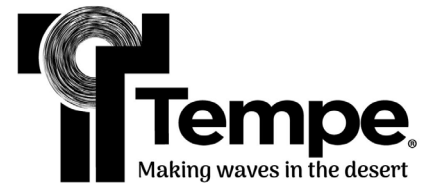


PUBLIC MEETING AGENDA



Sustainability Commission

MEETING DATE

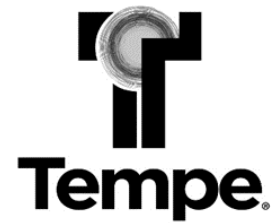
Monday, September 16, 2019
4:30 p.m.

MEETING LOCATION

Engineering & Transportation Conference Room
31 E. 5th Street, City Hall, Garden Level
Tempe, Arizona

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances 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
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the August 19, 2019 meeting.	Kendon Jung, Commission Chair (4:33 – 4:35 pm)	Action
3. Solid Waste Rate Study Update Staff will provide updates on the solid waste rate study.	Stephen White, Planning Resource Analyst, Tanya Chavez, Interim Deputy Directory, Municipal Utilities Department, Tony Miano, Solid Waste Manager, (4:35 – 4:55 pm)	Information
4. Climate Action Plan Approval Timeline Staff will provide updates.	Braden Kay, Sustainability Director (4:55 – 5:15 pm)	Information
5. Climate Action Plan 1.0 – Highlighted Actions Chair and Vice-Chair will provide updates.	Kendon Jung, Commission Chair, Ryan Mores, Vice Chair (5:15 – 5:55 pm)	Action
6. Housekeeping Items - September 21 - November 7 Council meeting - Commission work after adoption of CAP	Braden Kay, Sustainability Director (6:10 – 6:20 pm)	Action
7. Future Agenda Items Commission may request future agenda items.	Kendon Jung, Commission Chair (6:20 – 6:30 pm)	Information

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 August 19, 2019

Minutes of the Tempe Sustainability Commission meeting held on Monday, August 19, 2019, 4:30 p.m., at the Engineering & Transportation Conference Room, City Hall, 31 E. 5th Street, Tempe, Arizona.

(MEMBERS) Present:

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Steven Russell
Sukkie Jahnke

Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt

(MEMBERS) Absent:

John Kane

City Staff Present:

Braden Kay, Sustainability Director
Grace DelMonte Kelly, Energy Management Coordinator

Guests Present:

Suzanne Kraemes
Mike Bok
Alex Grimes
Ashley Cami

Chair Jung called the meeting to order at 4:33 p.m.

Agenda Item 1 – Public Appearance

Chair Jung asked the guests to introduce themselves.

Agenda Item 2 – Approval of Meeting Minutes

Chair Jung introduced the minutes of the June 17, 2019 meeting. Commissioner Milam-Edwards made a motion to approve the minutes. Commissioner Burke seconded.

Motion: Commissioner Milam-Edwards

Second: Commissioner Burke

Decision: Approved 8-0

Voted to Approve:

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Steven Russell
Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt

Commissioner Jahnke abstained.

Agenda Item 3 – Grants Update

Sustainability Director Braden Kay provided updates on grants.

- Health Impact Project
 - Working to collect heat data for playgrounds
 - Survey of Directors interested in how arterial walls impact heat
 - We would like to select walls that do not increase the urban heat island
 - Different way to collect heat information:
 - Mobile data
 - Weather sensors
 - Infrared photo technology
 - Survey
 - Questions when we do bi-annual survey
 - Heat walk along playground
- Partner with Urban Land Institute (ULI) on affordable housing and sustainable place making.
 - Council approved the affordable housing strategy 3 weeks ago. ULI grant will help us figure out how to move forward with that strategy.
- We were co-applicants on the Green Infrastructure working group to all-hazard mitigation plan with the City of Phoenix.
 - We've partnered with Maricopa County Flood Control District and Phoenix on workshops with EPA and FEMA. The new emergency manager can help with this. This will be a place to get funding.
- Braden thanked Mike Bell for his leadership. He got Maryann Corder grants to address a neighborhood challenge, to fund trees on private property.
- The urban forestry plan is trees on public lands, If Mike Bell's project is successful, there will be 40 trees planted on private property. This is a good example of neighbors getting together to find opportunities to help with climate action.

