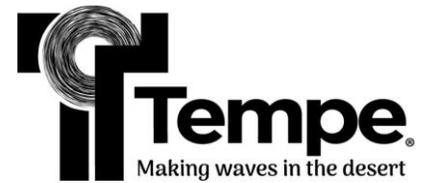


PUBLIC MEETING AGENDA



Sustainability Commission

MEETING DATE

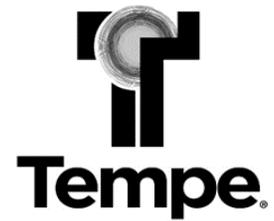
Monday, March 18, 2019
4:30 p.m.

MEETING LOCATION

Public Works 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 – 4:35 pm)	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the February 11, 2019 meeting.	Kendon Jung, Commission Chair (4:35 – 4:40 pm)	Action
3. Chair Update Chair will provide updates.	Kendon Jung, Commission Chair (4:40 – 4:45 pm)	Information
4. Air Quality in Tempe Staff will provide responses to the Commission's questions about Tempe air quality.	Justin Bern, Environmental Program Supervisor, Oddvar Tveit, Environmental Quality Specialist, (4:45-5:05 pm)	Information
5. Update on Climate Action Plan – Energy Public Forum Staff will provide updates on the Climate Action Plan.	Braden Kay, Sustainability Director (5:05 – 5:40 pm)	Information
6. State of the Neighborhoods Sustainability Awards Staff will provide updates on the upcoming awards ceremony.	Braden Kay, Sustainability Director (5:40 – 6:05 pm)	Information
7. Housekeeping Items -Retreat -Climate Action Plan Events	Kendon Jung, Commission Chair (6:05 – 6:25 pm)	Action
8. Future Agenda Items Commission may request future agenda items.	Kendon Jung, Commission Chair (6:25 – 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 February 11, 2019

Minutes of the Tempe Sustainability Commission meeting held on Monday, February 11, 2019, 4:30 p.m., at the Public Works Conference Room, City Hall, 31 E. 5th Street, Tempe, Arizona.

(MEMBERS) Present:

Kendon Jung (Chair)	Reyna Olvey (phone)
Ryan Mores (Vice Chair)	Serita Sulzman
John F. Kane	Barbie Burke
Arnim Wiek	Steven Russell
Stephanie Milam-Edwards	Sukki Jahnke
Gretchen Reinhardt (phone)	

(MEMBERS) Absent:

None

City Staff Present:

Braden Kay, Sustainability Director
Marilyn DeRosa, Deputy Public Works Director - Engineering
Grace DelMonte Kelly, Energy Management Coordinator
Kevin Devery, Fleet Manager
Ambika Adhikari

Guests Present:

Lauren Kuby

Chair Jung called the meeting to order at 4:31 p.m.

Agenda Item 1 – Public Appearance

There were none.

Agenda Item 2 – Approval of Meeting Minutes

Chair Jung introduced the minutes of the January 14th meeting. Commissioner Burke made a motion to approve the minutes. Commissioner Kane Seconded.

Motion: Commissioner Burke

Second: Commissioner Kane

Decision: Approved 11-0, all present approved

Voted to Approve:

Kendon Jung (Chair)
Ryan Mores (Vice Chair)
John F. Kane
Reyna Olvey
Annim Wiek
Sukki Jahnke
Stephanie Milam-Edwards
Gretchen Reinhardt
Steve Russell
Barbie Burke
Serita Sulzman

Agenda Item 3 – Presentation by the City Clerk

City Clerk Brigitta Kupier presented about boards and commissions and open meeting laws.

Brigitta said every state in US has a sunshine meeting law or open meeting law. The basic premise of open meeting law is that individuals are allowed to attend your meetings and public bodies have to post a meeting notice 24 hours in advance.

Why we have open meeting laws:

- To protect the public
- Protect public officials
- Maintain integrity of government
- Better informed citizenry
- Building trust between gov and citizens

Who must comply? Legislature, boards and commissions and political subdivisions must comply.

What constitutes a meeting? You can meet in conferences, most likely it's in person and a few people on the phone. For the sustainability commission, a quorum is 6 members. Anytime 6 members get together and talk about an issue, you're having a meeting. If 6 members talk, others may think you are doing city business. You also have sub-committees. If you have one with 3 people, a quorum is 2. They can't get together without posting a notice, having an agenda and taking minutes.

If a subcommittee has 5 members and 3 members are talking that is a quorum of the subcommittee. Staff will help you with agendas and minutes.

Commissioners asked:

- I was under the impression three was a quorum. Brigitta said 3 people does not constitute a quorum with this body but does at a subcommittee level.
- Can we have an ad hoc work session, not a subcommittee, but a group to discuss a topic? You would need a subcommittee. A subcommittee has certain tasks. You have to fill out a form for a subcommittee; they are for a specific purpose, for a certain amount of time.

-
- If 3 commissioners want to get together to discuss something with the commission, can they do this? Yes.
 - Brigitta said email and telephone are included in meeting requirements.
 - If we get the meeting reminder, and someone responds to the group and responds yes to pizza it doesn't count. One person can say I want an agenda item for x without going into detail.
 - What about providing information to the public that we can post somewhere? I don't see any thing prohibiting that.
 - Brigitta said notice is required. The second part is that the agenda should contain enough info that if the public is interested they can come and listen. Postings are 24 hours prior to the meeting on website and on the board out at city hall.
 - Agenda Logistics: Agenda and minutes must contain certain elements. We are required to microfilm the minutes. There are attendance requirements.
 - If you want to address an item that is on the agenda, staff can attach into to the agenda. The public doesn't know what those info items are and it's not on the agenda, so you could violate open meeting law. Individual penalties can go to board members and to staff, so if you have any questions, ask your staff liaison, and they can ask us.
 - Sounds like we could have resources that may be of interest at one meeting and an item for action, we could request to put items up for conversation; there is a way to do it, if we choose to do that.
 - The basic idea is we will implement a new system, where all information for each agendized item with be attached to an appendix and anything provided by the commission.
 - The chances we would have prepared materials for a current meeting would be unlikely. The materials would be for a previous meeting.
 - The idea would be we would agendize the item again at a future meeting. We can't have a previous meeting and then document out there about a previous meeting.
 - There could be some documents that are appropriate for the Sustainability Office website. That's where we have to be careful about whether it's being used for the commission or through the office of sustainability or through nonprofits that are presented at this table and some that are not present at this table.

We're explaining the system so we make sure we're following the open meeting law. We need to understand the limitations of the commission. If it's for commission business, it should be agendized.

Braden thanked Brigitta for coming and presenting to the commission.

Agenda Item 4 – Update on Electric Vehicles

Fleet Manager Kevin Devery said this presentation was adapted from a previous council presentation. There are some advantages to traditional fuels, but cost varies and there are environmental issues.

- Alternative fuels - we use CNG but we are looking to increasing electric vehicles
- Environmental: zero emissions and 40% reduction for alternative fuels

- Social – leadership, customer service

There are a lot of regulations with CNG and a huge expense with that. Cross section of our fleet :

- We have 27 plug ins and hybrids. We are trying to reduce maintenance and fuel costs
- We reached out to water, reached out to solid waste, we have 28 charging stations, 15 are plug in, 3 are hybrid.
- With SRP and APS they are working with ACC to get approval to provide grant funding, challenge is infrastructure, training, and with help from council we can reach our goals.
- 2020 goal – 65% alt fuel or electric
- 2025 – 85% of fleet alternative fuel or electric

Opportunities:

- Council adoption of fleet diversification goal
- Planning study
- Funding for levels of implementation
- 5 stages thru 2025
- Potential future power utility partnerships
- We're making investments to follow our road map

Commissioners asked:

- We still need to plug cars in and use electricity, so isn't it still using fossil fuels. Kevin said there is a huge coal reduction in utilities. Lauren Kuby led the working group for city ops to by 100% RE by 2035.
- You need to green your energy while you are switching to electric vehicles. You have to work on energy efficiency, greening, and EVs to coordinate the efforts.
- Are you creating the metrics? One slide said 60% savings over life tie of vehicle. How are you showing that to the public? Kevin said that is an industry wide accepted number. With lower labor requirements, we start the see the demand drop. It's a multiple domino effect.
- I'm wondering if you could tell us about the partnerships with APS and SRP?
- Braden said the ACC allowed APS to start a pilot project, APS will pay for 100 charging stations in the state. We're not sure we'll participate in that pilot. The thing important to understand is you have to get your fleet electric vehicles to set an example and then you can work on community, public charging stations. We worked on a CIP item to do a study for electrical upgrades to put more EV charging stations in. APS said do your study and then we can collaborate on installing more EV infrastructure.
- What are we doing to reduce the fleet, to have less vehicles? Kevin said in our fleet we do not own the vehicles, we have to work with the other departments to give them resources and information. A pickup truck may drive around Kiwanis Park 6 times a day, but we see 4 miles a day and it seems it's not being used much. Parks says it's being used 6 hours a day. Tony in solid waste has done a fantastic job to re-route and get rid of 6 trucks.
- Braden said that he and Kevin can do a lot on culture change. The more we can get our fire chief, police chief to know this is something we need.
- You could have a revolving fund. Kevin said we don't have a replacement fund. Each year, we make recommendations, we give 5 year budget projections, we've done all the right things, but with the program we have now, if vehicle wrecked, there is no fund for replacement.

Braden said the CIP budget request for EV infrastructure is very important. In the future, you could let council know we think you should be paying attention to this. In my mind, this is one of the top 3 investments we should be making in sustainability. Kevin has gotten a lot done without a lot of resources. This is a no brainer investment.

Agenda Item 5 – Update on Urban Core Masterplan

Braden said he wanted the new commissioners to hear about the urban core masterplan. Some of the things you have heard about transportation in 20-minute city are related to Urban Core Masterplan.

