# SNEAPA 2021

## Meeting Local Climate Goals —Tools and Resources for Local Planners

# Welcome!

## Introduction and Overview

- Fiona Coughlan, AICP, Community Planner, Barrett Planning Group LLC
- Jim Riordan, AICP, LEED AP, Senior Planner, Weston and Sampson
- Matt Bucchin, AICP, LEED GA, Regional Practice Leader, Halff Associates, INC.
- Karla Ebenbach AICP, LEED GA, Principal, Ebenbach Consulting LLC

## Presentation

- Explanation of APA SCD and Climate Champions Program (Fiona)
- Overview of Sustainability & Resilience CM Credit (Karla)
- Overview of Climate Change PAS Report (Matt)
- Overview of Climate Change Policy Guide (Fiona)
- Overview of the Climate Ordinance Summary (Jim)
- Overview of Climate Data Guide (Fiona)
- Overview of Climate Development Review (Jim)

## Q & A Session and Conclusion

- Discussion with Panelists
- Resources and More Information

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# APA SCD and the Climate Champions Program


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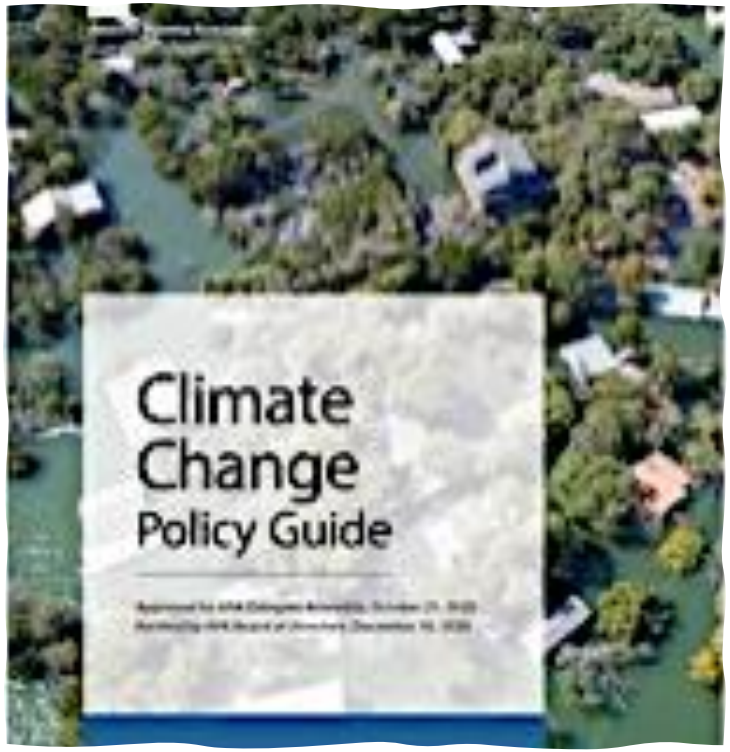
# APA-SCD

- The APA Sustainable Communities Division supports planners who are **committed to planning for sustainable communities** by integrating all aspects of sustainability and resiliency into our work. We do this through combined **economic, social, and ecological factors,** that shape our communities.


# Mission and Vision Statement:

- **VISION** - Empowered planners creating sustainable, resilient, and equitable communities.

- **MISSION** - The Sustainable Communities Division provides resources, information, and best practices to support planners in creating sustainable, resilient, and equitable communities. Through its forums for dialogue, collaboration, advocacy and professional development, the SCD engages planners in innovatively addressing the evolving ecological, social, and economic factors that shape our communities.

# SCD BY THE NUMBERS

**4,107**
DIVISION MEMBERS

**18**
DIVISION SPONSORS IN 2020

**2**
STUDENT LEADERS

**7,504**
E-BULLETIN RECIPIENTS

**7**
EDUCATIONAL WEBINARS

**9**
CLIMATE CHAMPIONS

**1,848**
STUDENT MEMBERS

**6.9K** followers

**2.2K** followers

**1.4K** follows

## WHAT WE HAVE BEEN UP TO

- Completed our Strategic Plan and Action Plan, the Climate Change Policy Guide, and finalized our Sustainability PAS Report
- Providing leadership on APA's Smart Cities, *Planning Home,* Awards for Excellence in Sustainability, and other Division initiatives
- Building relationships with our allied professionals and other organizations (e.g., EcoDistricts, USGBC, etc.) to create value and content for our members
- Offering educational webinars/webcasts, networking events/socials, scholarships, and opportunities for CM credits including the *new sustainability cm credit!*
- Preparing events and sessions for the 2022 NPC
- Expanding volunteer efforts with our student/non-student members
- Recruited a new Student Co-Chair and Student/Emerging Professional Subcommittee!
- New mandatory CM credit in Sustainability & Resilience, and the Sustainability & Resilience Series



