will always pass the costs onto the renter. He is not speaking about homeowners, who have collateral. He thinks they should exclude residential from the codes and instead require new codes for commercial and office that include full solar, not just solar-ready. He wants the costs to be shared by the community and less burden on low-income renters.

David asked what type of generator will be used in the EnVision Center. He asked about vehicle to grid technology, which has been successful in the UK. This would allow city vehicles to act as emergency batteries.

### **Agenda Item 2 – Approval of Meeting Minutes**

Chair Jung called for a motion to approve the minutes from February 14, 2022.

**Motion:** Jake Swanson

**Second:** Barbie Burke

**Decision:** Approved 10-0

**Voted to Approve:**

Kendon Jung (Chair)

Natalie Mendoza

Stephanie Milam-Edwards

Joyce Vesper

Katja Brundiers

Meaghan Coon

Shawn Swisher

Jake Swanson

Ryan Mores

Barbie Burke

### **Agenda Item 3 – Urban Cooling Green Stormwater**

Chair Jung said that the theme of the meeting is to highlight the areas that the commission wants to take ownership of and provide updates on where they are at.

Tempe City Engineer Julian Dresang gave a presentation about Green Infrastructure.

- Council Strategic Priority Performance Measures
  - o Sustainable Growth and Development 4.11
    - Tree coverage: Citywide 25% tree and shade canopy by 2040.
  - o Safe and Secure Communities 1.27
    - City Infrastructure and Assets: 100% compliance with industry standards related to the replacement of infrastructure/assets.
- Climate Action Plan
  - o Emissions reduction
  - o Resilience to extreme heat/green infrastructure.
- Green Infrastructure
  - o Urban Cooling
  - o Shade
  - o Save Water
  - o Capture stormwater
  - o Clean Streets
- Partners/Collaborations
  - o Office of sustainability, sustainability commission, municipal utilities, engineering/transportation, private projects, ASU, businesses, residents.
- Examples of GI in Tempe:
  - o College Ave: Vegetation provides water retention, urban cooling, and less pavement.
  - o Dorsey/Lemon: Stormwater diverted into the landscape, trees help with cooling, compost from city waste.
  - o Rio/Hardy: Cut the curb to allow water to flow into landscape, provide vegetation for cooling, city compost.
  - o 5<sup>th</sup>/Evergreen: Stormwater diverted from gutter to landscape, trees and vegetation help with cooling.
- Tempe Engineering Design Criteria
  - o Storm water retention
  - o Storm water quality
  - o Low impact development
    - Currently using Mesa's LID Toolkit
- Challenges

- Tempe is built out, existing right of way, new high-density development
- Lack of education and training related to LID and GI
- Lack of dedicated funding for pilot projects/community-initiated projects.
- Significant amount of existing storm drain infrastructure
- Maintenance can be difficult.
- Questions
  - Chair Jung asked what he meant by “existing infrastructure”. Does he think that additional capacity can be built into the infrastructure by utilizing GI?
    - Julian clarified that there are opportunities to introduce new elements into existing properties as well as future growth. There are good ways to use stormwater instead of diverting it.
  - Matt asked what the impact of additional shade canopy would be on water usage.
    - Julian said it would be a case by case basis, but the goal is to use native plants that do not require significant water. Our rainfall is far less than average so we need to be selective on what plants we use, and in some cases could have to use some irrigation. The most important thing is to use the proper pallet.
  - Matt asked for a source for the study for Tempe’s water usage.
    - Chair Jung said that it is part of the water rate structure.
  - Commissioner Brundiers asked if there are points of measurement to measure additional impacts such as cooling.
    - Julian asked how you could measure the cooling.
    - Commissioner Brundiers said there are projects that do this, like the heat equity maps. She said it would be interesting to do a study like that to quantify how the cooling infrastructure will work.
    - Julian said that that is a likely next step.
  - Commissioner Swisher asked how we have adopted to LID guidelines.
    - Julian said every new development is required to be able to store the 100 year storm event. This can be done through retention, on site storage, or others. It gives new development options to use green infrastructure to do this, but it is not required.
    - Commissioner Swisher asked if off-site retention is required.
    - Julian replied that new development or redevelopment is required for capturing the half-street.
    - Commissioner Swisher stated that the city should incentivize using GI to retain water. Julian agreed.
  - Commissioner Mendoza asked about the design guidelines that incentivize the proper plant pallet.

- Julian said that currently they are limited to pilot projects using internal resources. As the program develops, they will include those pallets in the guidelines. This project is in early stages so it has not been codified yet.
- Chair Jung emphasized how important this project is and how essential funding is.

#### **Agenda Item 4 – Solar Ready Code**

Shelly Seyler, Interim Community Development Director introduced the presentation.

- City Council Strategic Performance Measures
  - Sustainable Growth and Development (4.18)
- 2018 IECC Adoption and Solar Ready
  - Jan 1, 2019- City adopted IECC code.
  - Sep 30, 2021- Presentation to Sustainable and Livable Communities Committee on Solar Ready Code.
  - Nov 17, 2021- Council supports moving forward with stakeholder and outreach.
- Why it matters
  - Encourages installation of renewables.
  - Prepares buildings for future installation of solar equipment.
  - Supports the CAP Initiatives.
- Solar Ready Code Appendix
  - Applicable for all new commercial buildings to include all multi-family.
  - Solar Ready Zone is located on commercial buildings 5 stories or less.
  - SRZ shall be 40% of the calculated roof areas minus vegetated roofs, skylights, and occupied roofs.
  - Structural dead loads of 5lb/sq ft will be included.
  - Interconnection pathways are required for SRZ.
- Who has adopted solar ready codes?
  - Scottsdale, Tucson, and Pima County.
- Public Involvement
  - Feb 10- Stakeholder Meeting
  - Feb 15- Virtual Public Meeting
  - Online comments on Tempe.gov/forum
  - Mar 2- Tempe Chamber
  - Mar 14- Sustainability and Resilience Committee
  - TBD- Update to committee and council
  - TBD- Work study to present feedback
- Commission Feedback

- Chair Jung asked for an example of the difference between residential vs commercial.
  - Tempe does not have much new single-family residential development. There are more opportunities in commercial as that is the majority of the new development.
- Chair Jung and Commissioner Swisher highlighted that new single-family development can take up large areas, and should be required to be solar ready.
- Chair Jung addressed the comments from David at the beginning about the cost for renters due to solar ready codes. David clarified his comments. His main concern is rent price increases for low-income people.
- Chair Jung asked about the difference between solar-ready vs retrofitting existing properties.
- Commissioner Brundiers asked if they could use the argument that commercial buildings would offset more emissions through solar installation. Shelley agreed that there are opportunities to gather more data and use that as an argument.
- Chair Jung asked if there are any current incentives for properties to install solar at the time of build. Shelley was not able to answer. Braden said there are not enough incentives as they are very capital intensive.

### **Agenda Item 5- International Green Construction Code (IgCC)**

Dino Accardo, City Building Safety Specialist spoke about the IgCC code development.

- They have a team that is using the CAP to guide them through the code process.
- Update
  - In FY 2022 budget approval came for a Green Building Program Specialist. They received \$63,683.
  - Next step is to maximize the limited funds with seeking an RFP to assist staff with:
    - Develop 2018 Tempe IgCC code.
    - Pilot city projects.
    - Recommendations for training of city staff.
    - Pilot 1-3 private projects.
    - Resource plan for voluntary use of code.
    - EV capable and solar ready code.
- Questions
  - Chair Jung asked why they are still looking at the 2018 codes.

- Dino replied that they adopted the 2018 family of codes. They are staying within the same family of codes. They cannot adopt a later code into the current family of codes.
- Chair Jung asked how their actions will translate into something beyond just pilots, i.e. more permanent solutions.
  - Braden replied that they will be moving forward with a city building policy to institutionalize the actions.
  - There is a multi-phase project on the private building side. Eventually, a full temporary code will be adopted, followed by mandatory city-wide adoption of the IgCC, which is where Scottsdale is now.
- Commissioner Swisher asked for a timeline for the temporary code.
  - Braden said that the program will be running in 2023. Making it permanent will require additional funding. The true timeline for this adoption is somewhere around 2030. It depends on political support and funding.
- Commissioner Swisher asked if the commission could consider writing a letter of support for the adoption of these codes.

### **Agenda Item 6 – Transportation Demand Management (TDM) and Mobility Hubs**

Robert Yabes, Transportation Planner, spoke about TDM/Mobility Hubs.

- Tempe's Sustainable Vision
  - The projects support the 20 minute city, the traffic congestion performance measure, and reduce GHG emissions.
- Partners
  - Regional and State
  - Local
  - City Departments
- Current Planning Work
  - TDM Plan
    - Enhance system efficiency and promote use of multi-modal investments.
  - TMA Plan
    - Forum of collaboration to improve effectiveness of TDM.
  - Mobility Hubs Plan
    - Provides the infrastructure needed to support multimodal transit.
- Stakeholder engagement
  - General interest and enthusiasm
  - Education and awareness will be key
  - Need to start conversation about TDM strategies during initial development.