Agenda Item 4 – Climate Action Plan Approval Timeline

Sustainability Director Braden Kay gave the following timeline:

- August 27 – Draft Climate Action Plan released
- September 5 – Work Study Session presentation
- September 10 – Public Meeting at the Library
- September 30 - plan comment period closes
- November 7, 2019 – council adoption

Braden said Commissioners can meet with council before or after work study session meeting. Council will be presented with a new performance measure for community carbon neutrality on October 24th.

Agenda Item 5 - Climate Action Plan 1.0

Chair Kendon Jung thanked commissioners for responding to meeting scheduling invites. He said there will be one person per focus area to meet with a council member. We will work to schedule these meetings. We are all versed on the climate action plan.

Commissioners commented and asked:

- Has the commission met individually with council members?
- Can you walk through the appointment? How do we prepare?
- They will hear about the technical aspects from us.
- We need to explain the concepts in the climate action plan to council members.

Braden said as we talk about the climate action plan, we will tell them about our four highlighted actions, our ideas to collaborate and help them understand 45% of emissions come from transportation. We are trying to make the climate action relatable. Braden said each of you bring a relatable story on why you're on the commission. Council will see a presentation on transportation demand management. Your role is to present the information and decide how to grow the ideas and convey that to others.

Agenda Item 6 - Climate Action Plan 2.0 Guiding Principles

Sustainability Director Braden Kay said we will present the twelve actions and four highlight actions to council and we will present the guiding principles for climate action plan 2.0. From Portland, we learned to start simple and show:

1. Fiscal responsibility
2. Evidence / effectiveness
3. Engagement
4. Enterprise
5. Equity

We now have grants and pilot projects driving them. We want these to continue to be on your radar. Once we have approval on the guiding principles, the first climate action plan is about initial steps and how we engage neighborhoods.

Agenda Item 7 – Housekeeping Items

There is a youth climate summit on September 7th at 8:30 am at the student pavilion. Paul Hirt will give the key note speech. He will help students understand what role they play and train students to be organized on their own for climate action.

- Wrigley speaker from citizen climate lobby and inter-faith movement September 24th
- Climate town hall at Tempe Emanuel on August 29th at 6 p.m.

Agenda Item 8 – Future Agenda Items

There will be a solid waste rate study update next meeting and an Urban Core Master Plan update.

A motion was made to adjourn.

All approved 9 – 0

Motion: Commissioner Russell

Second: Commissioner Jahnke

Decision: Approved

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
Barbie Burke
Steven Russell
Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt
Sukki Jahnke

All present approved.

The meeting was adjourned at 6:00 pm.

Prepared by: Grace DelMonte Kelly

Reviewed by: Braden Kay

Sustainability Commission

Solid Waste Update

Sept. 16, 2019



Tempe
Making waves in the desert

Presentation Focus



- Tempe's commitment to the recycle program
- Change in trash collection days
- Green Organics Program
- Alley Maintenance Program
- Solid Waste Rate Study

Council Priority 4: Sustainable Growth & Development



Performance Measure 4.04: Achieve or exceed the Council adopted Solid Waste diversion rates by 2020

	Target	Baseline (FY15/16)	Current
Residential	40%	18.80%	22.80%
Commercial	25%	4.90%	24.20%