Braden introduced Ambika Adhikari. Ambika represents Community Development and is working on Urban Core MasterPlan. Ambika said we are close to getting a draft done. I'll give you timeline and update. The master plan includes the TOD. Because we received funds for street car, we have an affordable housing strategy along with historic preservation and sustainability.

In the hierarchy, we have the General Plan 2040, then infrastructure plans, water and transportation, then high level plans e.g. character area plans, urban forestry plan and climate action plan. Then we have implementation plans with development guidelines, then there are regulations, codes and ordinances, and engineering design criteria.

Boundaries

- The plan will be a mechanism to distribute potential and expected growth. We are working with consultants and they are estimating there will be 14,300 new dwelling units. That would be 16,000 new jobs, 3.5 million square feet of new office and 1.3 million square feet of new retail, 2,200 new hotel rooms.
- Looking at how to make it more effective and more efficient is the main driving force of the plan. We've done extensive consultation, we've done surveys, ideas are driven by the consultant teams.
- Based on consultation and availability of sites and historic preservation, the consultants have identified areas that will be targeted for growth. Downtown and Apache and some along Terrace area, and some growth along Smith.

Goals for the plan is to distribute projected growth in suitable locations. Ambika showed proposed TOD boundary and subzones, station area activity and corridor. There are 7 or 8 types of TOD. Different heights of buildings depending on location, more density in designated areas.

- Braden said this is how to make a city sustainable. This is complicated but what you're looking at is our attempt of change city ordinances to allow for more height new transit. One thing is to get community to accept more height, anything with a color will follow a set guideline of rules, what the store front looks like.
- Ambika said every building over 5000 square feet has to have an alternative transportation plan, reducing parking, trip reduction.
- What staff has identified is that this code has an opportunity to put this into a plan to reduce single occupancy vehicle. We're trying to create more efficiencies, we can't have density without investment in transportation.

Braden said this is important because if council doesn't want to put alternative transportation into the code, you need to know this conversation, to make sure we're preserving our neighborhood, developing sustainably, have those guidelines/requirements in those codes.

Ambika said the draft will incorporate TDS and density bonus, like Phoenix has; an affordable housing bonus and sustainability bonus. All of those things are incorporated into a lot of detail including parking, you need to build a parking garage with a flat surface.

Braden said another thing you'll be hearing about is green building code voluntary adoption. Those sustainability elements give us an opportunity to more proactive.

Ambika said there is a lot of overlap, the final draft will be posted to the public in May and June. They will take input from public and stakeholders and go to Council in August. If adopted, heights and densities will be allowed by right.

In order for the growth to be managed, we need to have height guidelines, so for the Urban Core Masterplan, we looked at GP2040 which envisions land use and residential density. They have already been accepted by the community. Council also had approved in 2001 and 2006 a height study, up to 350 feet in urban center, those heights were accepted in 2006. Based on those, the Urban Core Masterplan height is slightly different than TOD heights. That does not alone accommodate all of that growth. These are the guidelines in the plan. There will be affordable housing bonuses. Unless we provide incentives, we will be giving heights away for free. It is also in keeping with infrastructure we have.

Commissioners asked:

- You're asking people if they do 125 % parking they can convert it to livable spaces? Ambika said yes.
- What is the Smith innovation hub? Ambika said council gave guidance to Economic Development. There are areas within Smith Industrial areas that are ripe for land use changes. We are integrating that in masterplan.
- How do Affordable housing bonuses those compare with other cities incentives? Braden said developers are looking for areas they believe are good investment opportunities and they want consistency. The way things get built in Tempe, council rezones their plot, then they can develop. We rezone on a per project basis. A high functioning city should create a predictable process with predictable rules. The idea is to set this up, then if you want height bonuses, do the things we want to get height. We are trying to create a predictable investment system.
- You mentioned the height bonus for historic preservation, what if the height bonus is not what they're looking for? Is there another bonus that's not height? Ambika said yes, you could get density bonus.
- The design guidelines, do they include sustainability? Ambika said yes there is a threshold.
- The height was by what neighbors would bear, I'm trying to make sense of it, it's also as high as the market would bear I'm guessing. In 101 and McClintock, neighbors would bear more than neighbors between McClintock and rural. Ambika said they went through neighborhood workshop, 125 people, all of this is considered.
- The height proposed is a maximum. There would be more height possibility; that becomes minimized, it is a balance of what people want and what is needed. This is not a rezoning of the property.

Ambika said he would come back again. They will hold public outreach. Affordable housing strategies will go for adopting quicker, all of these are connected, affordable housing impact statement.

Agenda Item 6 – Climate Action Plan Prioritization:

The Climate Action Plan is an opportunity for city to set more aggressive goals than in the past. In the beginning we had a municipal goal to get to 20% renewable energy by 2025. With this group and Council working group, we set a 100% renewable energy goal by 2035 with carbon neutrality by 2050.

We are part of the Mayor's climate compact. We're in a place where half of emissions are from energy and half from transportation.

We don't want to do death by laundry list. Eventually, we'll have a bigger office and we'll have a longer list, but we're proposing is emission reduction in:

- Energy
- Transportation
- Extreme heat

We will look at one to two policy actions to move each thing forward. This is a Climate Action Plan using 2015 emissions data. In 2021 we will start a 2nd climate action plan using 2020 data. We need to make sure our city understands what emissions are, with champions that can move this forward. For now, what we're trying to do is to dive into these areas, and what policy change we are looking for in each of these areas.

In transportation, we may need 3 policy actions. Electric vehicles are part of the 3 items, I believe the utilities will step up, taking that 0-2% progress and setting a goal. We're going to get that articulated in CAP 1, highlighting critical investments we need to make right away. CAP 2.0 will be more in depth.

We will have a public event where we will be getting feedback for energy investments and extreme heat.

How do we start making investments that are low carbon? We build more infrastructure for automobile future. We continue to invest in the past instead of the future. We need to say we're building a different future than we have today. We need to invest in our city in different way.

Agenda Item 7 – Autonomous Vehicles:

In the Fall of 2017, I was working with a class and we spent time thinking about how to work on autonomous vehicles. There was a fatality and we learned we don't know where this trend is going, this could help us support zero carbon emissions and 20-minute city. The way we welcome autonomous vehicles can be a plus instead of a minus.

We found that it's not a forsaken conclusion that AVs are going to solve our problems. So with ASU we produced a white paper on AVs that AVs could hurt or help. We followed guidelines from NLC, there are some core challenges. How do you build AVs as part of a multi modal system as part of a 20 minute city, we have to take ownership to guide technology, otherwise we're threatened to be taken over by cars.

Recommendations:

- Smart mobility playbook
- Equity and access
- Public safety
- Infrastructure, zoning and land use
- Data governance and sharing
- Learning
- MAG would like us to help develop a playbook for the region

Pilot projects: We're applying for grant money for using AVS to solve congestion problems. This is an exciting area. That is where we're headed for AVs. We'll be working with MAG on funding this play book. Between EVs and 20-minute city, there is not a ton of guidance needed here. WAYMO and certain companies are dedicated to that. It will be broad. We will be working with ASU and have them looking at European partners. We're one of the first cities working on AV policy and we have AVs in the city.

Agenda Item 8 – State of the Neighborhoods Sustainability Awards

Braden said at the next meeting, we will need to decide on this. The first year, we spent a lot of time on this. Last year, we came to you with some ideas, and you nominated them, and they received awards. This year, we have some nominations, we will ask our water department for residents that should be nominated for an award. At the

next meeting, we'd like to make nominations on the residents and business side. If commissioners want to take the awards on and manage a process, we can do that next year.

Agenda Item 9 – Housekeeping items

The commission discussed retreat dates. Decision to have it on March 25th. Braden said we will discuss policies to get the first CAP through. There will be content, and a lot of things will be process. We need to make sure there is energy and support for each action in the plan. Our intent is what is the strategy to actively advancing the contents.

Agenda Item 10 – Future Agenda Items

None.

A motion was made to adjourn.

Motion: Commissioner Russell

Second: Commissioner Milam-Edwards

Decision: Approved

The meeting was adjourned at 6:35 pm.

Prepared by: Grace DelMonte Kelly

Reviewed by: Braden Kay

Energy and Extreme Heat Forum

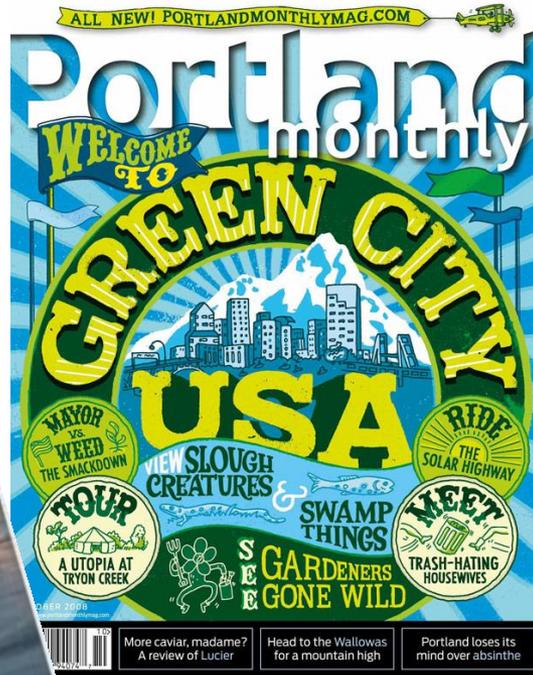
Climate Action Plan for Tempe 2050

February 26, 2019





Local Climate Action: Portland's plan for an equitable, prosperous, healthy way forward