# Division Initiatives and Projects

- Climate Champions
- Awards for Excellence in Sustainability
- Webinar Series
- Speaker Series
- Smart Cities
- Sustainability Framework
- NPC Events
- E-Bulletin


# Climate Champions Program

## ROLES

- Extend outreach and the message on climate action by engaging states and fostering regional collaboration
- Engage with state APA chapters to foster increased collaboration
- Empower to create sustainable, resilient, and equitable communities
- Part of a national sustainability network
- Local and regional resource for planners and allied professionals
- Facilitating cross-regional collaboration
- Apply online through APA SCD website: apascd.com

## WHAT WE HAVE BEEN UP TO

- Launched in 2014 by the APA SCD
- 2 MA Champions
- 1 RI Champion
- No Champions for CT – YET!
- Regional Roundtable Discussion "*What's All This I Hear About Climate Change*?"
- Presented to APA-MA Board
- Speaker Series with APA National and APA SCD featuring various Champions
- Social media updates
- Advocacy at APA Policy Conference
- Representation at NPC
- Working groups/subcommittees for initiatives including entrepreneurship in planning

# Sustainability & Resilience CM Credit

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# AICP Sustainability and Resiliency CM Credit

- Approved Sustainability and Resilience credit by AICP Commission in 2019
- Mandatory 1.0 credit starting January 2022
- Objective: provide framework to empower planners facing urgent challenges, connect with resources, tools, and best practices

- New APA Sustainability and Resilience Series
- Divisions created inter-disciplinary virtual learning series on for CM live credit AND on demand

- Coursework must instruct within the sustainability OR resilience learning areas
- Must build knowledge on one of twelve designated sustainability and resilience topics, and must incorporate equity considerations in the instruction

# Climate Change PAS Report

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# Climate Change PAS Report

- Draft of the Planner Advisory Service (PAS) Report turned in for external review in September
- Comments turned around and final publication scheduled for by the end of 2021/early 2022
- For planners to understand climate issues and best practices as it relates to climate readiness planning for resilient communities
- Update to the 2010 PAS Report related to Climate Change

# CLIMATE: WHAT WE KNOW

Global climate change is getting worse at an increasing rate

Projected impacts of climate change are intensifying and not equal

Global responses to address climate change has not been enough

The United States will need to take a leadership role in solving climate change

Climate solutions across all sectors are needed

Planners need to take the leadership role in addressing the climate crisis

*Moving Target? 50% reduction in GHG emissions by 2030; net zero by 2050*

# CLIMATE CHANGE IMPACTS

| ENERGY | TRANSPORTATION | LAND USE | INFRASTRUCTURE | BUILDINGS | MATERIALS | NATURAL SYSTEMS | PUBLIC HEALTH |
|---|---|---|---|---|---|---|---|
| ▪ Changing energy supply portfolio<br>▪ Changes in seasonal energy demands<br>▪ Decreased grid reliability<br>▪ Extreme weather disruptions<br>▪ Changes in water availability | ▪ Roadway failure<br>▪ Decreased system reliability<br>▪ Transition to Electrification<br>▪ Changes in mode choice<br>▪ Inadequate design for future climate conditions<br>▪ Increasingly vulnerable fixed facilities<br>▪ Extreme weather disruptions | ▪ Decreased agricultural productivity<br>▪ Increased droughts<br>▪ Wildland urban interface issues<br>▪ Mass migration<br>▪ Increased economic activity disruptions | ▪ Coastal erosion<br>▪ Storm surge<br>▪ Decreased water supply<br>▪ Increased water demand<br>▪ Reduced infrastructure reliability<br>▪ Infrastructure failure<br>▪ Increased impacts from extreme weather events | ▪ Increased urban heat<br>▪ Urban flooding<br>▪ Extreme storm events<br>▪ Inadequate building envelopes<br>▪ Increasing risk<br>▪ Increasing insurance costs | ▪ Increasing quantities of waste from disasters<br>▪ Changing material requirements<br>▪ Changing material processing requirements<br>▪ Increasing source/waste material transportation costs | ▪ Decreased snowpack<br>▪ Earlier Snowmelt<br>▪ Increased wildfires<br>▪ Sea level rise<br>▪ Reduced biodiversity<br>▪ Species migration and extinction | ▪ Inequitable health disparities<br>▪ Increased vector borne diseases<br>▪ Increased water-related illnesses<br>▪ Increased food insecurity<br>▪ Decreased air quality |