- Businesses are interested in the ROI for investment
- Positive response about the potential of TMA in addressing transit issues and allowing efficient travel.
- Public Meetings/Surveys
  - Many are open to other options besides driving alone
  - Bike, pedestrian, rideshare and transit are used by respondents.
  - We need to provide more complete and real time information about transit options.
  - Comfortable waiting areas, secure bicycle parking and more convenient transit.
- Mobility Hubs
  - Provide infrastructure for multiple modes of transportation in one location. Example is the Tempe Transportation Center.
- Equity Focus on Mobility Hubs.
  - Emphasis on placing hubs in lower income areas that will benefit most.
- Hubs on Public Property
  - Can be located at parks.
- Public/Private Partnerships
  - Urban core/high density environments.
  - Reduce on site parking and VMT.
  - Amenities will cater to development and public.
- Potential Locations
  - Residential Density, employment density, nearby transit, access to employment are all considered.
- What is a TMA?
  - Collaborative agency or initiative that exists to provide a variety of TDM services.
  - Public and private can work together to deliver transit services.
- Tempe Context
  - TMA can help respond to Tempe's growth pressures.
  - Public and private leaders are committed to this work.
  - There has been significant recent planning and investments in multimodal infrastructure.
- Stakeholder Response
  - Set the stage for change before travel returns to its peak.
  - Support needs of businesses and individual travellers.
  - Align with other planning efforts.
- Settings up the TMA
  - Confirm the missions and goals
  - Establish the structure and cross-sector partnerships

- Outline key strategies
- Identify funding
- Questions
  - Chair Jung commended Robert on the work that has been done. He is very excited about the project.
  - Commissioner Brundiers asked about the usage of equity maps for where hubs can be placed. She asked if there is an overlap between the heat vulnerability maps and green infrastructure placement with the hub locations.
    - Robert said that they want to be the lead in implementing these projects. They need to be part of the work to ensure that green infrastructure will be placed in their projects.

### **Agenda Item 7 – Envision Tempe Update**

Braden Kay, Suitability and resilience Director gave an update on EnVision Tempe.

- Unlimited Potential Partnership
  - June 19, 2021- Climate Justice Forum
  - June 22, 2021- Neighborhood Forum
  - Oct 19, 2021- Neighborhood Resilience Event
  - Nov 6, 2021- EnVision Tempe Event
- Main Findings
  - Health and Wellness
  - Workforce Development/Affordable Housing
  - Emergency Management/Community Resiliency
- Why Hubs and Centers?
  - Resilience Hub (USDN)
    - Localized approach to emergency preparedness that utilizes well-trusted community spaces.
  - EnVision Center (HUD concept)
    - Centralized facilities designed to provide greater access to economic, social, and health services.
- National Models
  - Orlando FL, Austin TX, Baltimore MD, Puerto Rico
- Core Pillars
  - Economic Empowerment, Educational Advancement, Health and Wellness, Character and Leadership, Resilience to Extreme Heat, Community Resilience.
- Overview
  - Open Fall 2022
  - Services Offered

- Finding a job, GED classes, Housing assistance, Parenting programs, Before/after school care, Heat relief location.
- Capital Improvement Budget
  - Master plan for up to 20 sites
  - Microgrid- Solar and battery storage system.
  - Total Five-Year \$1,300,000
  - 3<sup>rd</sup> budget request is for a neighborhood resilience coordinator.
- Questions
  - If solar and battery were added to Clark park, that project would be a great site.
  - Chair Jung commented that he liked how they are blending the ideas of the resilience of people looking to get on their feet and the resilience to environmental hazards.
  - Commissioner Vesper asked if they have worked with existing agencies that provide these services.
    - Braden said most of the functions will be done with partner agencies. This will not just be city staff running these programs.
  - Commissioner Brundiers commented on the use of map overlays that could help with the selection of future hub locations.
    - They will do a full description of the master plan. The idea is that they will use all of the heat, income, transit data to help identify locations.

### **Agenda Item 8 – Housekeeping Items**

- Chair Jung thanked members for submitting comments in favor of the CAP.
- Neighborhood Celebration on March 26. Chair Jung is asking 2-3 commissioners to table at the event. This is an opportunity to practice their pitch.
  - Jake Swanson and Joyce Vesper offered to table.
  - Barbie Burke and Kendon Jung will be there.
- April 10- Down to Earth event with 2<sup>nd</sup> Sundays. Same setup as the neighborhood celebration.
  - Shawn Swisher and Stephanie Milam-Edwards tentatively agreed to table.

Chair Jung asked for a motion to submit a letter of support for TDM/Mobility Hubs work.

**Motion:** Kendon Jung

**Second:** Barbie Burke

**Decision:** Approved 10-0

**Voted to Approve:**

Kendon Jung (Chair)

Natalie Mendoza

Stephanie Milam-Edwards

Joyce Vesper

Katja Brundiers

Meaghan Coon

Shawn Swisher

Jake Swanson

Ryan Mores

Barbie Burke

### **Agenda Item 9 – Future Agenda Items**

Kendon asked commissioners to send any items to staff.

The meeting was adjourned at 6:31 pm.

Prepared by: Henry Pearson

Reviewed by: Brianne Fisher



# Community GHG Inventory and Accounting

Sustainability and Resilience Commission

April 11, 2022



**Tempe**

Making waves in the desert

# Performance Measures

## Sustainable Growth and Development

- 4.18 Community Carbon Neutrality

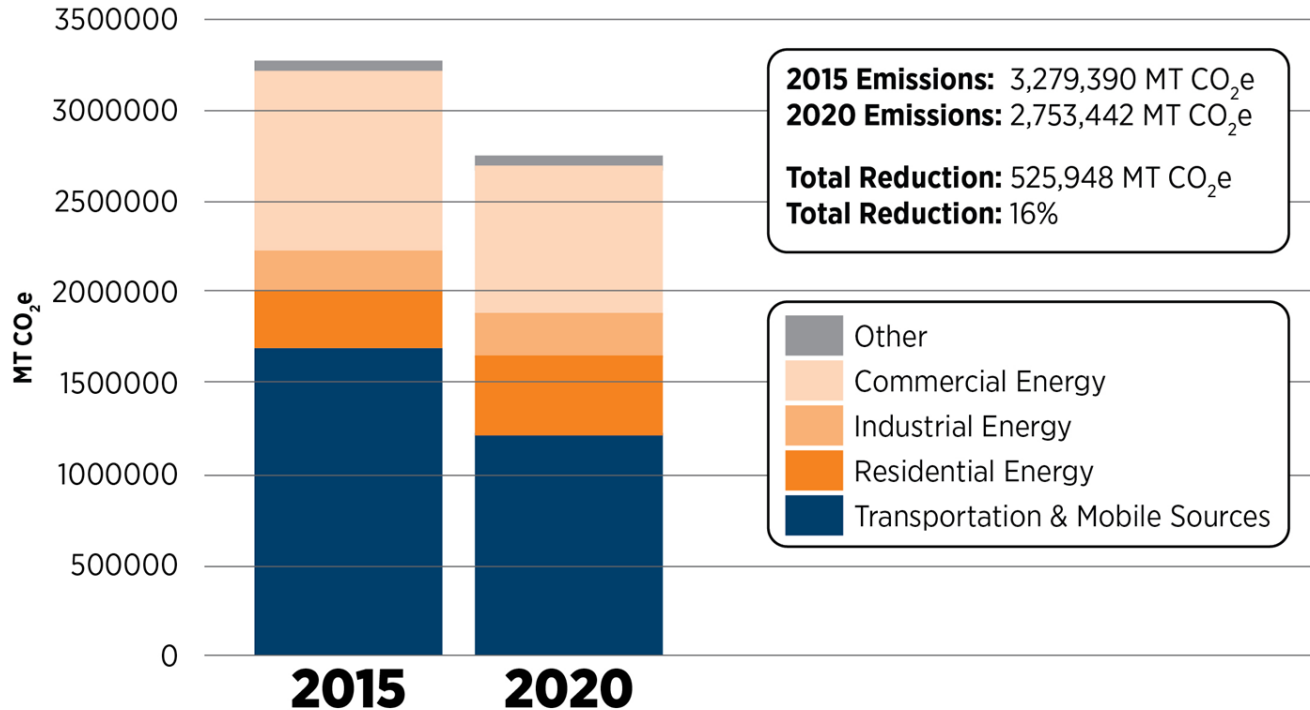
**Achieve community carbon neutrality by 2050 with equitable outcomes.**