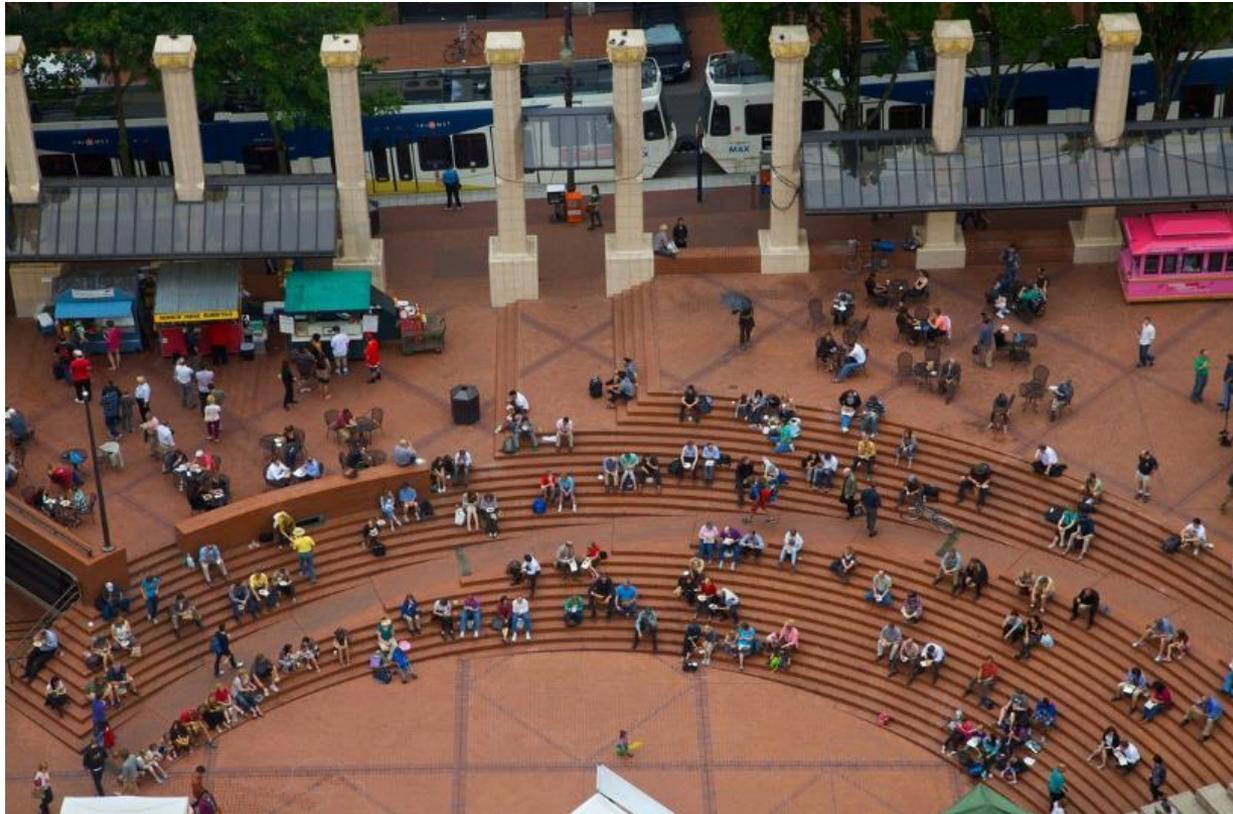


1970's Portland = 180 Air Quality Violations

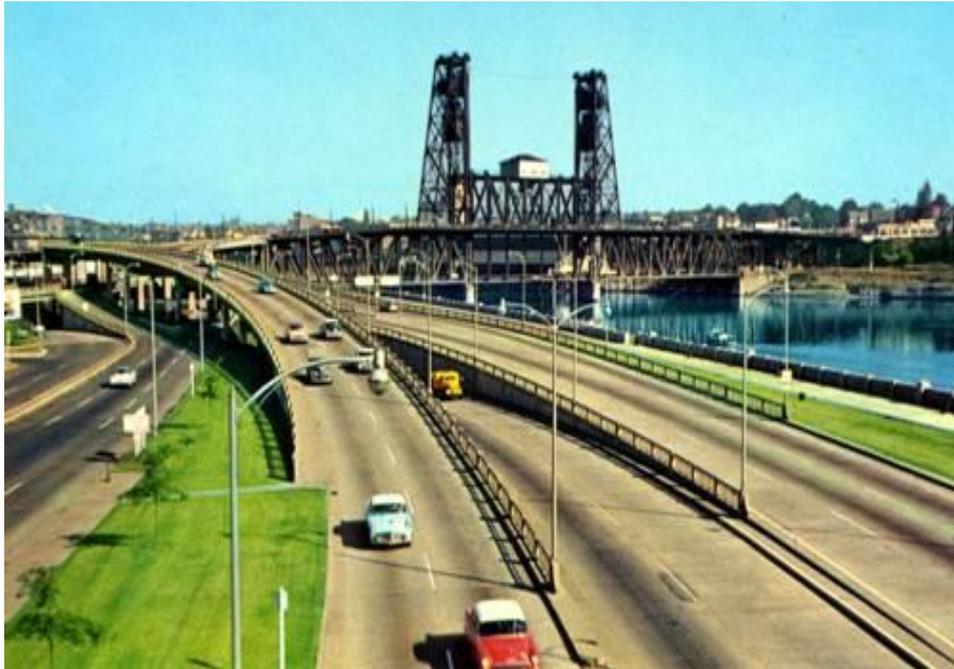




REAL PROGRESS



REAL PROGRESS

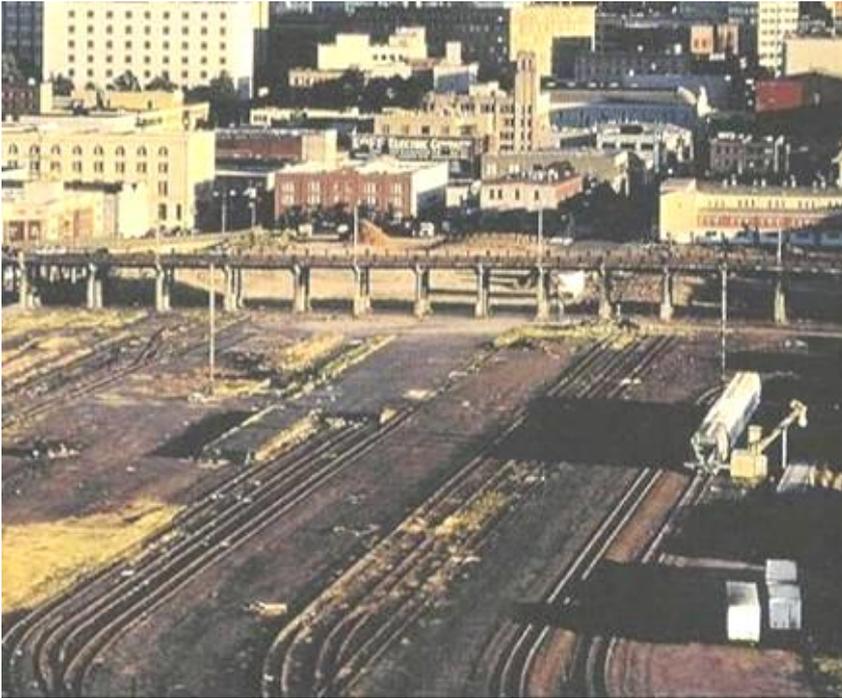


Harbor Drive

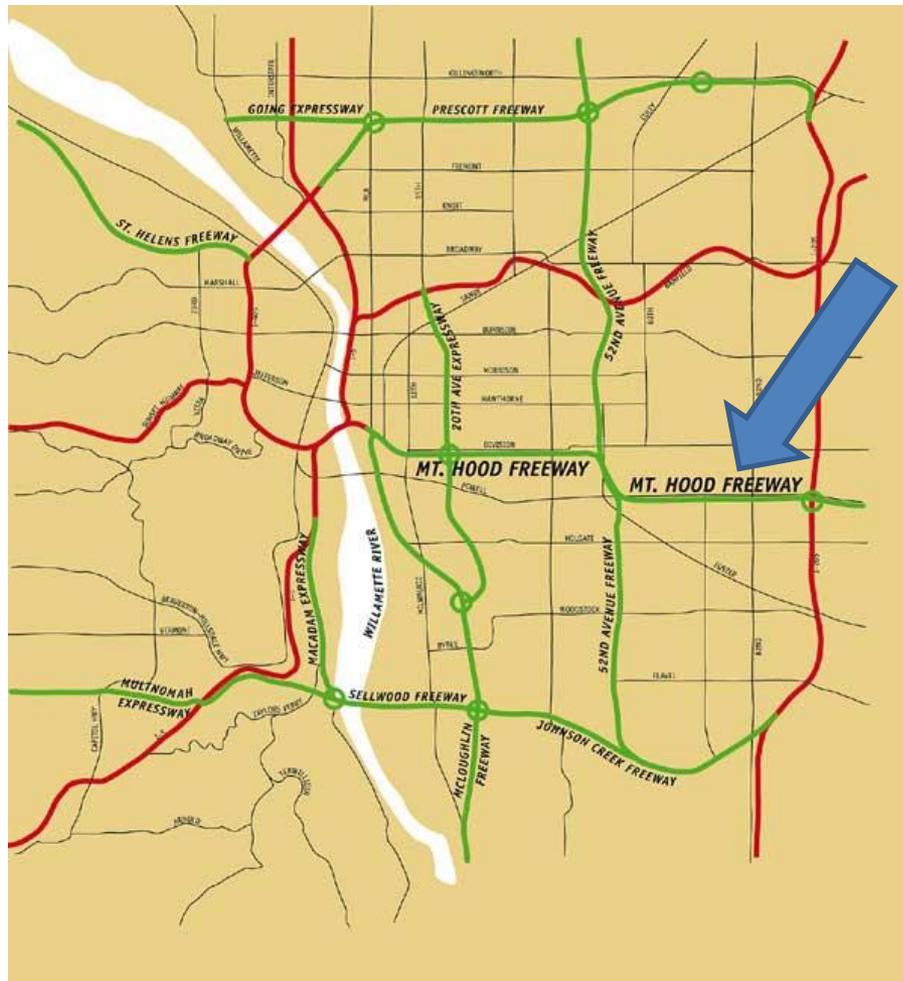


Waterfront Park

REAL PROGRESS



Pearl District



REAL PROGRESS



Mt. Hood Freeway "ghost ramp"