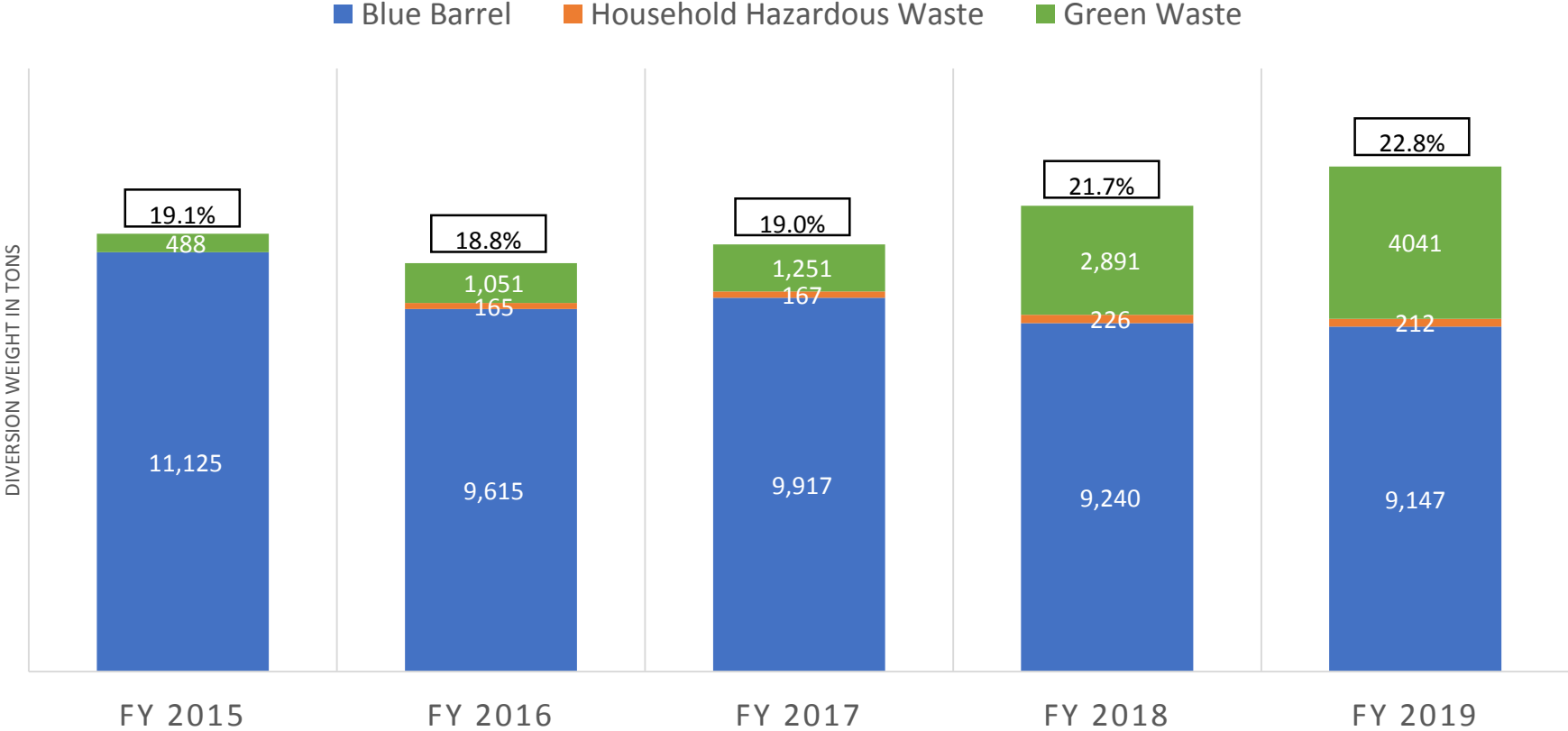
Valley Solid Waste Rates



City	Solid Waste Monthly Fee
Mesa	\$29.34
Phoenix	\$26.80
Tempe	\$25.60
Glendale	\$21.80
Scottsdale	\$18.75
Peoria	\$15.29
Gilbert	\$14.80



Residential Diversion Goal 40% by 2020



Change of Trash Day



● Current Collection Days

Monday/Thursday north of US60

Tuesday/Friday south of US60

● Potential Collection Days

Monday/Wednesday

Tuesday/Thursday

Why the change?



- *Improve customer service*
- *Improve efficiencies*
- *Reduce mileage*
- *Reduce cost*

Green Organics Update



Service day	Total Containers	Setout Rate	Tonnage
Monday	763	34%	276
Tuesday	752	55%	926
Thursday	560	31%	225
Friday	634	37%	314
FY 18/19 Totals	2,709	40%	1,740