# Community GHG Inventory



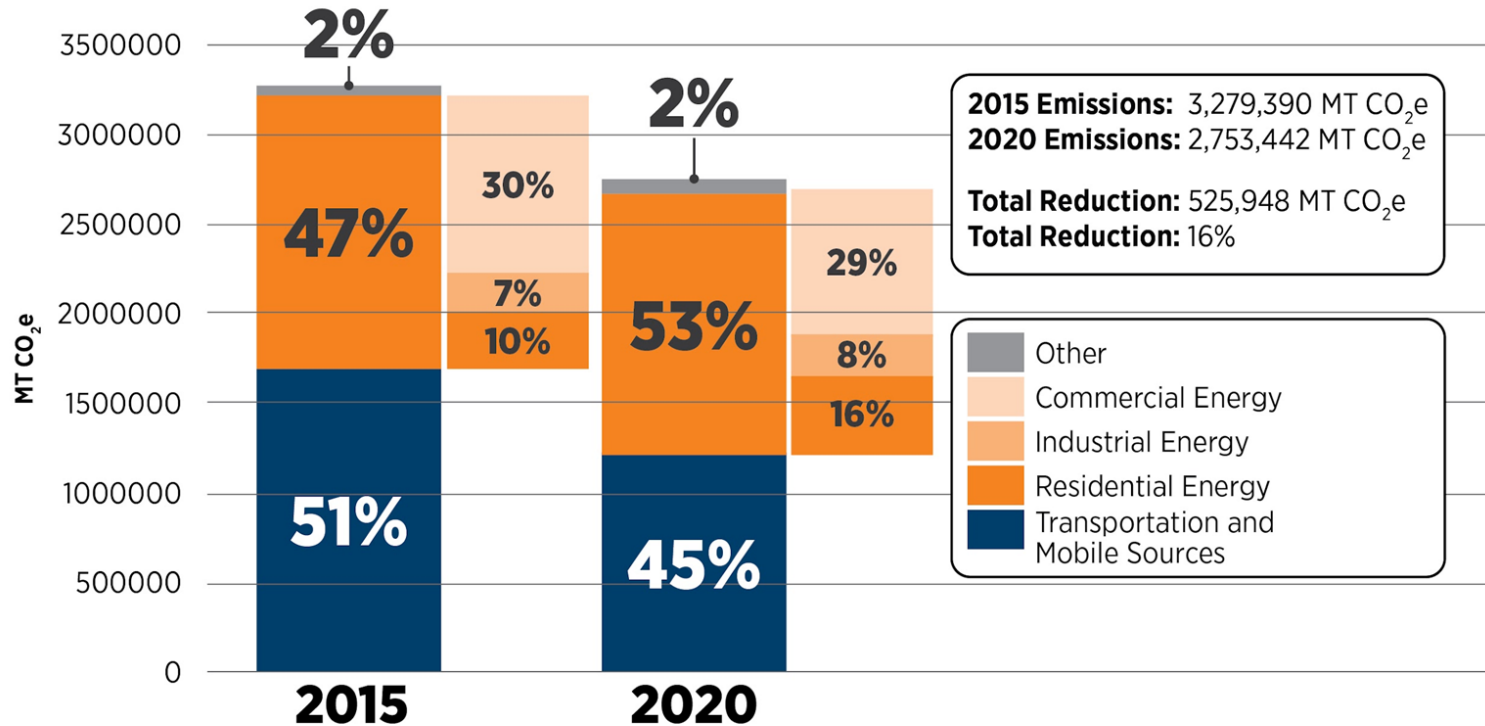
## Community GHG Emissions



# Community GHG Inventory



## Community GHG Emissions






# CAP Community Actions

## Highlight Actions:


- Resilient Energy Hubs and Resilience Hubs
- Transportation Demand Management and Mobility Hubs
- Green Codes and Green Stormwater Infrastructure Standards

**ENERGY** PAGE 13




1. Resilient energy hubs
2. Revolving fund
3. Sustainability platform
4. Solar EV charging stations

**TRANSPORTATION** PAGE 25



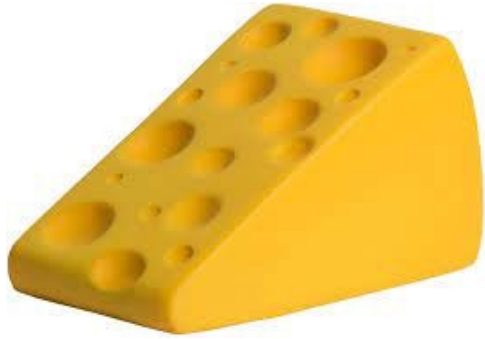
1. Transportation Demand Management (TDM)
2. Encourage walking, biking, and public transport in city projects
3. EV charging
4. Smart mobility guide

**EXTREME HEAT** PAGE 37



1. Green infrastructure
2. Green construction codes
3. Urban Forestry Master Plan
4. Emergency management program

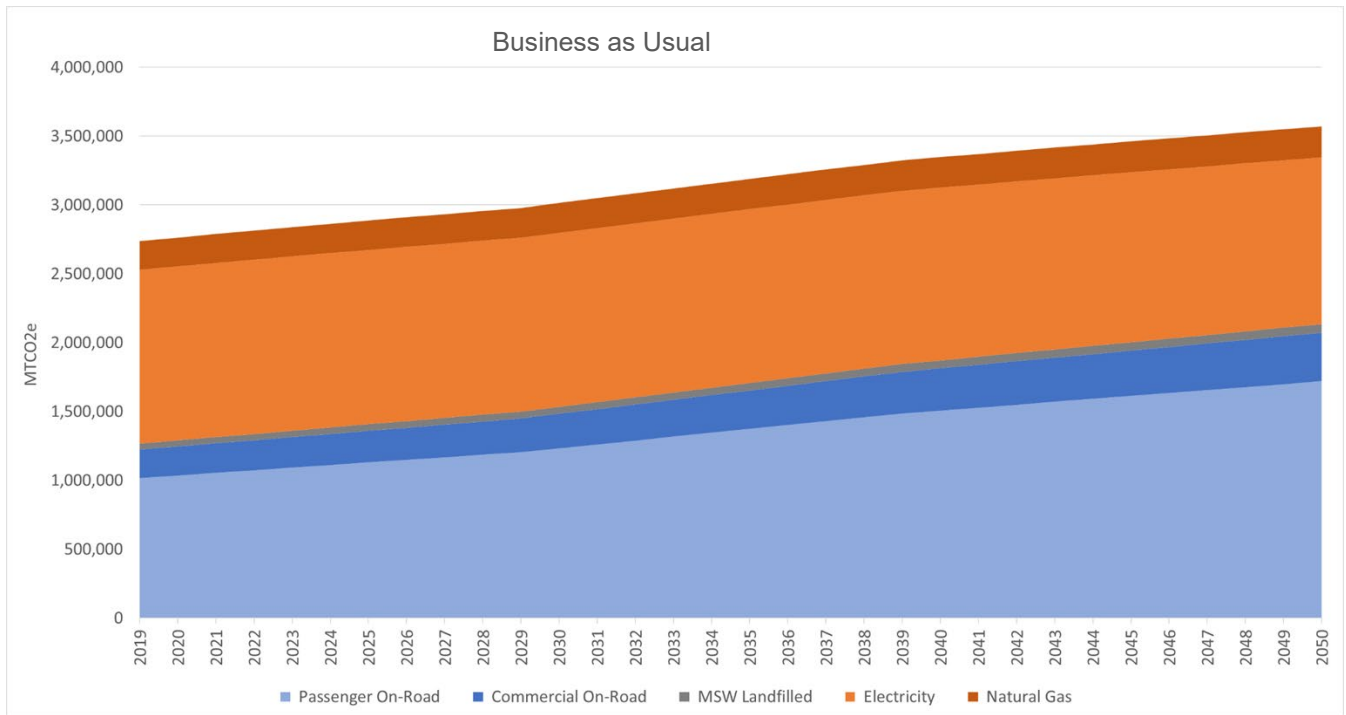
# Wedge Analysis



# Business as Usual



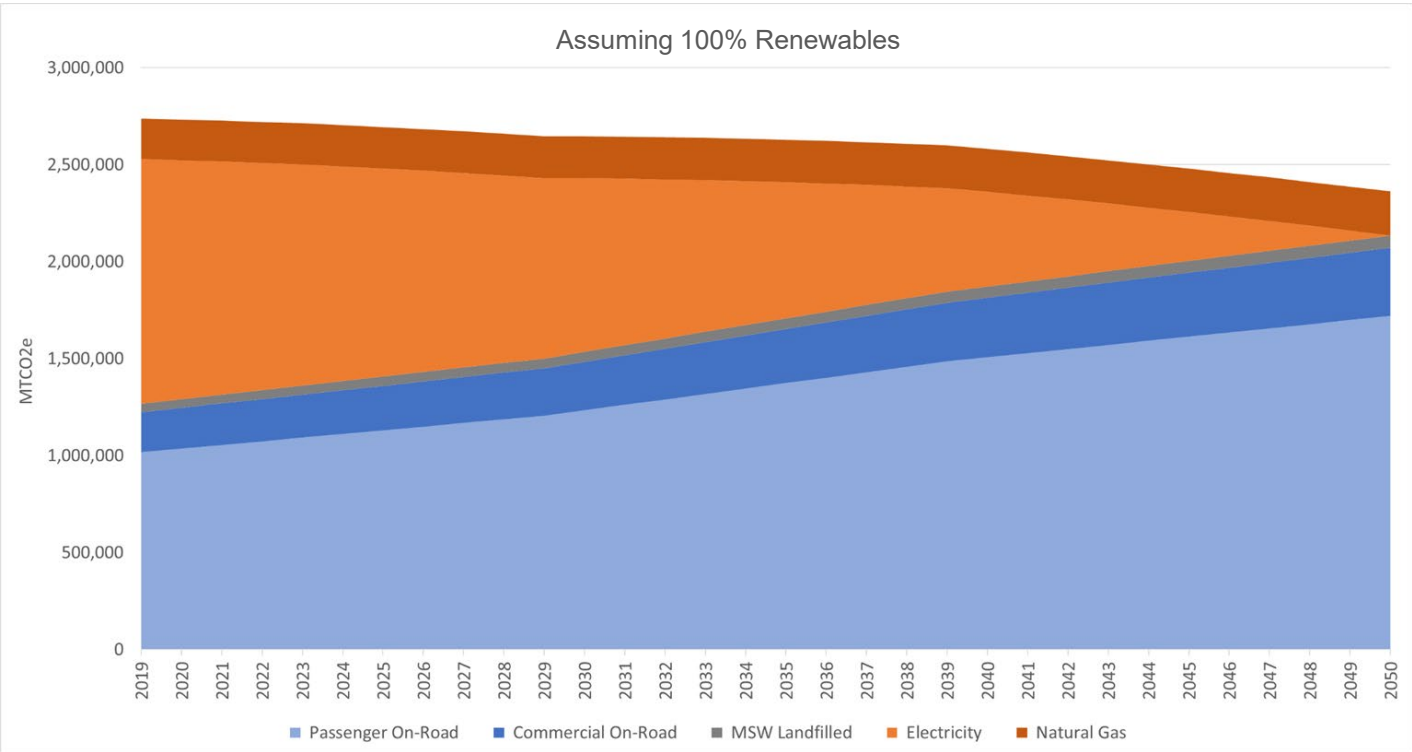
**Without local action**  
over 3.5 million metric tons of GHG emissions in 2050