Transformation



Purpose of Forum

- **What strategies could Tempe use to support energy efficiency and renewable energy?**
- **How can Tempe prepare for extreme heat in our city?**
- **What actions should we take to join the global movement on addressing climate?**
- **What goals should we set to reduce our community greenhouse gas emissions?**

Climate Action Plan



Phase 1



Phase 2



Phase 3



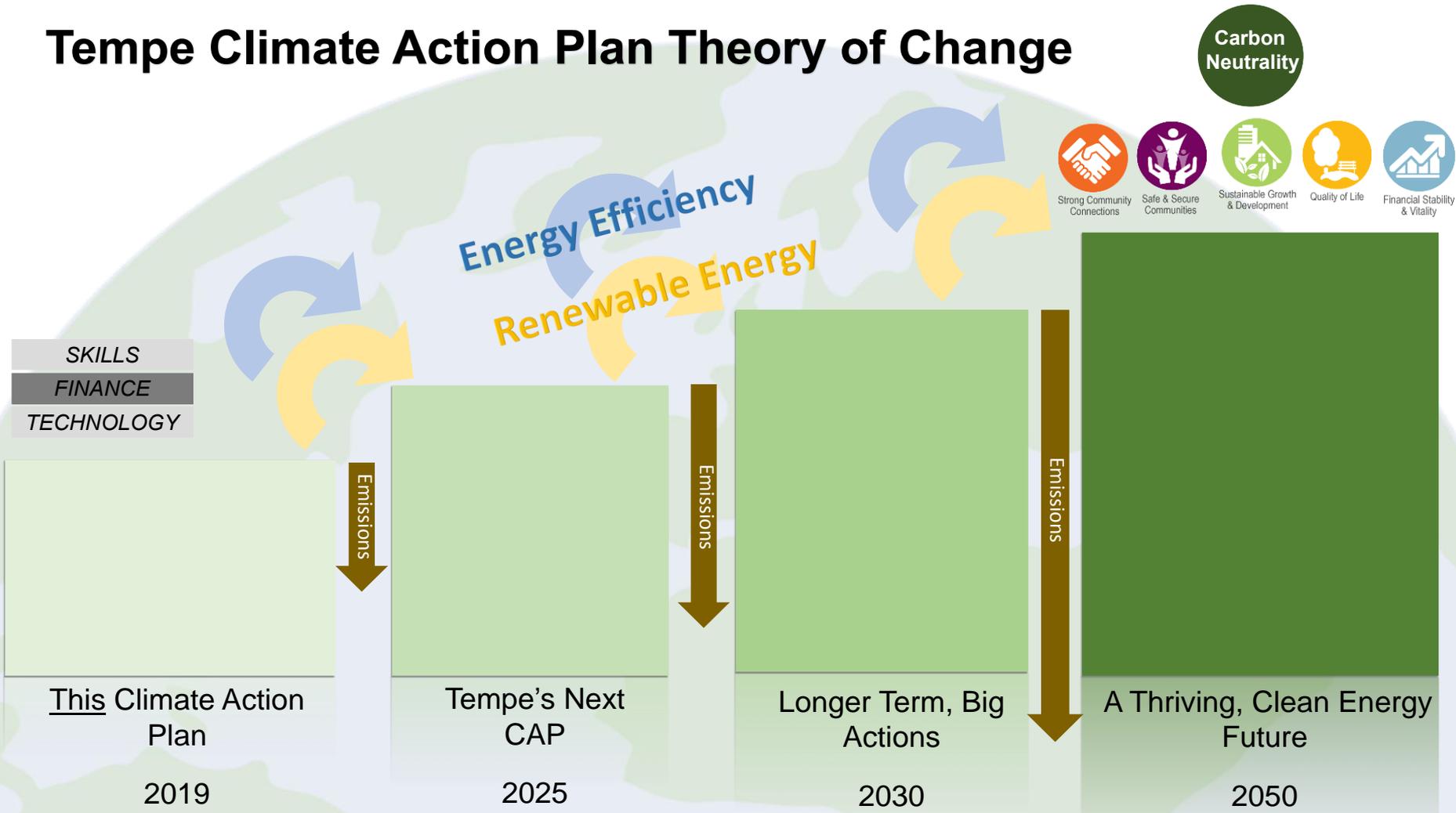
Phase 4

As part of the City's Commitment with the Global Covenant of Mayors:

1. Letter of Intent from Mayor and Council
2. Complete a greenhouse gas emissions inventory
3. Will set a target to reduce GHG emissions
4. Develop Climate Action Plan on how Tempe will reduce GHG emissions



Tempe Climate Action Plan Theory of Change



Greenhouse Gas Inventory

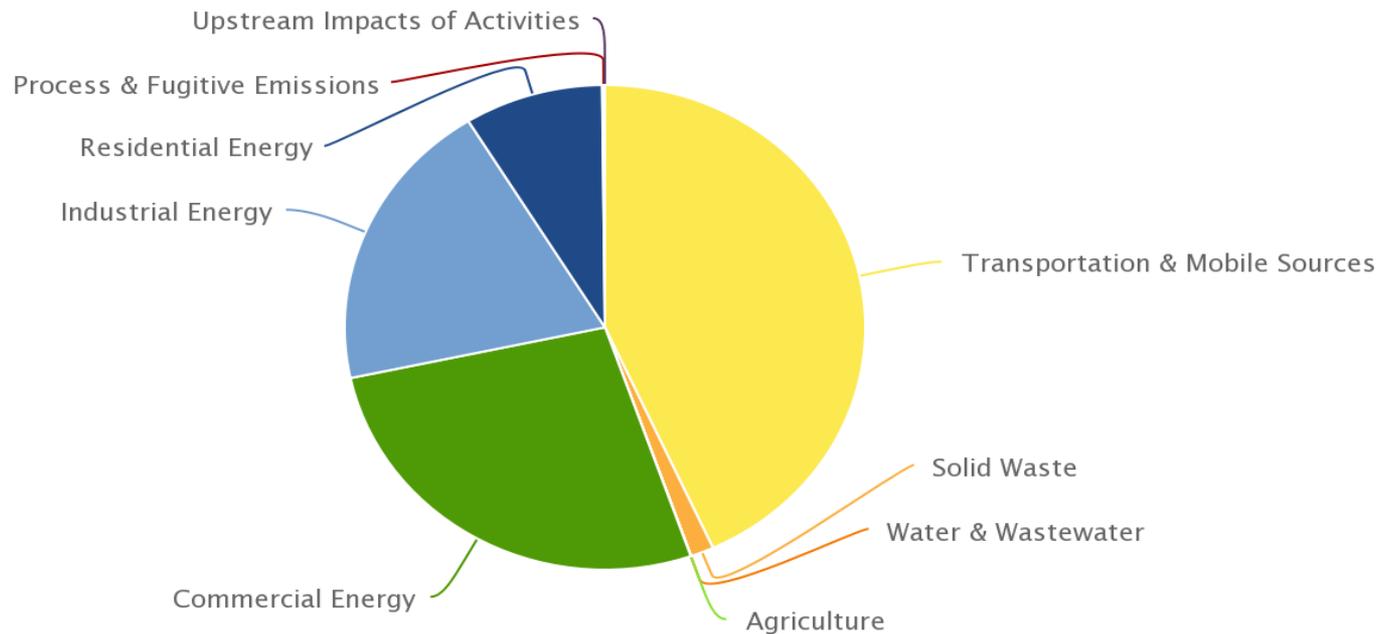
- If you can't measure it you can't manage it
- Sets a baseline to set reduction targets
- Identifies major sources of emissions
- Measures effectiveness of programs over time



Greenhouse Gas Inventory

Total Emissions:
3,667,560 MT CO₂e

CO₂e across all categories for current inventory



Municipal Energy Investments

Energy Efficiency improvements in city facilities include:

- Efficiency
 - Water treatment
 - Street lights
 - Buildings
 - HVAC
 - Lighting
 - Controls
 - Energy Management System

- Renewable Energy
 - Solar Panels installed at 6 city facilities
 - Alternative fuels