Alley Maintenance Program



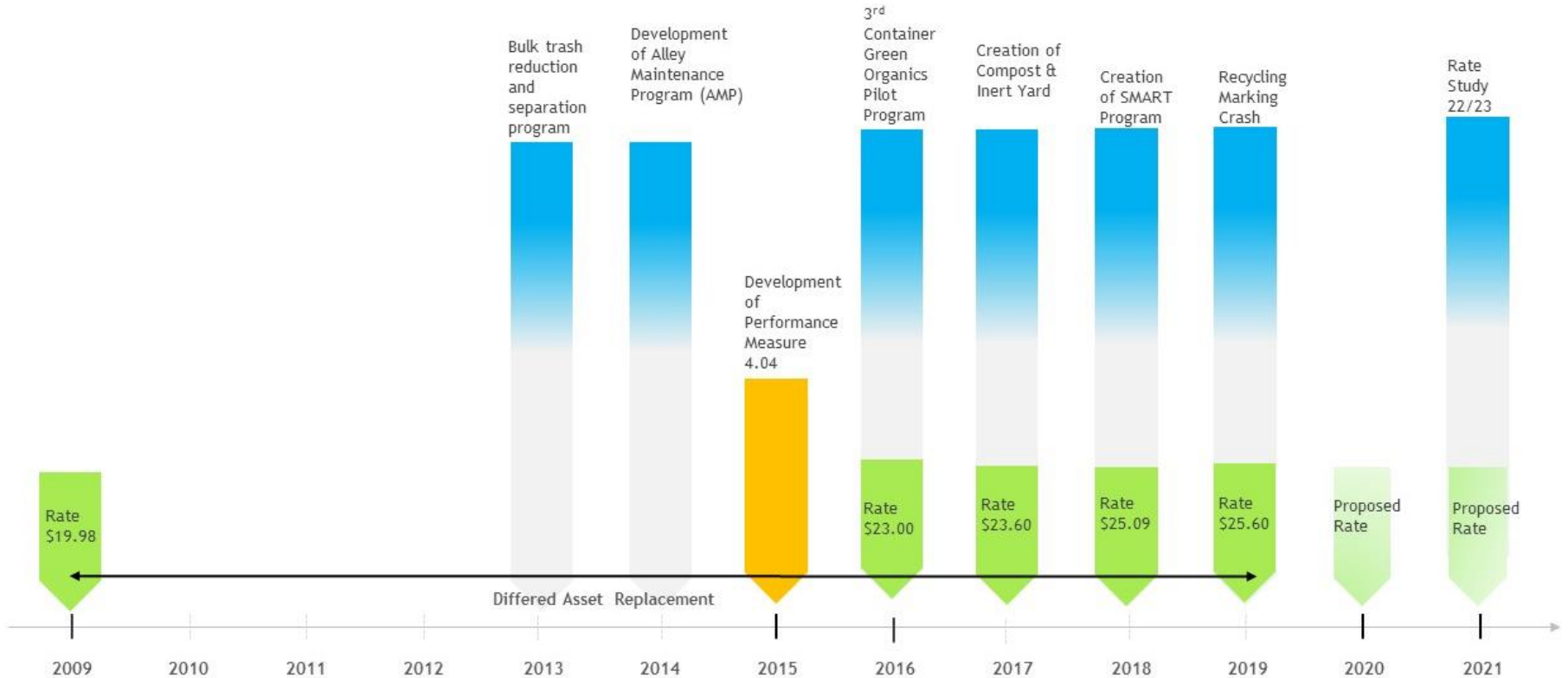
Compost and Inert Operations



Reuse of diverted materials



Solid Waste Rate Study History



Timeline



- 9/19/19 Council WSS – Rate Recommendations
- 9/23/19 – 10/7/19 – Public Comment Period
- 10/1/19 – First draft of 2020/2021 Rates
- 10/3/19– Public Meeting – (Tempe History Museum, 5:30-7:30 p.m.)
- 10/5/19 – Public Meeting –(Tempe Public Library, 9:30-11:30 a.m.)
- 12/12/19 Council Adoption
- 1/1/20 – Effective date of new rates

The image features a central yellow circle surrounded by numerous concentric blue circles of varying thicknesses, creating a tunnel-like or ripple effect. The text is centered within the yellow area.

Questions?

[Tempe.gov/solidwasteratestudy](https://tempe.gov/solidwasteratestudy)

Climate Action Plan



Public Forum
September 10, 2019



What is a Climate Action Plan (CAP)?

Tempe's Climate Action Plan:

- Global Covenant of Mayors
- 12 actions to reduce GHG emissions and improve resilience to extreme heat
- New Performance Measure for community GHG emissions

Related Performance Measures

- Carbon neutrality in municipal operations by 2050, with a strategy of 100% renewable energy sources by 2035 **(4.19)**
- Achieving a citywide 25% tree and shade canopy by 2040 **(4.11)**
- Creating a multimodal transportation system (20-minute city) where residents can meet all basic daily, non-work needs **(3.26)**

What is in Tempe's Climate Action Plan?