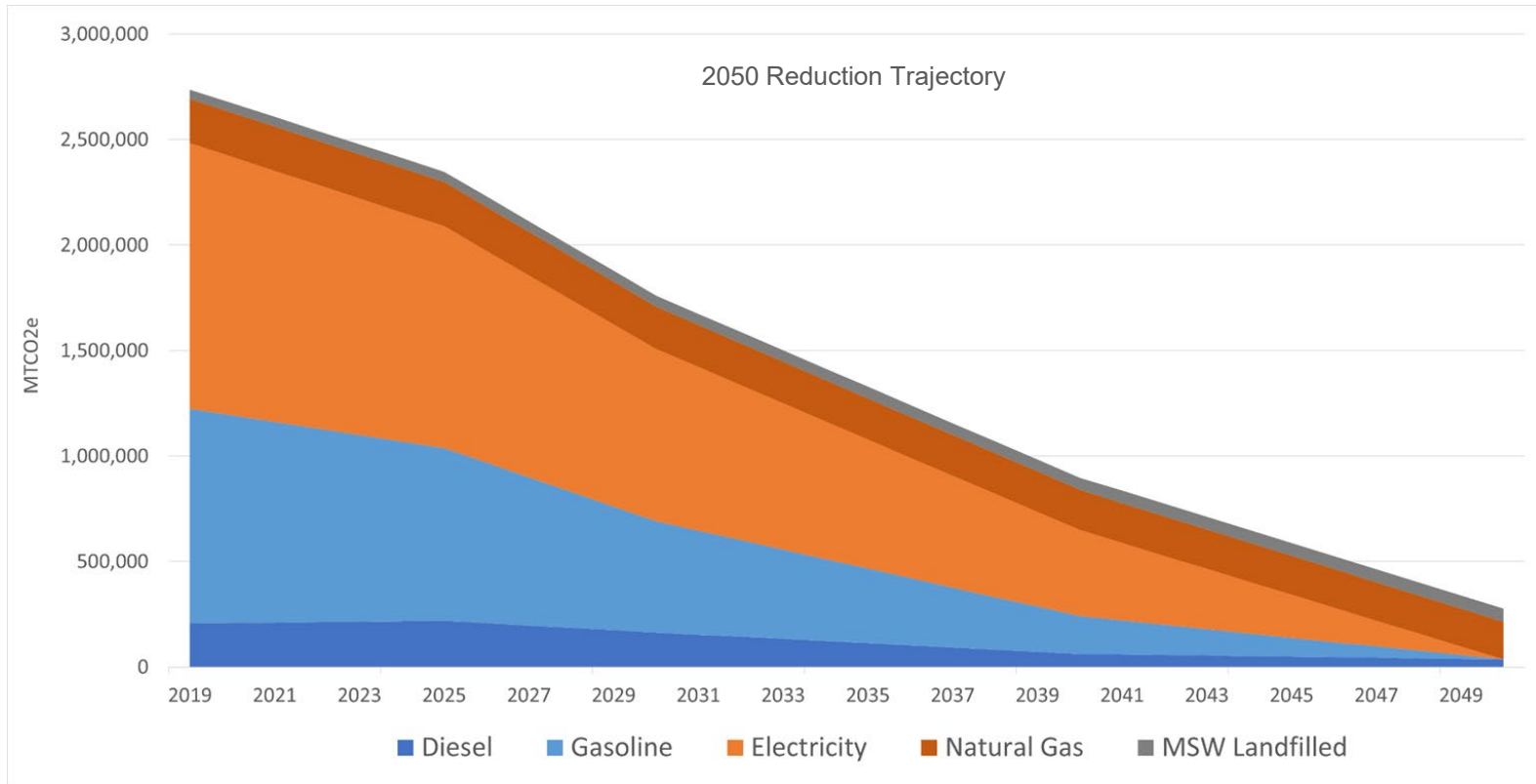
# Business As Usual with Renewable Energy



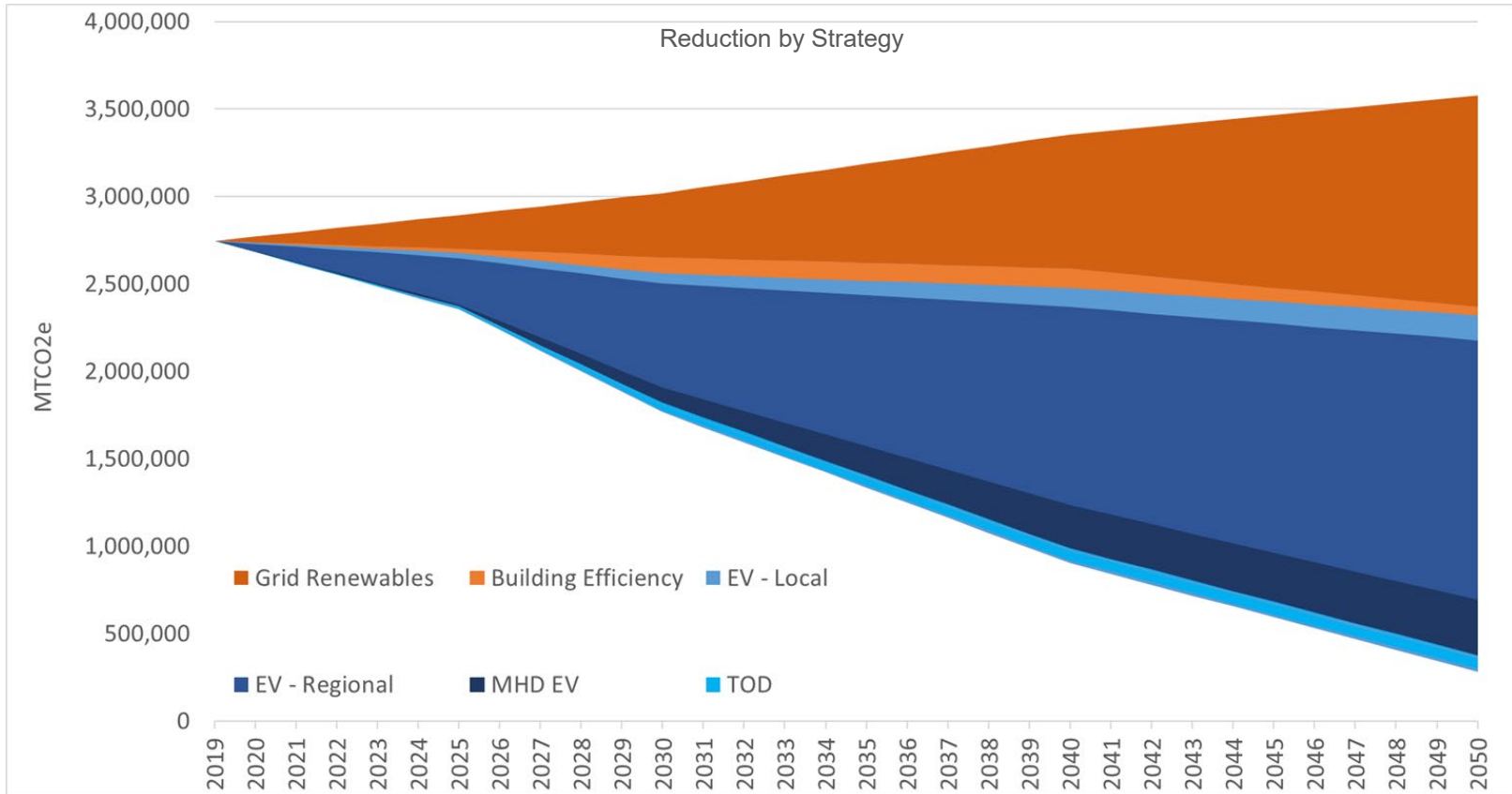
Tempe's community will produce **2.3 million metric tons** of GHG emissions in 2050.