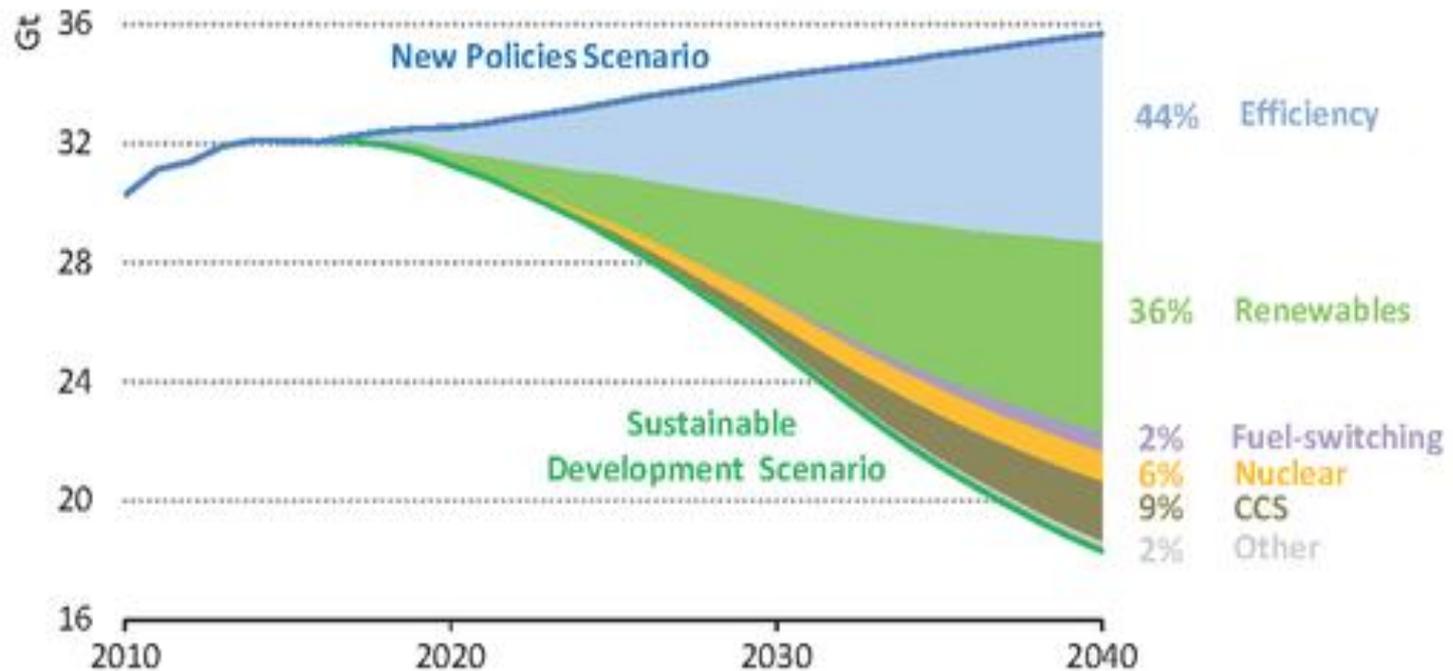
What Does a “Climate Action Plan” look like in Tempe?

- New **goal** for carbon reduction
- New **goal** for resilience to extreme heat
- Menu of **potential investments** (Including projects in current CIP, and projects to put in year 5 before next bond authorization)
- Develop **community support, and data** to support actions and investments (Partnership with ASU)





Figure 1.8 Global carbon dioxide (CO₂) emissions reductions in the WEO 2017 New Policies and Sustainable Development Scenarios



What Areas Does our Climate Plan Address?

● Emissions reduction

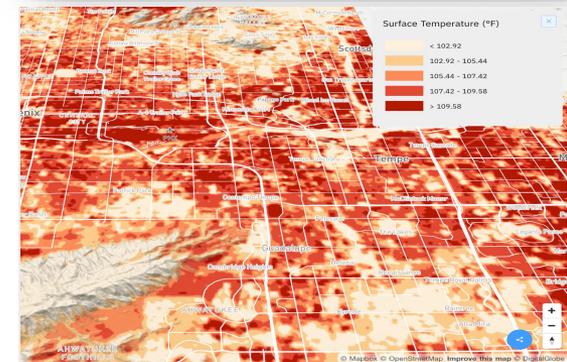
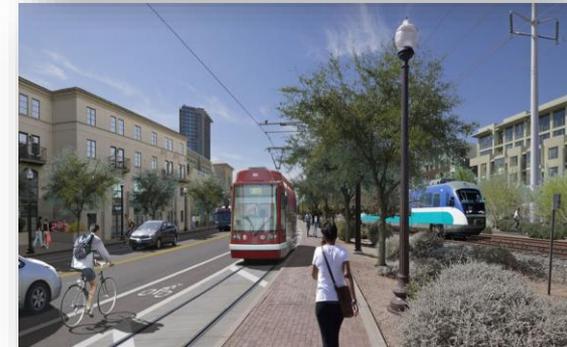
- Energy
 - Business engagement
 - Renewables
 - Energy efficiency financing

• Transportation

- 20 minute city (Demand response, transit and roadway configuration)
- Electric vehicles
- Autonomous vehicles

● Resilience

- Extreme heat
 - Emergency response
 - Building and landscape code
 - Urban forestry
- Drought
- Air Quality





Why heat? Why now?

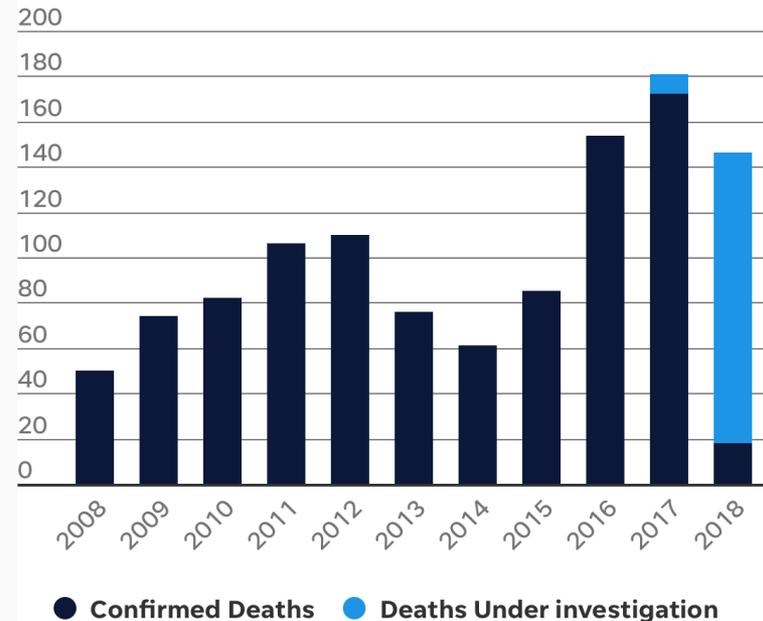
Men leave Phoenix shelter for last time this morning

Brenna Goth, The Republic | azcentral.com Published 8:10 a.m. MT April 1, 2015 | Updated 1:10 p.m. MT April 2, 2015



Image source:
<https://www.azcentral.com/story/news/local/phoenix/2015/04/01/phoenix-homeless-shelter-closes-men-leave/70768806/>

Heat-associated deaths in Maricopa County, 2008-2018



Source: Maricopa County Department of Public Health

Extreme Heat

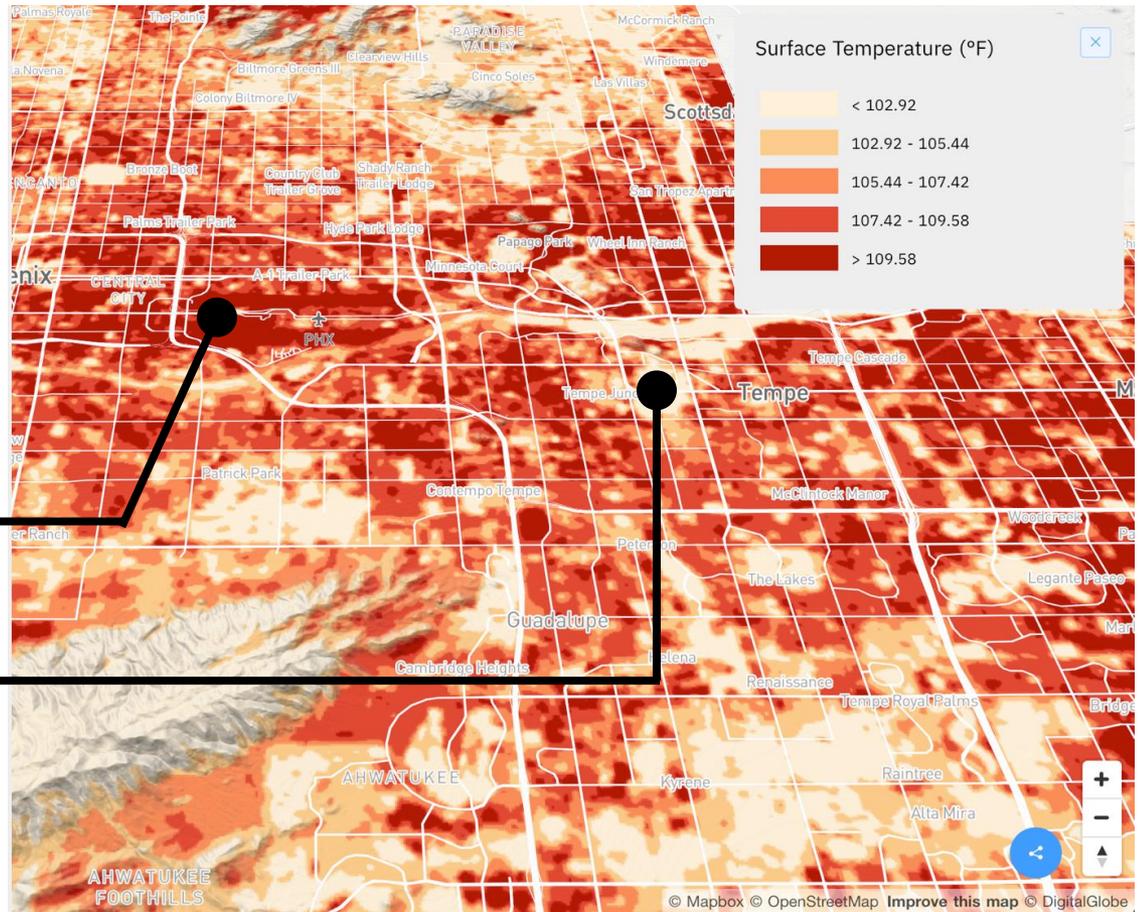


Urban Heat Islands

August 16, 2016

Sky Harbor Airport

ASU Campus



From: Urban Systems Lab
<http://urex.urbansystemslab.com>

Source: USGS 8/16/2016 Landsat 8 image

What Areas Does our Climate Plan Address?