- Overview
- Community Actions
 - **Emissions Reduction**
 - Energy & Energy Efficiency
 - Transportation
 - **Resilience**
 - Extreme Heat
- Municipal Actions – GHG Inventory
- Climate Action Plan 2021 Update

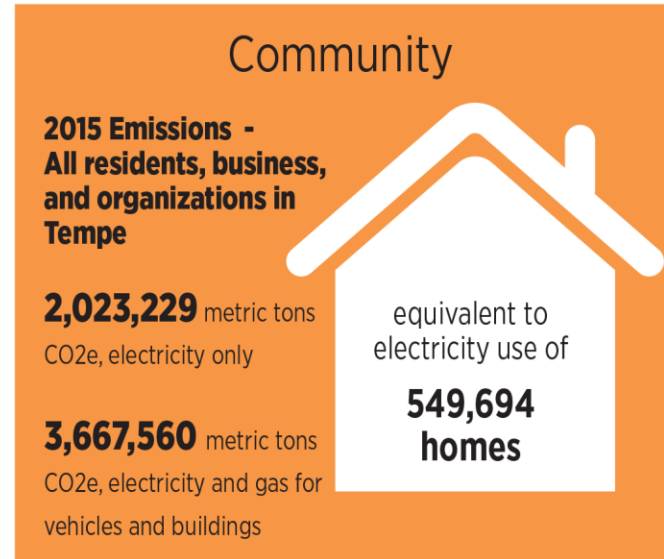
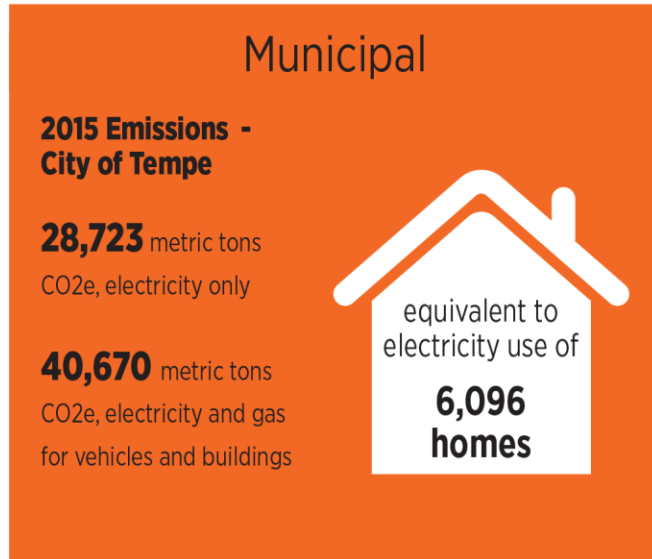
Emission Reduction vs. Resilience

- **Emissions Reduction: Energy and Transportation**
 - Reduce greenhouse gas emissions
 - Become a more livable and economically viable
 - Invest in a better city for future generations
- **Resilience: Extreme Heat**
 - Become more resilient to climate change
 - Help Tempe achieve its sustainability goals

Emissions in Tempe

- **Municipal emissions:** City facilities and operations
- **Community emissions:** Electricity production and transportation emissions