# Summary Recommendations



# Wedge Analysis Findings



# Wedge Analysis Findings

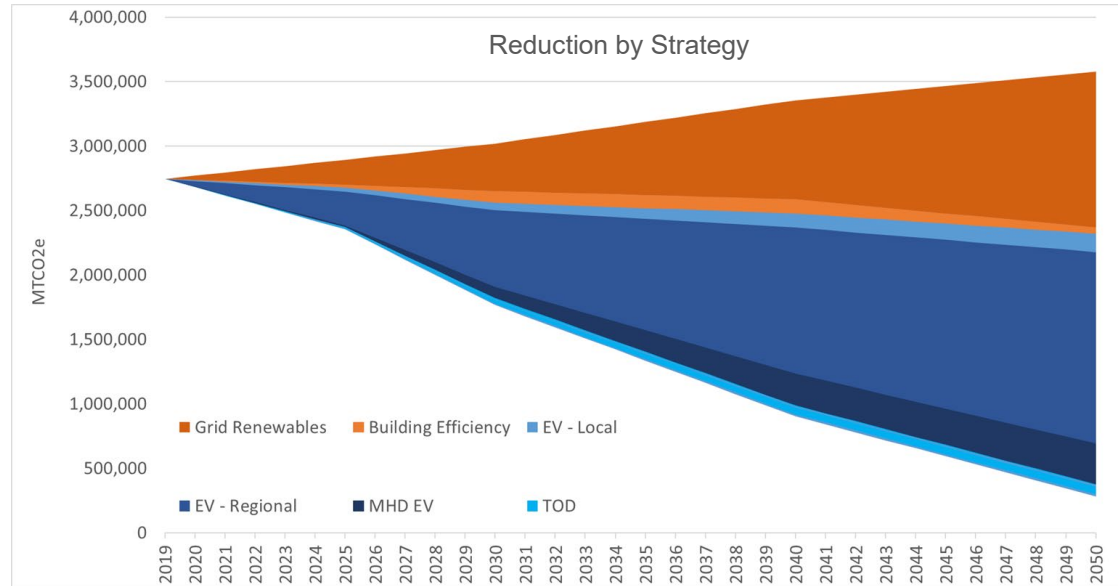


## Additional Strategies

The strategies and outcomes envisioned will lead to a 89% reduction in emissions.

- Building Efficiency
- Transportation Electrification
- Transit Oriented Development (TOD)

Transitioning to **100% renewable electricity** is critical for building and vehicle reductions



# Energy Reductions



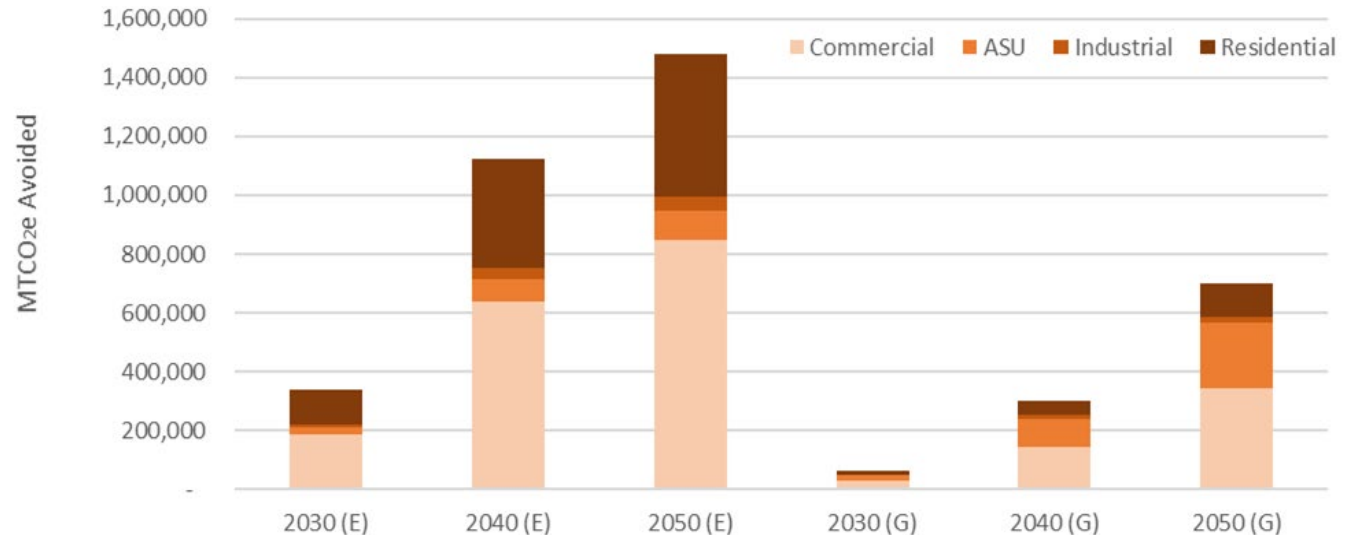
## Main Reduction Strategies

Ability to reduce 20% residential and 30% commercial

## Largest Impact

Annual reductions for electricity savings are near-term while grid is carbon-heavy

Cumulative Reductions from Electric (E) and Gas (G) Efficiency





# Energy Reduction Investment



## Energy Reduction Investment

About \$200 million/year investment in existing buildings to see reductions.

Share of Properties	APS	SRP
Commercial	42%	58%
Residential	26%	74%

## Energy Reduction Impact

- 20% residential and 30% commercial energy reductions
- About 5,800 green jobs
- Additional \$300 million in commercial property value
- \$121 million/year annual energy cost savings



LEED Certified Tempe Transportation Center

# Transportation Reductions



## Main Reduction Strategies

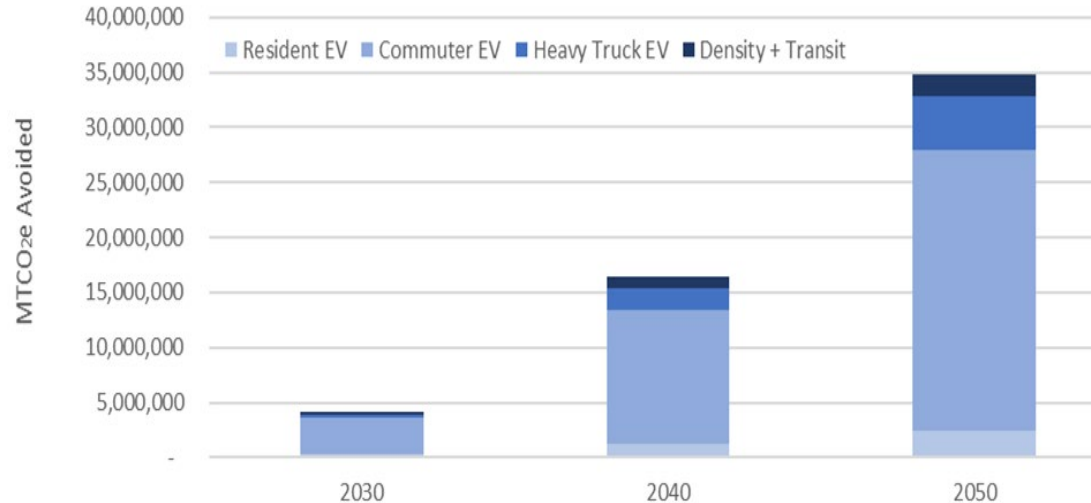
Ability to reduce transportation emissions by 91% through

- Transition to EVs
- Mode shift
  - Transit oriented development (TOD)
  - Expanded transit

## Largest Impact

- Regional transition to EVs

Cumulative Reductions from Transportation Strategies



# Wedge Analysis Findings - Transportation



## Transportation Reduction Investment

- Investing \$36 million by 2050 in charging infrastructure to support transition to all EV
- TOD to support mode shift for 18,000 new residents

## Transportation Reduction Impact

- Extended Streetcar and BRT lines for Rural & Baseline reduces more than 56 million VMT/year
- TOD avoid \$1.3 million in public EV charging infrastructure
- TOD avoid over 83,000 MWh of EV electricity demand