Source: Authors

# CLIMATE ACTION

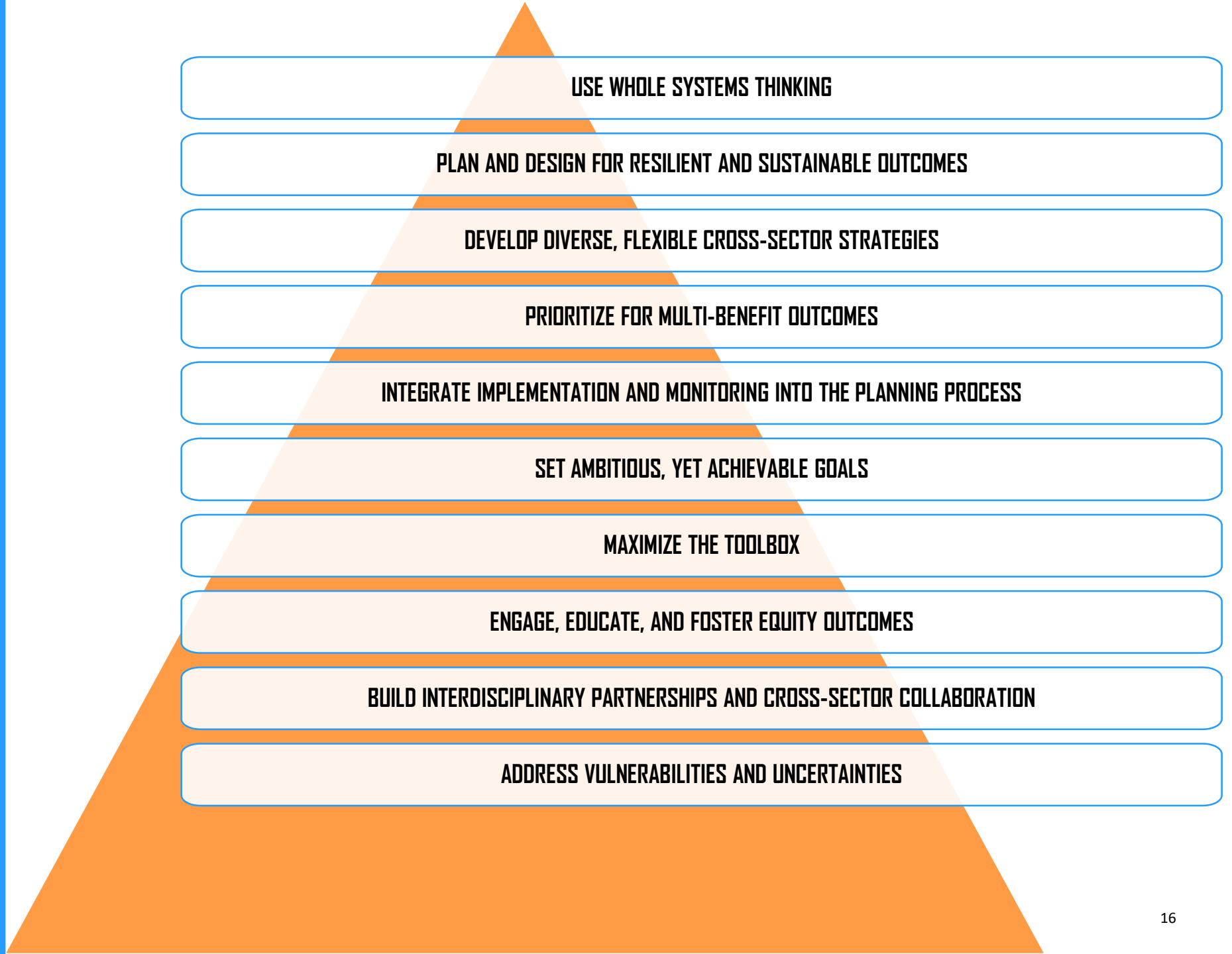
## MITIGATION

Climate mitigation is a human intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC 2014). Mitigation of climate change therefore refers to actions that seek to reduce or store greenhouse gas emissions and to limit future warming. Investing in zero- or low-emission energy sources such as wind turbines is an example of climate change mitigation.