● Emissions reduction

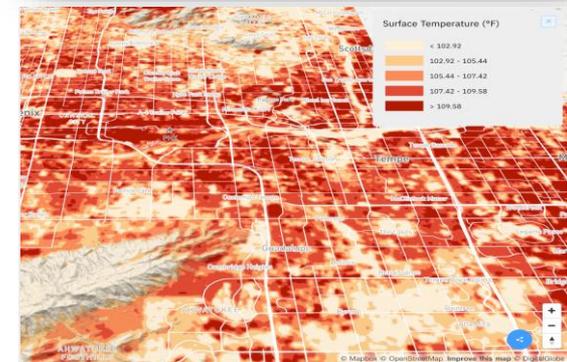
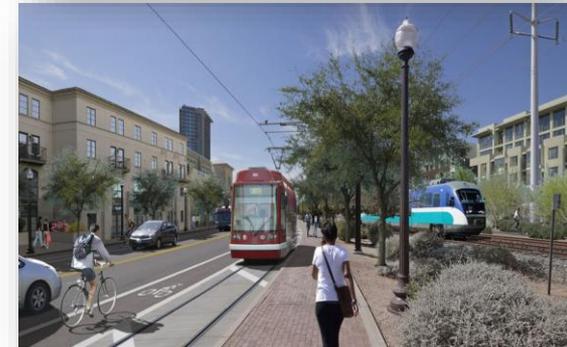
- Energy
 - Business engagement
 - Renewables
 - Energy efficiency financing

• Transportation

- 20 minute city (Demand response, transit and roadway configuration)
- Electric vehicles
- Autonomous vehicles

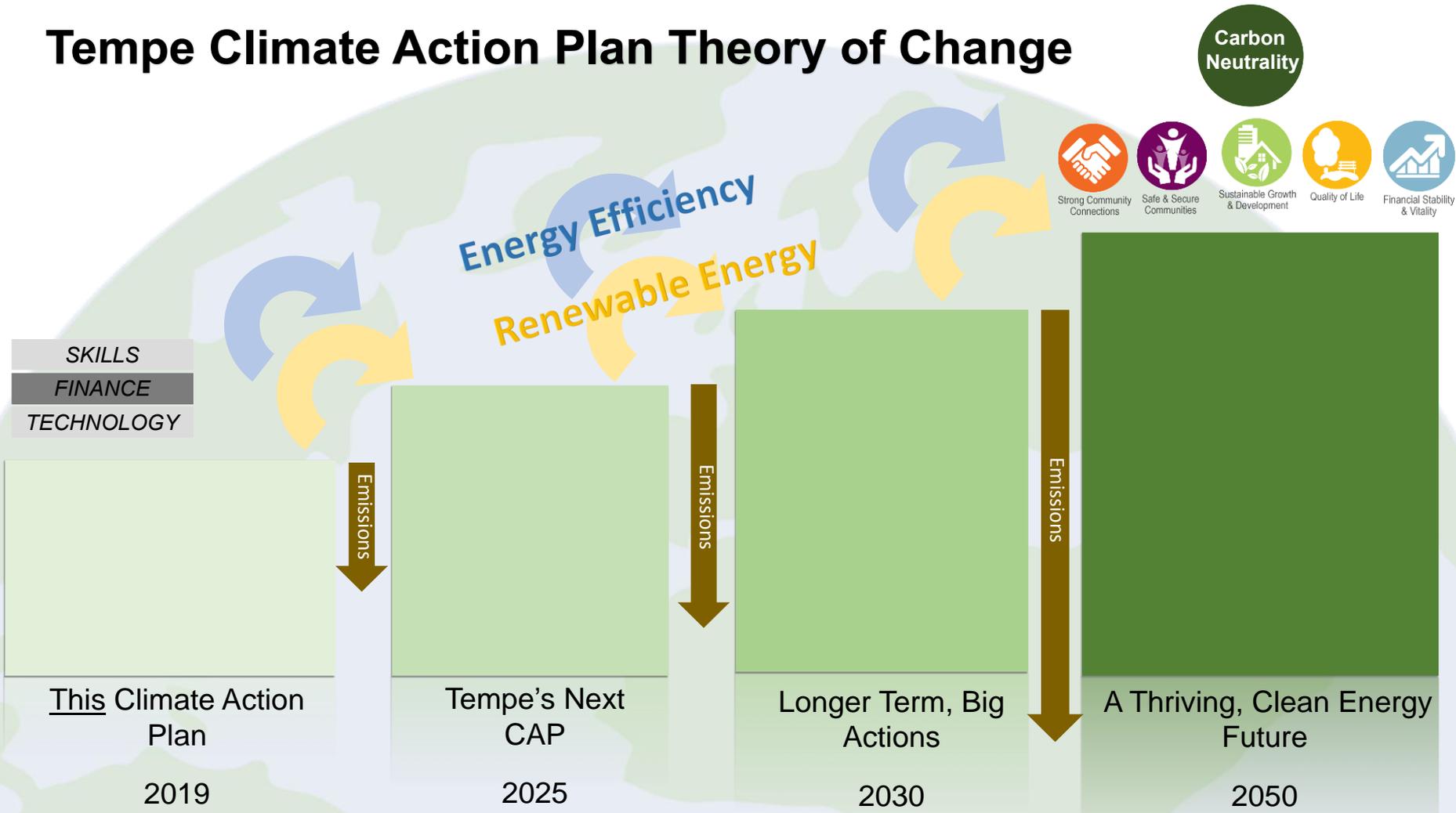
● Resilience

- Extreme heat
 - Emergency response
 - Building and landscape code
 - Urban forestry
- Drought
- Air Quality



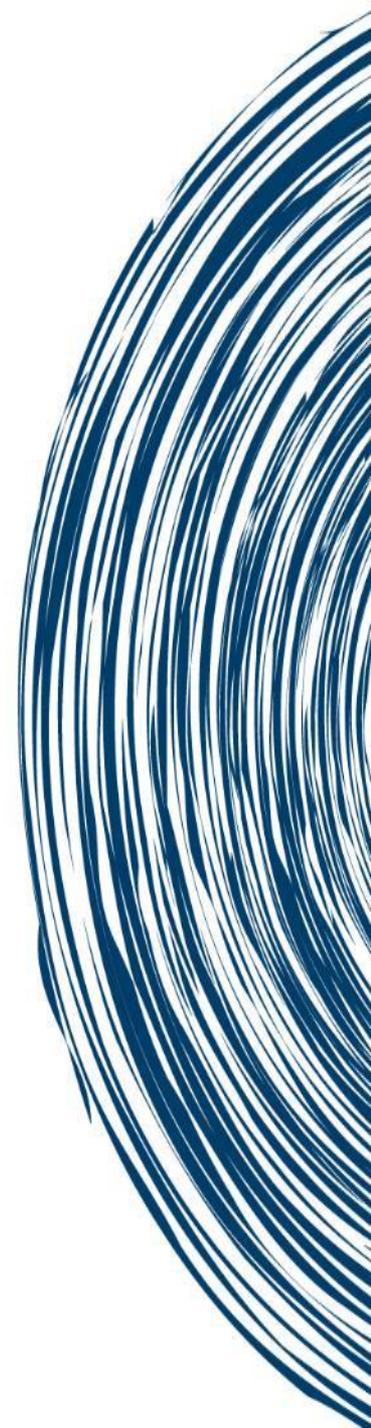


Tempe Climate Action Plan Theory of Change



Climate Action Plan Engagement

- Spring 2018: Interviews with city staff
- May 2018: Update to Sustainability Commission
- October 11: Expert forum on energy actions
- October 30: Public forum on transportation actions
- November 13: Joint meeting of sustainability and transportation commissions on transportation actions
Expert forum on transportation actions
- February 26: Public forum on energy and heat
- March 19: Public forum on Climate Action Plan
- Summer: Review of Climate Action Plan
- Fall: Potential Adoption



Stakeholder Forum on Community Energy

CRAFT 2050: Climate Resilience and Action For Tempe
 October 11, 2018

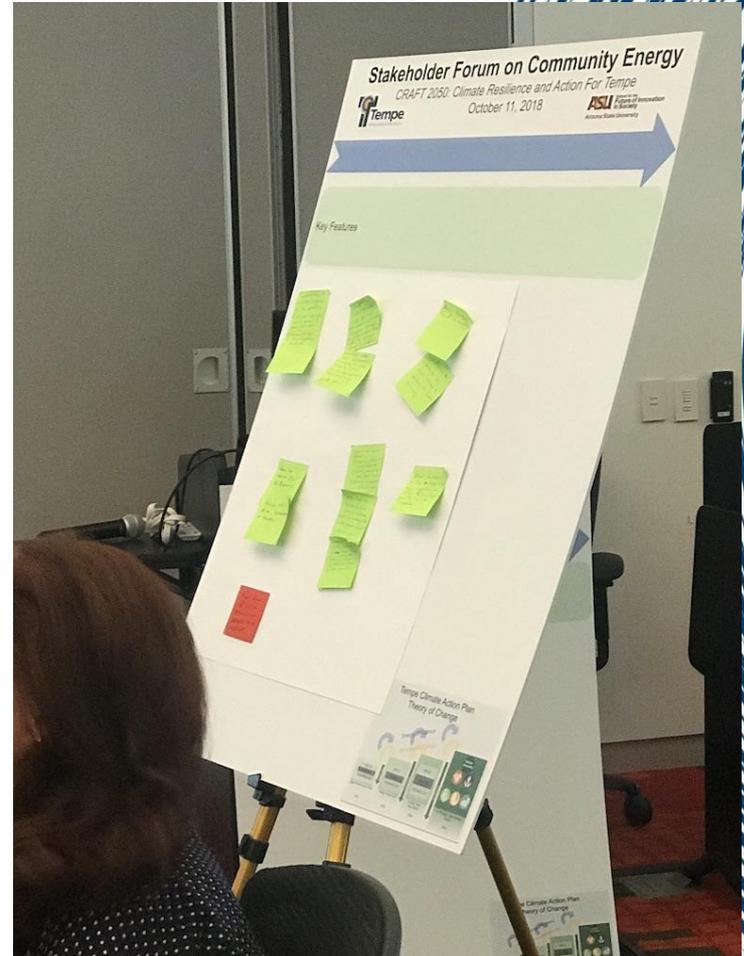
Tempe Making waves in the desert

ASU School for the Future of Innovation in Society
 Arizona State University

Centralized Sustainability Platform (CSP)