Valley Metro Bus Rapid Transit at Tempe Transportation Center

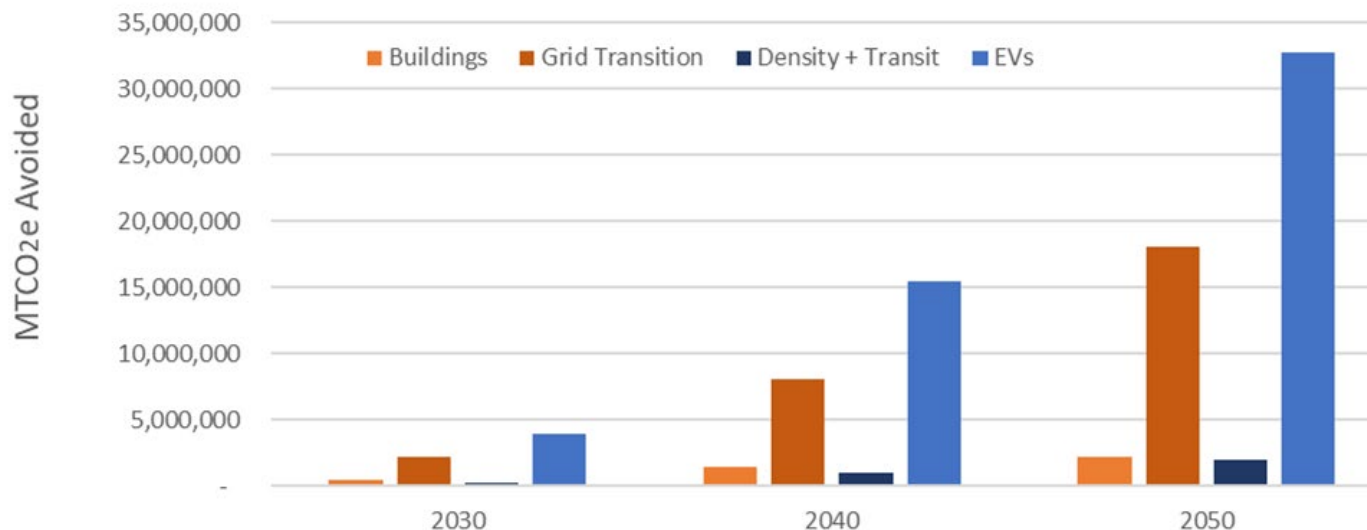
# Summary Findings



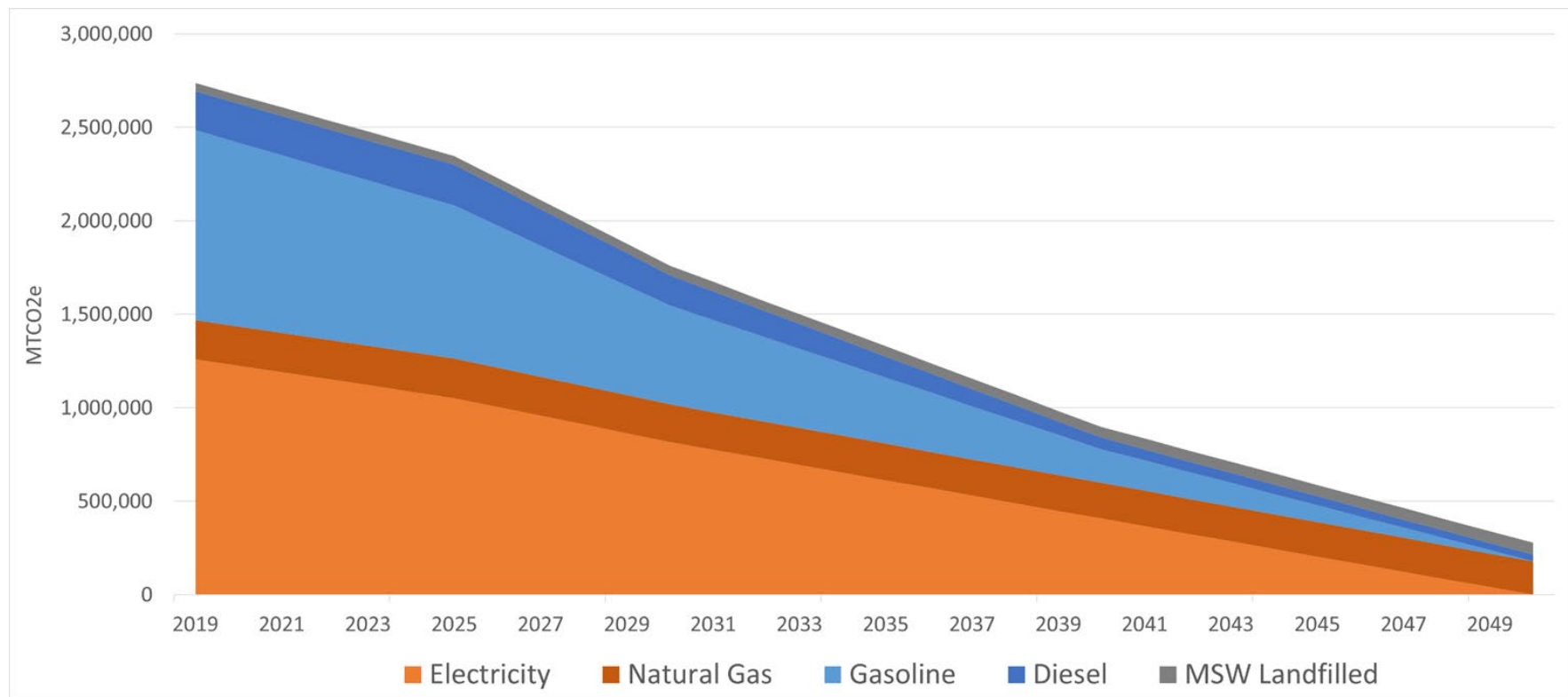
## Strategy Summary

- Transportation strategies are critical
- Grid transition large factor
- TOD and building energy efficiency are “first in” investments

Cumulative Reduction Compared



# 2050 Community Carbon Emissions





## Supporting Local Mode Shift

- Support Transportation Demand Management program and Mobility Hubs
- Education and outreach
- **General Plan Update** and supporting maximum density near mass public transit
- **Transportation Master Plan** strategies and Vehicle Miles Traveled (VMT) accountability

## Advocating for Regional Mode Shift

- Working with region to support additional resources for mass public transportation
- Proposition 400E flexible funding and active transportation



McClintock Light Rail Station Area Plan reflecting TOD and multi-modal strategies

# Recommendations - Transportation



## Supporting Local EV Transition

- EV ready code
- \$3 million / year infrastructure investment
- Public private partnerships
- Community and EV Fleet Specialist
- Policy and Grants Coordinator

## Advocating for Regional EV Transition

- Regional data collection and planning
- Federal competitive grant funding
- Utility partnerships
- Public private partnerships



Tempe Public Library ChargePoint public chargers





## Supporting Local Energy Reductions

- Invest \$200 million/year to reduce residential and commercial energy emissions
- Energy Equity Specialist and pilot projects
- IGCC Code Specialist
- Solar ready code
- 2018 International Green Construction Code
- 2024 IECC and IGCC

## Advocating for Regional Energy Reductions

- Utility company programs and partnerships



FMR Fire Station No. 2 incorporates elements of IGCC





## Reaching Community Carbon Neutrality by 2050

### Increase Personnel Capacity



### Strategic Land Use Planning



### Department Collaboration



# Recommendation Review



## Reaching Community Carbon Neutrality by 2050

### Utility Partnerships



### Regional Partnership and Action



### Federal and Philanthropic Funding



### Equity Centered Action



# Questions

# 2022 Water, Wastewater and Stormwater Rate Study

Sustainability and  
Resilience Commission  
Meeting

April 11, 2022



**Tempe**

Making waves in the desert



Safe & Secure  
Communities

1.13 – Safe Drinking Water



Strong Community  
Connections

2.02 – Customer Service Satisfaction



Sustainable Growth  
& Development

4.03 – Water Conservation and Efficiency



Financial Stability  
& Vitality

5.01 – Quality of Business Services

# Rate Study Process

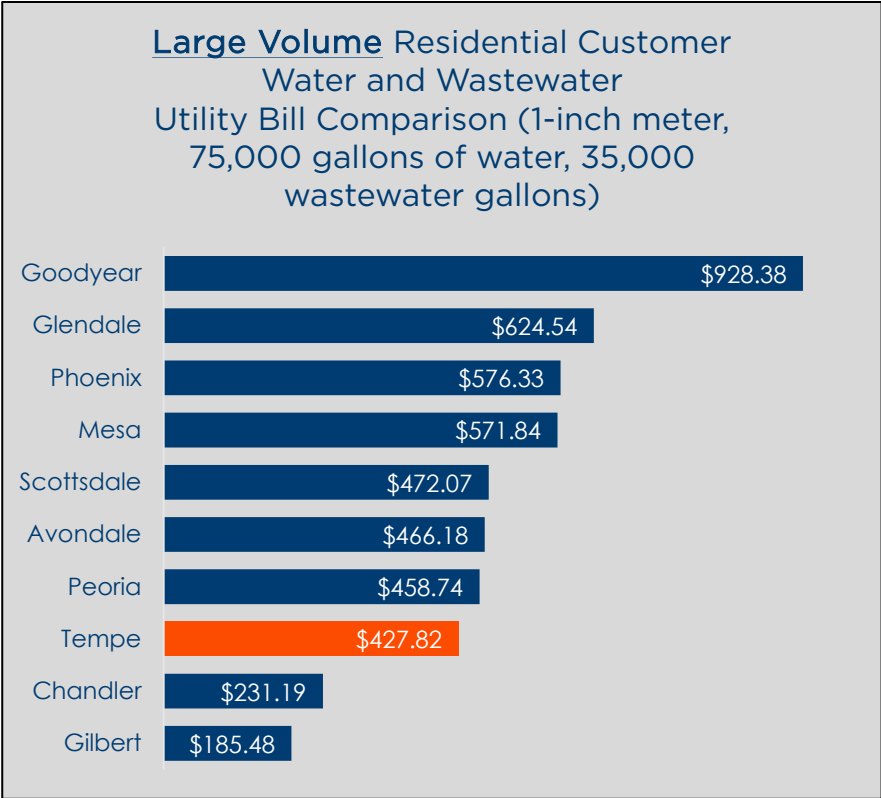
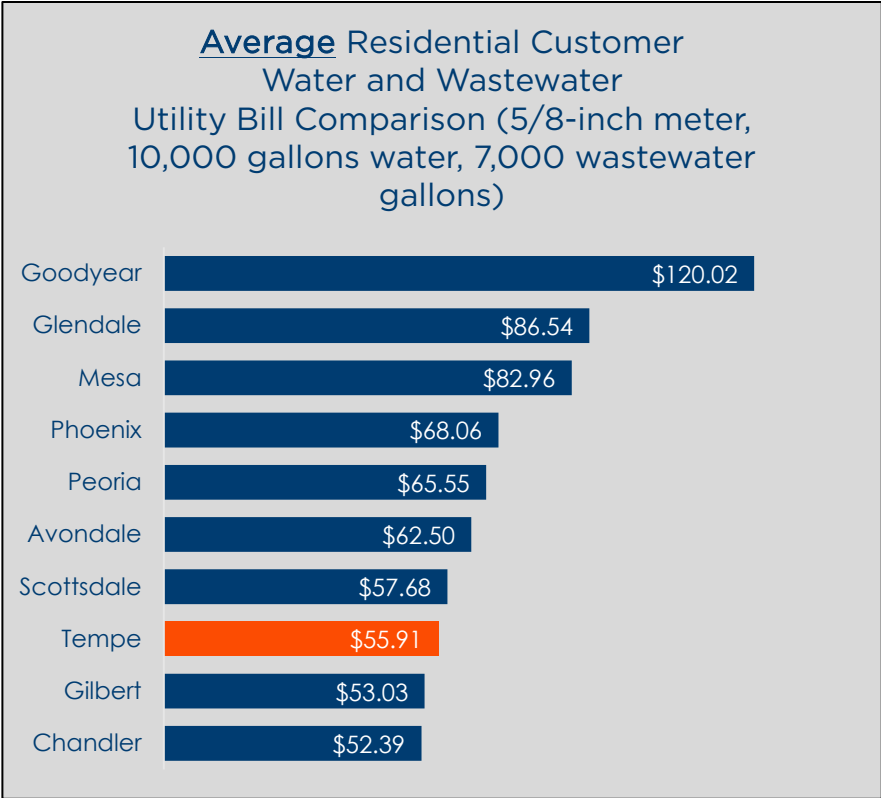