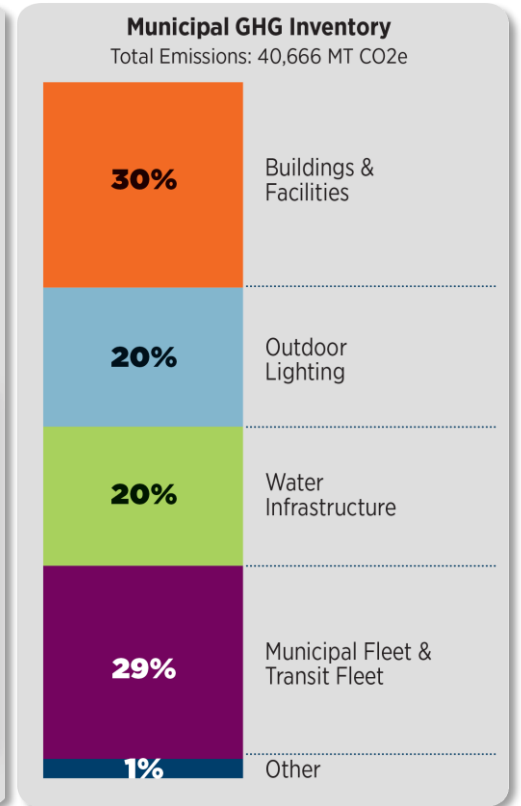
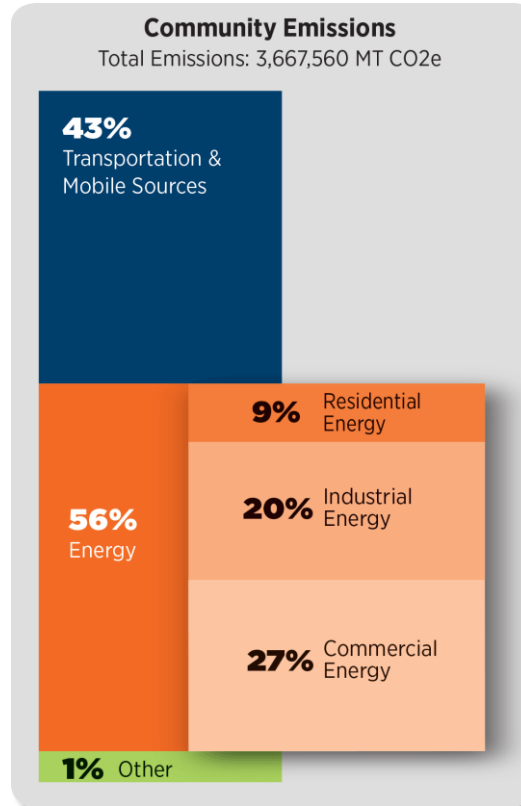
GHG Emissions Baseline



Emissions in Tempe

- Community emissions: Electricity production and transportation emissions

- Municipal emissions: City facilities and operations



Municipal Operations Emissions

- City buildings, outdoor lighting, and water treatment account for **70% of municipal emissions**
- City fleet, transit fleet, and employee commute account for **30% of municipal emissions**



Municipal Actions: City Buildings

City Buildings

- Solar panels at six facilities
- Energy audits and retrofits

Next action

- Facilities Sustainability Plan



Municipal Actions: Outdoor Lighting

Outdoor Lighting

- Converted streetlights to LED



Next actions

- LED street lighting
- LED park lighting
- LED building exterior lighting



Municipal Actions: Water Treatment

Water Treatment

- Research technologies to lower energy & water use
- Power operations with renewable energy

Next action

- Assessment of water treatment operations



Municipal Actions: City Fleet

● Fleet and Transit Fleet

- Prioritize electric vehicle (EV) investments
- Orbit & Flash buses – alternative fuel

● Next actions

- Electric vehicle feasibility study
- Increase EV purchasing

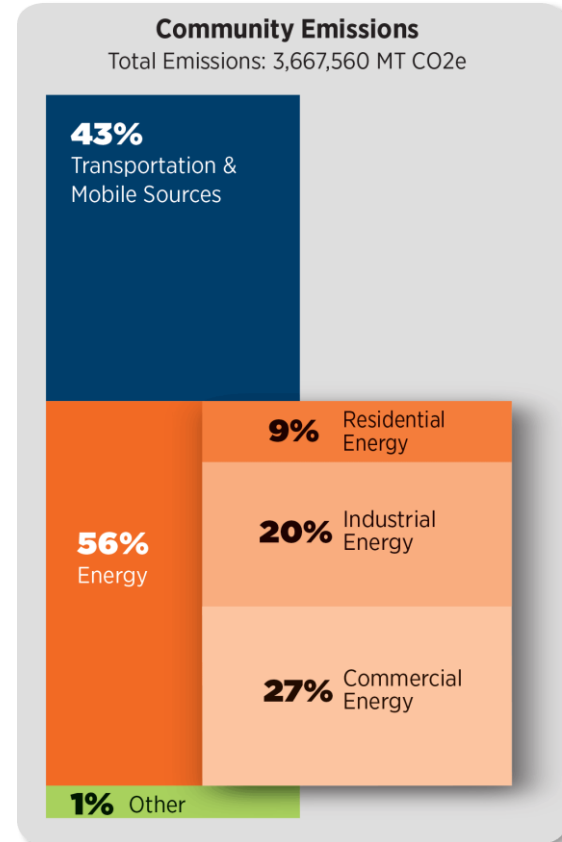


Moving Towards Municipal Carbon Neutrality

- **Partner** with utilities on fleet electrification & renewable energy
- **Collaborate** with city departments - facilities, streets, transit, water utilities - to reduce carbon emissions
- **Measure and report** on carbon emissions reduction