Key Features

- Rebates, incentive programs - all on one site - Co-hosted by Chamber & City of Tempe
- Tool to help biz understand what they qualify for & ROI
- Incentives from Chamber



Proposed Actions for Climate Action Plan

See and provide comment on actions came from previous expert engagements on the climate action plan:

1 Hire an Emergency Manager that works on the city's resilience to extreme heat.

2 Further invest in Urban Forestry Master Plan to provide more shade in parks and along streets.

3 Adopt Green Building Code with support for increasing shade and use of cool materials.

1 Create a revolving fund to support energy upgrades to businesses and schools in Tempe.

2 Pilot solar electric vehicle charging to store electricity during peak sunlight for use in homes.

3 Create a centralized sustainability platform to help businesses implement energy upgrades.

4 Create resilient energy hubs with renewable energy and energy storage.





Combatting Extreme Heat

- Use dots to provide input on what actions you would support Tempe in taking to combat extreme heat.

Combatting Extreme Heat
CRAFT 2050: Tempe's First Climate Action Plan

From the ideas and actions below, please place a dot on those you support or agree with:

A strategy to double the number of trees in Tempe over time is a good idea.

If the city gave me a tree (for free) to help shade my house, I would like one and I would be willing to give it water.

I think we should have a lot more fruit trees around the city.

I would consider volunteering for occasional tree planting projects in my local community.

I would consider donating to a citywide tree campaign in my city.

If there was a shaded pathway from my home to nearby shops, I would walk to those shops more than I do now.

In hot weather, I sometimes cross the street in order to walk in the shade.

I need more shade around the home/building I live in.

I support requiring developers to provide shade and use cool materials in new buildings.

Further Comments or Ideas

Research and report and public engagement by the Tempe Climate Action Plan was supported by funds from the ASU Center for Sustainable Solutions.



Improving Air Quality

- Two posters
- Use dots to provide input on how you are affected by air quality issues in Tempe and how you would like to see the city prioritize actions to address air quality.

Improving Air Quality

CRAFT 2050: Tempe's First Climate Action Plan

Are you concerned with Tempe's air quality?
Please place a dot on the choice you agree with:

Yes

No

From agree

What should the City of Tempe do to improve local air quality?
Please place a dot on the **TWO** choices you most support or agree with:

I may years

I sup vehic

I wou a hor

I sup vehic famil

Work with local utilities to increase the amount of clean, renewable energy available to Tempe residents.

Create programs that help Tempe residents purchase electric vehicles.

Create regulations that limit the use of diesel leaf blowers and lawn mowers.

Invest in low-emissions public transportation like electric buses, light rail and streetcar.

Make it safer and more convenient for walking and biking in Tempe.

Further Comments or Ideas



Tempe
Making progress in the desert



ASU Arizona State University
Support for the Future of Innovation in Society



Research and expert and public engagement for the Tempe Climate Action Plan was supported by funds from the Global Consortium for Sustainability Outcomes.



Tempe
Making progress in the desert



ASU Arizona State University
Support for the Future of Innovation in Society



Research and expert and public engagement for the Tempe Climate Action Plan was supported by funds from the Global Consortium for Sustainability Outcomes.

29



Clean Energy Upgrades

- Provide input on what actions you would support the city in pursuing to help upgrade homes and businesses with more energy efficient technologies.
- Provide input on the city's long-term goals

Clean Energy Upgrades

CRAFT 2050: Tempe's First Climate Action Plan

Energy Efficiency and Renewables
 From the ideas and actions below please place a dot on the ones you agree with or support the city in pursuing:

Offer free energy audits to homeowners to identify savings opportunities

Work with local utilities to offer special incentives to reduce energy use in homes

Offer low interest financing options to homeowners wanting to do energy efficiency upgrades

Offer upgrade assistance to low-income households with single-pane windows

Tempe's Long-Term Goals
 Tempe has the goal of having a carbon neutral city government by 2035. Given this current goal, please place a dot on the following statements you agree with or support:

I would like to see Tempe adopt a goal of 100% clean energy for all homes and businesses by 2060 (the same goal as the City of Phoenix).

I would like to see Tempe reduce its emissions by 80% of 2015 levels by 2050 (the same goal as the City of Flagstaff).

I would like to see Tempe adopt a goal of 100% clean energy for all homes and businesses by 2035.

Further Comments or Ideas



Tempe
Making waves on the desert



ASU Arizona State University
ASU is proud to be the partner in innovation in society



Research and report and public engagement for the Better Green Action Plan and opportunity. Link from the Global Consortium for Sustainability Solutions.

CRAFT 2050: Tempe's First Climate Action Plan

Extreme Heat

- 1 Hire an Emergency Manager that works on the city's resilience to extreme heat.
- 2 Further invest in Urban Forestry Master Plan to provide more shade in parks and along streets.
- 3 Adopt Green Building Code with support for increasing shade and use of cool materials.
- 4 Adopt Green Infrastructure and low-impact development standards.

Energy and Energy Efficiency

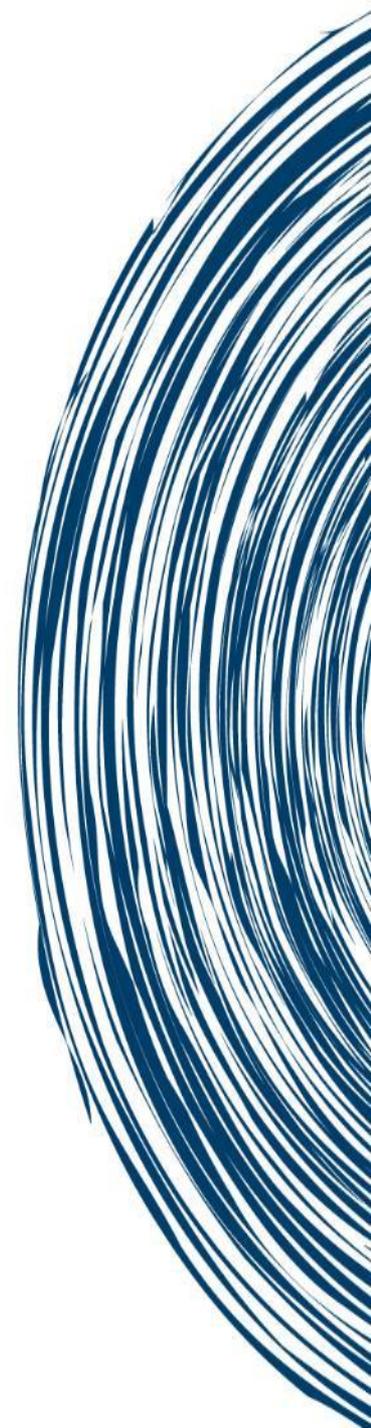
- 1 Create a revolving fund to support energy upgrades to businesses and schools in Tempe.
- 2 Pilot solar electric vehicle charging to capture and store energy during peak sunlight hours.
- 3 Create a centralized sustainability platform to help businesses implement energy upgrades.
- 4 Create resilient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

Transportation

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

Climate Action Plan Engagement

- Spring 2018: Interviews with city staff
- May 2018: Update to Sustainability Commission
- October 11: Expert forum on energy actions
- October 30: Public forum on transportation actions
- November 13: Joint meeting of sustainability and transportation commissions on transportation actions
Expert forum on transportation actions
- February 26: Public forum on energy and heat
- March 19: Public forum on Climate Action Plan
- Summer: Review of Climate Action Plan
- Fall: Potential Adoption



Create resilient energy hubs with renewable energy and energy storage.

DESCRIPTION

What if all critical infrastructure in Tempe in the case of emergency had clean and reliable energy? One potential strategy to adding more solar energy to city buildings is to add solar panels and battery storage to buildings that are areas of first refuge or house first responders. A major barrier to adding these systems to fire stations, community centers, schools, and churches are the way rates and policies are currently designed. There is an opportunity to advocate to the Arizona Corporation Commission and the SRP Board to create a special rate and necessary exemption for critical infrastructure. If these barriers were reduced Tempe and other cities would be able to finance and build clean energy capacity where it matters most.

KEY FEATURES

- Partner with utilities to reduce barriers to adding solar and battery storage to fire stations, community centers, schools, and churches.
- Ensures that first responders and emergency evacuees have resilient energy sources if an event that occurs that comprises the electrical grid.
- Supports investment in new solar and battery technology.
- Aligns with Council adopted goal of becoming carbon neutral in municipal operations by 2050.

CRAFT 2050: Climate Resilience and Action for Tempe

Tempe's first Climate Action Plan

How does this action support City of Tempe's Strategic Priorities?



Sustainable Growth & Development

Investing in solar and battery storage in city buildings supports our 100% renewable energy strategy.