- Identify stormwater management costs.
- Address infrastructure needs.
- Meet emerging unfunded regulatory mandates.

# Benchmarking Utility Rates





# Rate Study and Public Outreach Timeline



# Questions





# Resilient Tempe Master Plan

April 11, 2022



# Tempe Climate Action Plan Update

## Highlight Actions Update

The Sustainability and Resilience Commission identified immediate highlight actions in the first plan that still need policy adoption and investment:



**Green Codes and Standards (Green Stormwater Infrastructure and International Green Construction Code adoption):**  
To establish resilience to extreme heat in new construction ..... 16



**Transportation Demand Management and Mobility Hubs:**  
To increase convenience of low carbon transportations options ..... 19



**Resilient Energy Hubs and Resilience Hubs:**  
To increase community connections and the ability to support survival during disasters ..... 21



# Green Stormwater Infrastructure

- Supports Urban Cooling
- Creates Shade
- Saves Water
- Captures Stormwater
- Keeps Streets Clean During Storms



# Green Stormwater Infrastructure Partners & Collaboration

## Internal Partners

- Office of Sustainability and Resilience
- Municipal Utilities Department
  - Water Conservation
  - Environmental (Stormwater Quality, Reporting)
- Engineering and Transportation Department
  - Transportation Planning (CIP Projects)
  - Streets Maintenance (Pilot Projects)
  - Engineering (CIP Projects, Floodplain Management)
- Community Development Department (Private Projects)

## External Partners

- Sustainability and Resilience Office
- Arizona State University
- Tempe Residents
- Private Businesses (Pilot Projects)



# College Avenue Pilot Project

- Stormwater diverted from streets into landscaping
- Trees and vegetation help with cooling
- Reduced pavement



# Dorsey Lane and Lemon Street Pilot

- Stormwater diverted from the gutter into landscaping
- Trees and vegetation help with cooling
- Compost from city green waste





# Examples of Green Infrastructure in Tempe



## ● Rio Salado Parkway & Hardy Drive

- Stormwater diverted from the gutter into landscaping
- Trees and vegetation help with cooling
- Compost from city green waste



# Next Level of Coordination

## **Funding**

- \$250,000 Master Plan and Utility Feasibility Study
- \$150,000 Infrastructure

## **Scope of Work**

- Regulations
- Infrastructure
- Programs
- Operations and Maintenance

# Elements of Scope of Work

## **Infrastructure Assessment**

- MS4 Permit Compliance and Program Cost
- Assessment of current stormwater infrastructure
- Opportunities for green infrastructure within existing projects
- Opportunities for NEW GSI projects
- Assessment of schools and parks for increased GSI capacity
- Assessment of private infrastructure

# Elements of Scope of Work

## **Infrastructure Assessment Continued...**

- Permeability analysis
- Review of existing design criteria codes and standards
- Data review for stormwater and urban forestry
- Racial equity and heat vulnerability mapping

# Elements of Scope of Work

## **Pilot Projects**

- Review existing pilot projects
- Development of GSI project typologies for each character area of the city

# Elements of Scope of Work

## Urban Forestry Master Plan

- Update of UFSMP including tree banking system, code updates, and review of upcoming investments
- Coordination with Arizona State University to determine how investment can improve biodiversity, soil quality and water quality (Handshake: CAP-LRT)
- Benefits of increased vegetation

# Elements of Scope of Work

## **Utility Feasibility Study**

- Development of alternative funding solutions for Urban Cooling and Stormwater Utility
- Determine alternatives to determine utility cost burden per customer type
- Development of a phased approach for developing utility overtime
- Coordinate with Utility Rate Study by Municipal Utility

# Elements of Scope of Work

## **GSI Standards**

- Co-develop revisions to Engineering Design Criteria for Engineering and Transportation (City projects)

## **GSI Codes**

- Co-development new GSI standard and codes for Community Development and Design Criteria Matrix that is used in private development (private property) – Public/Stakeholder Engagement – (International Green Construction Code Chapter 5)



**Questions?**

**SUPPLEMENTAL BUDGET REQUEST OVERVIEW**  
**FY 2022-23**  
**SUSTAINABILITY AND RESILIENCE OFFICE**

Overview

To continue the advancement of sustainability and resiliency goals at the City of Tempe, the Sustainability and Resilience Office recommends the following budgetary requests to further the depth of sustainability programs, policies, and partners. Through these investments, we hope to advance the adopted Climate Action Plan and build upon our collaboration with stakeholders by reducing emissions in energy and transportation and creating resilience to extreme heat. We have organized our request into categories based on the 2019 Climate Action Plan and the 2022 Climate Action Plan Update:

- **Office of Sustainability** (Total \$117,750)
- **Energy** (Total \$340,900)
- **Transportation** (Total \$30,000)
- **Resilience and Sequestration** (Total \$431,318)
- **Climate Justice and Youth** (Total \$527,650)

## SUPPLEMENTAL BUDGET PRIORITIZATION




### Budget Summary







Total supplemental request: **\$1,447,618**

7 FTE total: **\$662,618**




17 non FTE total: **\$785,000**

**FTE**  
**+ Joint Submittal**  
**Municipal**  
**Community**

1. **Resilient Tempe Master Plan and Utility Feasibility Study** (\$250,000)(one time) +  Resilience and sequestration
2. **Youth Climate Engagement Coordinator** (\$87,750)( recurring)  Climate Justice and Youth
3. **Neighborhood Resilience Coordinator** (\$81,318) (recurring)  Resilience and sequestration
4. **Grant Management and Climate Policy Coordinator** (\$107,750) (recurring) +  Office of Sustainability
5. **Indian Bend Wash Landscaping** (\$50,000 recurring) Office of sustainability
6. **Regional Resilience Initiative** (\$25,000 one-time)  Resilience and sequestration
7. **Residential Green Stormwater Infrastructure** (\$30,000 Recurring)  Resilience and sequestration
8. **Local Food Access, Production and Entrepreneurship Roadmap** (\$100,000) (one time)  Climate Justice and Youth
9. **Indigenization and Land Stewardship program** (\$25,000)(one time)  Climate Justice and Youth
10. **Climate-adapted Urban Forestry** (\$25,000) (recurring)  Resilience and sequestration
11. **Energy Equity Specialist** (\$97,450) (recurring) +  Energy
12. **Climate Justice and Indigenous Land Stewardship Specialist** (\$97,450) (recurring)  Climate Justice and Youth
13. **Backyard Garden Pilot Program** (\$50,000)(one-time)  Climate Justice and Youth
14. **Food Forest Program** (\$50,000) (one-time)  Climate Justice and Youth
15. **Local Food and Green Stormwater Infrastructure Specialist** (\$97,450 Recurring)  Climate Justice and Youth
16. **Energy Equity Program** (\$50,000) (one-time) +  Energy
17. **Food Entrepreneurship Training Pilot Program** (\$20,000) (one-time)  Climate Justice and Youth

- 18. Community EV Roadmap** (\$30,000 One-time)   
Transportation
- 19. Clean Energy Economy Roadmap** (\$50,000) (one-time)   
Energy
- 20. Business Sustainability Platform** (\$50,000)(one time)   
Energy
- 21. Operating Budget** (\$10,000) (recurring)   
Office of sustainability
- 22. Cooling Center Standards** (\$20,000 One-time)   
Resilience and sequestration
- 23. Business Sustainability and Community Electric Vehicle Specialist** (\$93,450 Recuring)   
Energy

Other Department Supplementals\*

- Community Adopt Green Construction Code (Community Development) 
- Fleet Electric Vehicle Roadmap (Municipal Utilities) 
- EV Fleet Coordinator (Municipal Utilities) 

## Office of Sustainability

The Office of Sustainability strives to make sustainability a fundamental aspect of policy work in Tempe by expanding the Office's involvement and engagement within city operations.