Community GHG Emissions

- **56% of GHG emissions** in Tempe are from energy production across residents, businesses, industries, and nonprofits
- **43% of the GHG emissions** in Tempe are from transportation



Community Climate Action: Energy

- 56% of community GHG emissions = **electricity production**
- Challenge:** A least 50% of electricity that powers Tempe homes and businesses comes from fossil fuels
- Support** businesses and residents in **load shifting and energy upgrades**
 - Saves money
 - Promotes clean energy economy



Community Climate Action: Transportation

- **43%** of community GHG emissions = **vehicular emissions**
- Tempe **leads Arizona** in alternative transportation: bus, bike, light rail
- The shift from **single-occupancy vehicles to alternative modes of transportation:**
 - Improves air quality
 - Lowers GHG emissions



Community Climate Action: Extreme Heat

- Summers have **more extreme heat days**, fueled by **urban heat island (UHI)** effect
- Extreme heat poses **serious health risks** for vulnerable populations and **Tempe's economy**
- **Green infrastructure** and low-impact development can make Tempe **cooler and more livable**.



Collaboration on the CAP

- Building Capacity
- Community Engagement



Capacity Building

- Future Shocks and City Resilience boardgame
 - **Engage/educate** city leaders about sustainability issues
 - Present **new perspectives** and thinking for sustainable management
- Sustainability Goal Setting and Strategy Workshop
 - **Introduce** focus areas of CAP
 - Develop **deeper understanding** of **sustainable** infrastructure and **resilient** communities



Community Engagement

● Forums

- Build support for key investments in target areas (energy, transportation, heat, etc.)

● Engagement with City Departments

- Ensure alignment of actions and the climate action planning process with existing city actions and planning

● Interviews

- Generating ideas, getting feedback on initial concepts and testing communications strategy



Forum Discussions and Stakeholders

Energy:

- Opportunities to support energy upgrades in residential and commercial buildings
- Community solar development to increase access to renewable energy
- **Stakeholders:** APS, SRP, ASU, Renewable Energy Firms

Transportation:

- Electric vehicles use and infrastructure
- Streetcar and other modes of transportation that reduce congestion and the need for car travel
- **Stakeholders:** Valley Metro, ADOT, Waymo, Tempe Chamber of Commerce

Extreme Heat:

- Cooling the city with trees, vegetation, material use and smart stormwater practices
- Lessening the impact of extreme heat through education and preparedness
- **Stakeholders:** AZ Dept. of Forestry & Fire Management, Watershed Management Group, SRP Sustainability Team, Tempe FMR, ASU

Engagement with City Departments

- ASU, MAG, DTA, and Engineering and Transportation on transportation actions
- ASU and Strategic Management and Diversity Office on autonomous vehicles
- Engineering and Transportation and Internal Services on energy actions
- Sustainable Cities Network on extreme heat and green infrastructure
- Fire Medical Rescue Department, and Police Department on Emergency Management
- Community Development on Green Building Code

Interviews

- Conducted semi-structured, group interviews with:
 - 42 Tempe city staff
 - Non-profits
 - Commissioners
 - Key stakeholders such as the Tempe Chamber of Commerce and Local First Arizona
- Results included:
 - Current actions to reduce emissions
 - Recommendations for future collaborations
 - Areas of strength, investment, expertise for CAP

Timeline: CAP Engagement

- Spring 2018 Internal Interviews
- Summer 2018 External Interviews
- Fall 2018 Engagements with City Departments
- September 2018 Forums on *Extreme Heat*
- October 30th 2018 Forum on *Energy*
- Oct./Nov. 2018 Forums on *Transportation*
- February 26th 2019 Forums on *Extreme Heat and Energy*
- March 19th 2019 Climate Action Plan Open House
- Summer 2019 Finalize Plan
- September 7th CAP Draft Review
- September 10th CAP Draft Review
- September 21st CAP Draft Review
- Fall 2019 Council Adoption

Climate Action Plan Overview

Energy and Energy Efficiency

- 1 Create resilient energy hubs with renewable energy and energy storage.
- 2 Create a revolving fund to support energy upgrades to businesses and schools in Tempe.
- 3 Create a centralized sustainability platform to help businesses implement energy upgrades.
- 4 Pilot solar electric vehicle charging to capture and store energy during peak sunlight hours.