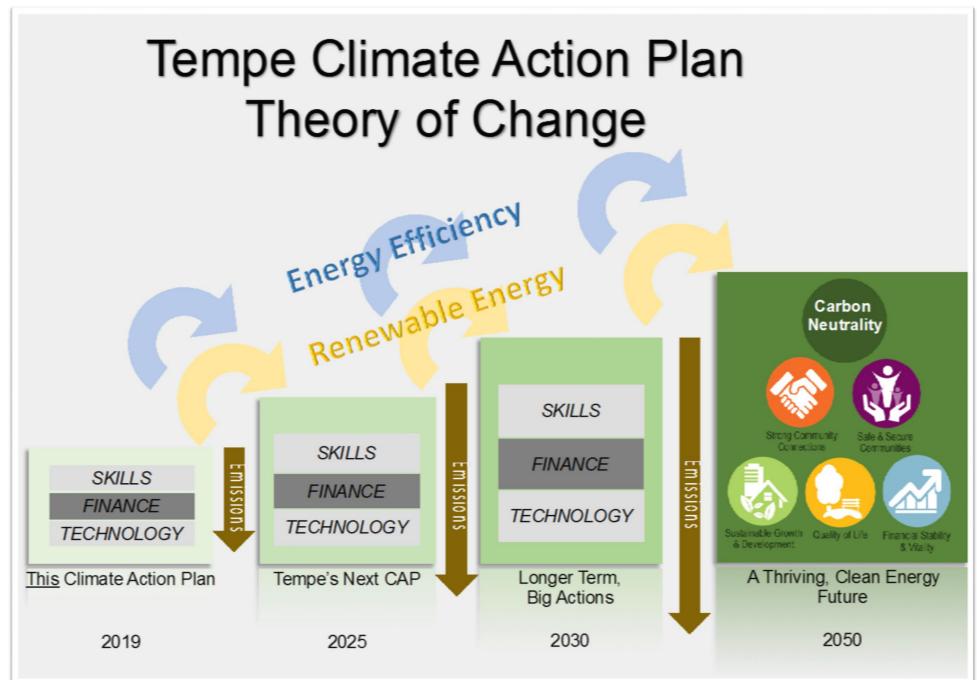
Safe & Secure Communities

A stable electric grid is essential to having a safe and secure community. Solutions like this that are looking to help ensure grid stability are critical.



Quality of Life

Resilient energy for fire stations and areas of first refuge ensures Tempe residents can keep cool and receive services during emergency events.



Create a centralized sustainability platform to help businesses implement energy upgrades.

DESCRIPTION

The city, the Tempe Chamber of Commerce (CoC), Local First (LF), Downtown Tempe Authority (DTA), the utilities (SRP & APS) and other interested parties could create a website providing information to businesses on energy efficiency programs. These could also include the Sustainability Pledge (CoC), the GreenBiz Certification (LF), a tool to calculate which programs a business qualifies for and the amount of expected savings, helping businesses understand their energy bill and success stories. This website could be co-hosted by the city and the CoC. To kick-off the website SRP and APS can host an energy efficiency challenge.

KEY FEATURES

- Website with energy efficiency programs and more
- SRP: helping people understand their energy bill
- CoC: Sustainability pledge
- LF: GreenBiz Certification
- “Savings-Calculator”
- Share success stories
- SRP and APS to host energy efficiency challenge for kick-off
- Reduce emissions from commercial buildings
- Alignment with Tempe’s strategic priorities

CRAFT 2050: Climate Resilience and Action for Tempe

Tempe’s first Climate Action Plan

How does this action support City of Tempe’s Strategic Priorities?



Financial Stability & Vitality

Sustainable business practices are sound business practices. By implementing energy upgrades and reducing resource use businesses can save money.



Sustainable Growth & Development

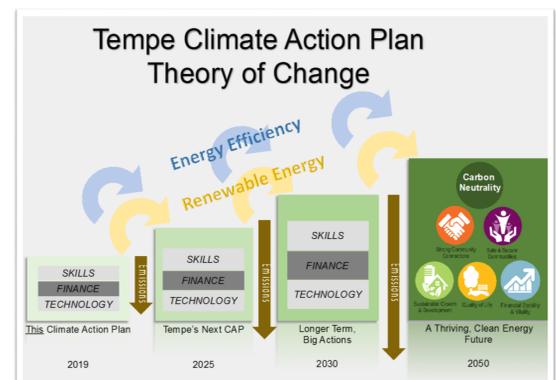
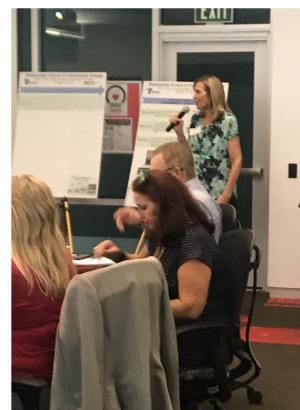
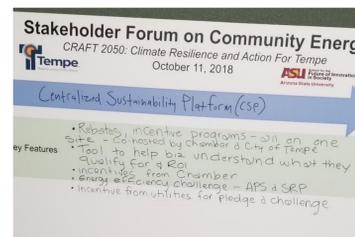
Sustainable growth for Tempe requires businesses to be sustainable. This platform would guide businesses in adopting sustainable practices.



Quality of Life

By helping businesses use less energy and water, and promote electric vehicle adoption, City of Tempe is helping ensure that it is a livable city in the future.

Expert Forum on Energy October 11, 2018



Pilot solar electric vehicle charging to store electricity during peak sunlight for use in homes.

DESCRIPTION

A major barrier to putting more solar energy on the grid is that most electricity from solar is generated during the day but most electricity is consumed in the late afternoon and evening. If solar power could charge electric vehicles (EVs) during the day, and EVs could charge homes at night, this would help address the mismatch between electricity generation and use. Tempe could be part of this solution. As part of its first climate action plan, Tempe could launch a flagship project for electric vehicle (EV) charging in the form of a public-private partnership (PPP) between the city, businesses and the utilities. EV chargers powered by solar energy could be available in prominent parking lots etc., for example at city facilities or local office complexes. The PPP could create a working group to explore how the solar EV charging could be used to power homes and to create a strategy to scale the pilot across the city.

KEY FEATURES

- Enable EV charging in Tempe to attract more EVs.
- Test impact of scaled EV charging on mid-day electricity demand
- Working group to explore power homes with EV batteries
- Shifting emissions out of city center
- City and partners as global frontrunners in linking EVs and solar power generation.
- City could provide support programs for low-income residents.
- EV charging could be put in the city code.

How does this action support City of Tempe's Strategic Priorities?



Sustainable Growth & Development

Sustainable growth should improve air quality. This means fewer cars and fewer internal combustion engines to move more people.



Quality of Life

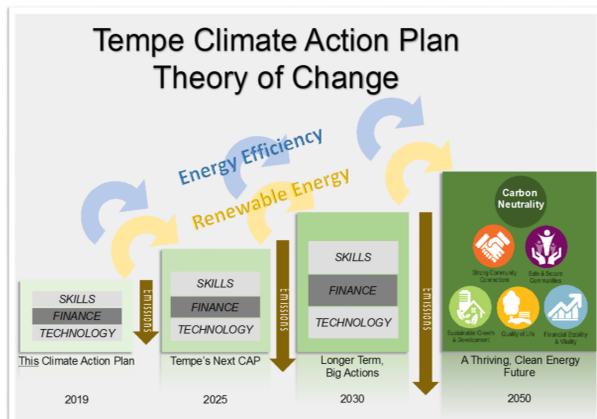
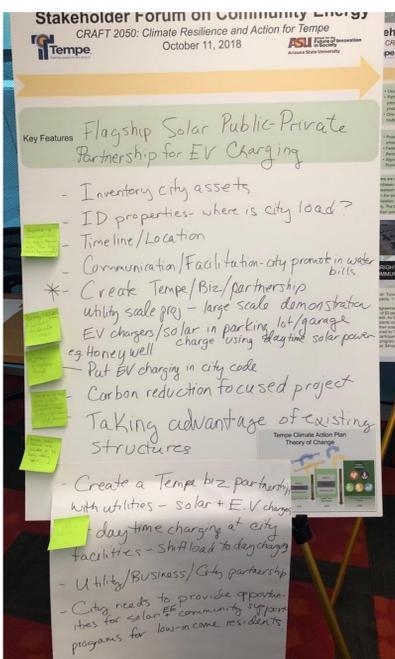
By helping businesses use less energy and water, and promote electric vehicle adoption, City of Tempe is helping ensure that it is a livable city in the future.



Safe & Secure Communities

A stable electric grid is essential to having a safe and secure community. Solutions like this that are looking to help ensure grid stability are critical.

Expert Forum on Energy October 11, 2018



CRAFT 2050: Climate Resilience and Action for Tempe *Tempe's first Climate Action Plan*

Create a revolving fund to support energy upgrades to businesses and schools in Tempe.

DESCRIPTION

An energy upgrades revolving fund begins with an initial pot of money which is used to give out loans for energy efficiency upgrades. Tempe could found a 501c3 and use it to support businesses and schools in upgrading their infrastructure. The city may be able to take advantage of the Community Reinvestment Act to create the fund. The could initially be made available to early adopters, including mom & pop stores and schools interested in saving money by reducing their energy use. If the revolving fund runs successfully, fund applications can be extended to residential customers

KEY FEATURES

- Funding mechanism (fee, business partners, donations, banks, grants)
- Funds adoption of energy efficient technologies like LED lights, and more efficient freezers, and HVACs.
- Reduces carbon emissions from building operations.
- Outreach via faith-based institutions, news channels, radio etc.
- Makes energy efficiency upgrades affordable to small businesses and schools.
- Once established the fund is self-sustaining.

CRAFT 2050: Climate Resilience and Action for Tempe *Tempe's first Climate Action Plan*

How does this action support City of Tempe's Strategic Priorities?



Sustainable Growth & Development

This fund could support schools, businesses and residents in adopting energy efficiency upgrades so Tempe can grow while being resource conscious.



Financial Stability & Vitality

Supporting businesses and residents in upgrading their infrastructure will save them money which can go back into Tempe's economy.



Safe & Secure Communities

Having access to affordable energy is an important part of security. This fund could help schools and residents by reducing energy costs.

Expert Forum on Energy October 11, 2018