*FTE (full time employee)*

*+ (joint department submission)*

**Office of Sustainability Total Request: \$168,150**

Grant Management and Climate Policy Coordinator + (#4)

**(Recurring \$107,750)**

Develop regional, state, and federal policy solutions and develop grant proposals.

Indian Bend Wash Landscaping (#5)

**(Recurring \$50,000)**

Funding to keep Indian Bend Wash an active and thriving public space that showcases sustainability practices and organic landscaping.

Operating Budget (#21)

**(Recurring \$20,000)**

Additional funds are needed to support the Office of Sustainability in outreach, consulting services, and hosting regional meetings to move policy and programs forward. The Office survives on a \$10,000 budget, which makes it difficult to carry out the communications and marketing expected by residents and the Sustainability Commission.

## Energy

The City of Tempe will work towards emissions reduction in municipal energy by working with key community stakeholders to create new plans and programs.

**FTE (full time employee)**

**+ (joint department submission)**

**Energy Total Requests: \$325,894**

**FTE**

Energy Equity Program (#16) **+**

**(Recurring \$50,000)**

Energy efficiency and clean energy have an opportunity to benefit the people that need it most. This funding would continue to support energy training for Tempe residents to provide resources on how to invest in energy efficiency and become involved in regional energy policy.

Energy Equity Specialists (#11) **+**

**(Recurring \$97,450)**

This position comes out of the recommendations from the Climate Justice Agenda in Tempe's 2022 Climate Action Plan Update. Residents that worked with Unlimited Potential stated a need for the city to support residents in navigating energy use and clean energy programs.

Clean Energy Economy Roadmap (#19)

**(One-time \$50,000)**

Tempe has an opportunity to work with Chamber of Commerce, APS, and SRP to define a roadmap for the clean energy economy. Workforce development, incentives, cooperative purchasing, and energy scoring are all potential methods to grow an economy around clean and renewable energy.

Business Sustainability Platform (#20)

**(One-time \$50,000)**

Partnership with the Tempe Chamber of Commerce, APS, and SRP to ensure that Tempe businesses have the information and best practices for investing in energy efficiency. A website, workshops, and business support will ensure that Tempe businesses can benefit when we grow the clean energy economy in Arizona.

Business Sustainability and Community Electric Vehicle Specialist (#23)

**(\$93,450 Recuring)**

The business community stated a clear need for more outreach and communication and for my support in moving forward the adoption of electric vehicles by Tempe businesses. This position would develop electric vehicle roadmap and implement EV programs for residents and businesses.

EV Fleet Coordinator (Municipal Utilities) \*\*

Position to support Municipal Utilities Department in electrifying city owned fleet and charging stations.

*\*\*Requests being submitted by different City Departments. More info when available.*

## Transportation

Tempe will advance our multi-modal transportation system by investing in the necessary infrastructure to make public transit the preferred method of travel around Tempe.

**FTE (full time employee)**

**+ (joint department submission)**

**Transportation Total Request: \$30,000**

Community EV Roadmap (#18)

**(One-time \$30,000)**

This roadmap would coordinate efforts between the City of Tempe, MAG, APS, SRP, DTA, Tempe Chamber of Commerce, ASU, and other key stakeholders to develop a ten-year roadmap for electric vehicle adoption and charging infrastructure deployment. Cost/benefit analysis to determine carbon reduction, air quality, and public health benefits would help build evidence for the generational investment required to shift to a low carbon economy and transportation system.

Fleet Electric Vehicle Roadmap\*\*

**(Municipal Utilities in Fleet CIP)**

This roadmap will create a 5-year plan for investing in electric vehicles and charging infrastructure for Tempe's fleet. The plan will outline the investments required to reduce carbon emissions and improve the operations and maintenance of the city fleet. This investment will ensure Tempe is a leader in demonstrating how to reduce emissions and improve air quality through transitioning fleets to electric vehicles.

EV Solar Charging\*\*

**(Engineering and Transportation in Solar CIP)**

Solar charging during the day takes advantage of the sun to support clean transportation. By demonstrating the use of state-of-the-art solar sharing stations on city property, we hope to model solar workplace charging for the Tempe business community.

*\*\*Requests being submitted by different City Departments. More info when available.*



### Resilience and Sequestration

Preparing for Tempe's future will allow our city to adapt to disturbances, such as extreme heat, while remaining a livable and equitable urban center.

*FTE (full time employee)*

*+ (joint department submission)*

#### **Total Resilience and Sequestrations Requests: \$426,781**

##### Resilient Tempe Master Plan and Utility Feasibility Study (#1) **+** **(One-time \$250,000)**

Master Plan to develop vision for cooling, urban forestry and stormwater and feasibility study to determine implementation and funding options. Due to concerns of the General Fund handling of additional stormwater regulation personnel and program costs, this study is needed to determine the feasibility of creating a new urban cooling and stormwater to cover the increasing cost of compliance and the future costs of meeting Tempe's stormwater and urban cooling needs.

##### Neighborhood Resilience Coordinator **(#3)** **(Recurring \$81,318)**

Tempe neighborhoods need support in working with schools, businesses, and residents to keep neighborhoods safe, cool, and connected. The Resilience Fellow will start Tempe's neighborhood resilience program, support resilient energy hubs, in partnership with Neighborhood Services, Community Services and Community Services.

##### Regional Resilience Initiative (#6) **(One-time \$25,000)**

The initiative seeks to support Maricopa County in seeking competitive federal funding for resilience to extreme heat, electric vehicles and energy equity. The project also seeks to explore long-terming funding and financing solutions for urban forestry, green stormwater infrastructure and green buildings.

##### Residential Green Stormwater Infrastructure (#7) **(\$30,000 Recuring)**

This reoccurring request would create a funding stream for neighborhood pilot projects that neighborhoods to apply to the City of Tempe to receive. These projects are critical for demonstrating to businesses and residents that curb cuts, bioswales and bulb-outs can be used to increase tree canopy and vegetation, while reducing potable water use.

##### Climate-adapted Urban Forestry (#10) **(\$25,000 recurring)**

This request will build upon the work completed in the community last year at Thew Elementary School, McClintock High School and Tempe High School. The request covers contracted services for tree planting and outreach. This request will further advance the citywide 25% tree and shade canopy goal while prioritizing student walkways and playgrounds and providing educational platforms and future programming.

Cooling Center Standards (#22)

**(\$20,000 One-time)**

This request is to hire a consultant to come up with standard operating procedures for operating cooling centers including at the soon to be open EnVision Tempe. The standards will including guidelines for staffing, heat relief practices, communications, awareness outreach and energy cost saving practices.

International Green Construction Code\*\*

*(Community Development)*

This funding would support Community Development and Sustainability in staff training and consulting required to offer Developers the option of use of the International Green Construction Code. Use of the code will support energy efficiency and promote use of shade and cool materials in order to ensure Tempe's buildings are prepared for the effects of climate

*\*\*Requests being submitted by different City Departments. More info when available.*

### Climate Justice and Youth

Investments that support implementation of the Climate Justice and Youth Agendas in the 2022 Climate Action Plan Update

*FTE (full time employee)*

*+ (joint department submission)*

**Total Climate Justice and Youth Request: \$519,044**

Youth Climate Engagement Coordinator (#2)

**(\$87,750 recurring)**

Young people in Tempe want see the city further engage with school districts and school leadership and we heard a clear desire for programs that support youth in working on food access and production and transportation access.

Local Food Access, Production and Entrepreneurship Roadmap (#8)

**(\$100,000 one time)**

A roadmap for building the local food economy and increasing food access. The roadmap will address racial equity through ensuring that neighborhoods with high percentages of BIPOC (Black, indigenous, people of color) residents have access to local food solutions.

Indigenization and Land Stewardship program (#9)

**(\$25,000 one time)**

This funding request will support the partnership, projects and policies that will be a result of the partnership with Indigenous Design Collaborative (IDC) that was established to produce projects that integrate Indigenous arts, culture, and design activities across Tempe.

Climate Justice and Indigenous Land Stewardship Specialist (#12)

**(\$97,450 recurring)**

This position comes out of the recommendations from the Climate Justice Agenda in Tempe's 2022 Climate Action Plan Update. Residents stated a need for the city to support more partners with community-based organizations and local tribes with transportation, urban cooling and land stewardship pilots.

Backyard Garden Pilot Program (#13)

**(\$50,000 one-time)**

Pilot program to support residents in growing food in backyards and on multi-family properties

Food Forest Program (#14)

**(\$50,000 one-time)**

Pilot to promote landscapes on public and private property that increase biodiversity and food production. The pilot would allow the City to select land, establish a for-profit or non-profit partner to develop a food producing and water responsible food forest that could include fruit trees, shrubs, vines and cacti.

Local Food and Green Stormwater Infrastructure Specialist (#15)

**(\$97,450 Recuring)**

This position will support growing Tempe local food economy and support residents and schools in creating local food and urban cooling pilot projects.

## Food Entrepreneurship Training Pilot Program (#17)

**(\$20,000 one-time)**

The pilot will train a cohort of up to 30 Tempe residents to support the creation of new values-based food business focused on creating high quality jobs and sustainable and low carbon food products.