## ADAPTATION

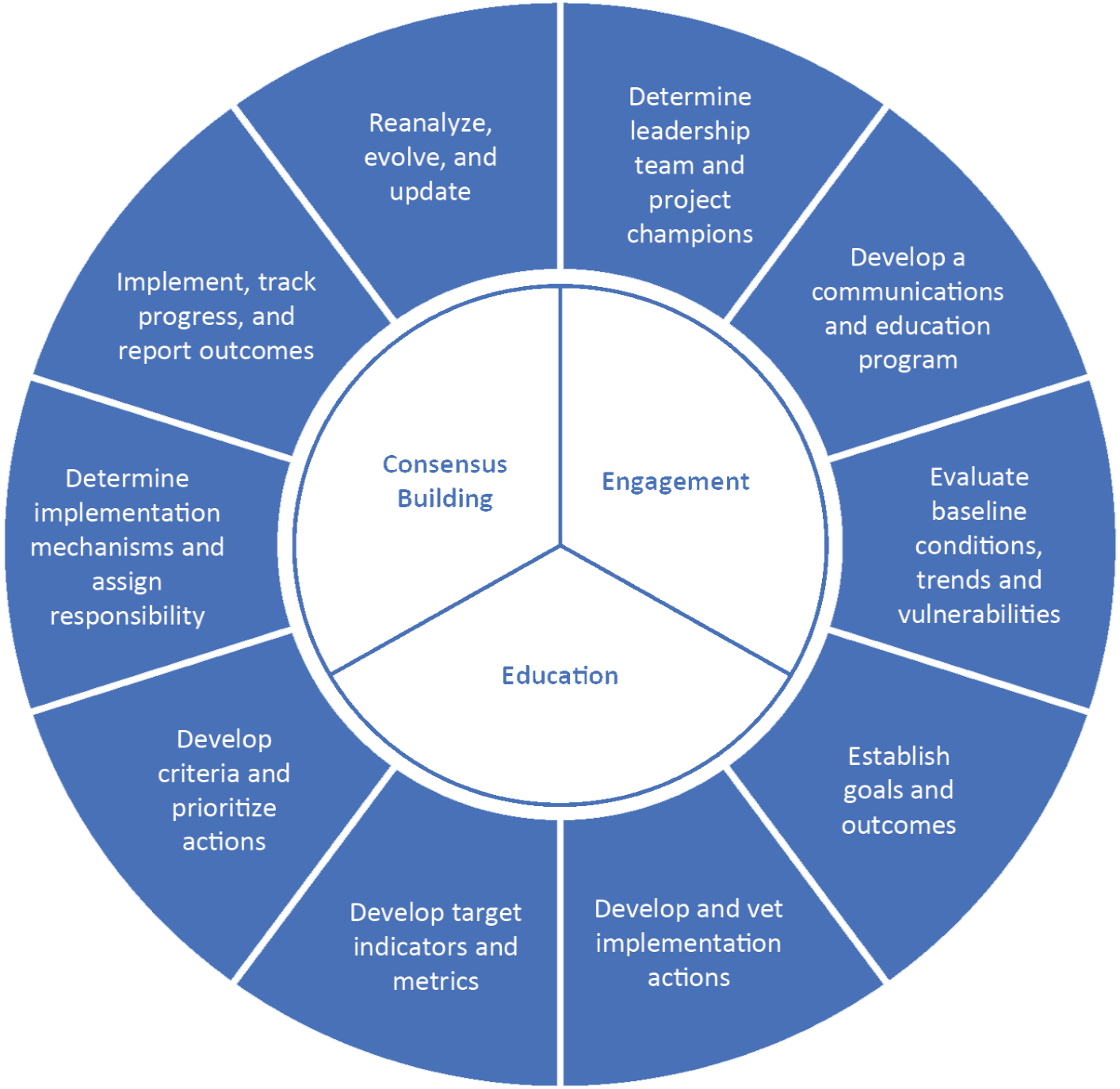
Climate adaptation is the process of adjustment to actual or expected climate and its effects. It includes reducing the vulnerability of people, places, and ecosystems to the impacts of climate change. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

# Principles For Climate Action



# Climate Planning

1. Engagement
2. Education
3. Consensus Building
4. + 10 Steps



# Climate Change Policy Guide

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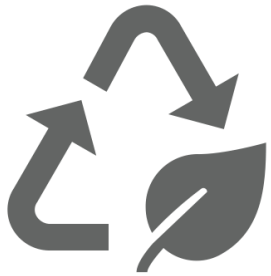
POLICY GUIDE 6 PRINCIPLES