Transportation

- 1 Create an urban core Transportation Demand Management program and a Transportation Management Association.
- 2 Prioritize safe and low-stress connections by walking, biking or riding transit in all transportation projects.
- 3 Invest in electric vehicle charging infrastructure and adopt building code changes that support electric vehicles.
- 4 Develop an automated mobility readiness guide and policy framework.

Extreme Heat

- 1 Adopt Green Infrastructure and low-impact development standards.
- 2 Adopt Green Building Code with support for increasing shade and use of cool materials.
- 3 Further invest in Urban Forestry Master Plan to provide more shade in parks and along streets.
- 4 Invest in new emergency management program and develop resilience plan for extreme heat.



Highlight Energy Action

● Resilient energy hubs

- Partner with utilities to **reduce barriers to adding solar and battery storage** to community centers, schools, and churches.
- Meet the power needs of the most **vulnerable populations** in case of **emergency**



Highlight Transportation Action

- **Transportation Demand Management (TDM) program**
 - A TDM program **encourages transit and carpooling**
 - Provides **congestion mitigation alternatives**
 - The Transportation Management Association (TMA) is a public-private partnership that aims to **reduce traffic congestion and carbon emissions.**



Highlight Extreme Heat Action

- **Green Infrastructure & Low Impact Design Standards**
 - Design landscapes that **capture stormwater** while growing **vegetation** for **shade** and urban **cooling**
 - Promotes a **walkable** and comfortable city
 - **Saves water**
 - Keeps Tempe **cool**



Highlight Extreme Heat Action

- International Green Construction Code (IgCC)
 - Make construction **more sustainable**
 - **Increased resilience** to extreme heat
 - Encourage **sustainable construction methods and materials**
 - Structural **shade**
 - Supports **cool** materials
 - Requires more **tree canopy** coverage



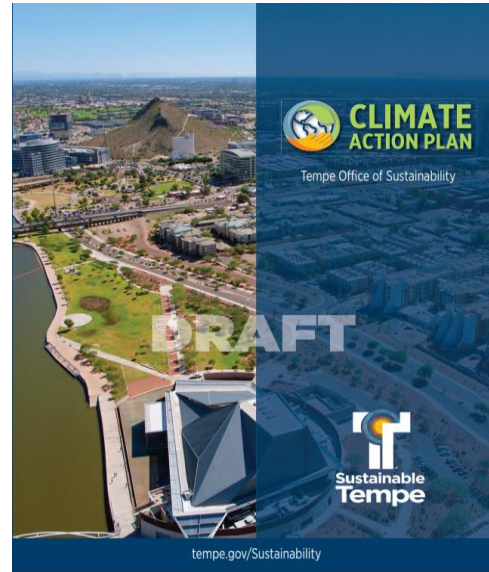
What's Next: CAP 2021 Update

- Tempe's CAP 2021 Update will incorporate the following **guiding principles** to ensure **quality and effective climate action** is taken:
 - **Fiscal responsibility**
 - Make financially wise climate action investments
 - **Equity**
 - Prioritize job creation and professional development
 - **Engagement/Education**
 - Create engagements that allow residents connect with content
 - **Enterprise**
 - Tempe businesses can promote climate action
 - **Effectiveness/Evidence**
 - Evidence that climate actions have an impact

Timeline (Future and CAP 2021 Update)

- September 7th Public Event
- September 10th Public Event
- September 21st Public Event and Heat Walk
- Fall 2019 Finalize CAP
- Fall 2019 Council Approval
- Spring 2020 Forums on CAP 2021 Update
- Spring 2021 Analyze 2020 data
- Summer 2021 Draft & edit CAP 2021 Update
- November 2021 Council Adoption

GHG Reduction Target Recommendation



- 80% of 2015 community GHG emissions by 2050 and 100% carbon neutral by 2060