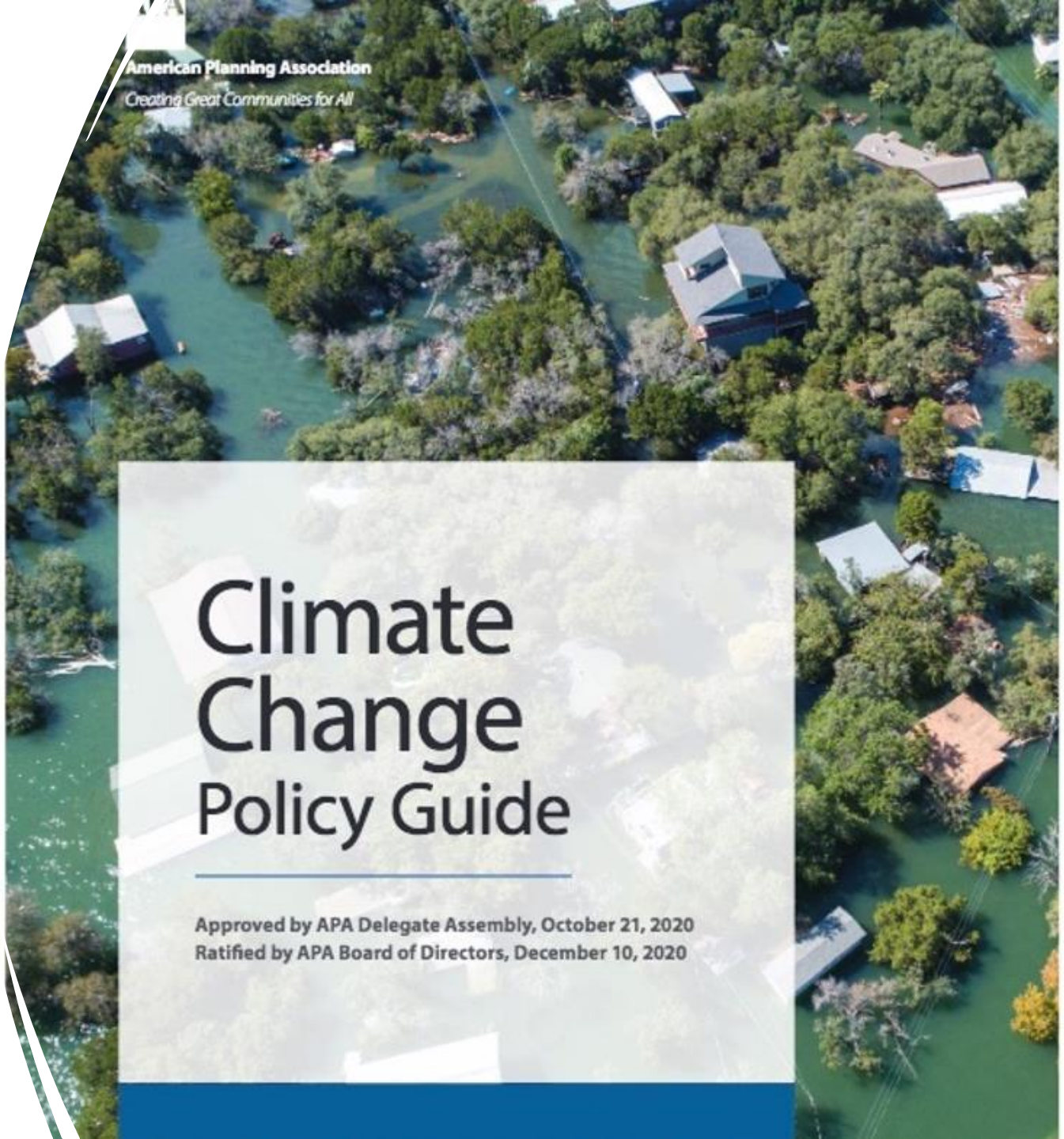
- LIVABLE BUILT ENVIRONMENT
- HARMONY WITH NATURE
- RESILIENT ECONOMY
- INTERWOVEN EQUITY
- HEALTHY COMMUNITIES
- RESPONSIBLE REGIONALISM



- Help formulate position statements, legislative recommendations, and policy-based actions
- Recommend funding at federal and state levels
- At local and regional levels, policies should guide creation of comprehensive plans, climate action plans, long-range planning docs, projects, regulations, etc.
- Should be used to help guide annual budgets and capital improvements
- Focus: climate change as an overarching issue

# APA Climate Change Policy Guide

- Replaces the 2008 Policy Guide on Planning and Climate
- Represents APA's official position on critical planning issues
- Separate category focused on needed federal and state policies



- 7 General Policy Statements (with explanation)
- 51 Specific Policy Statements (with explanation)
- 253 supporting strategies to achieve the intended policy outcome (with explanation)

## EX.

HWN C.4: Promote Solid Waste Reduction

- Support life-cycle materials management
- Promote waste prevention
- Promote reuse of materials
- Promote the expansion of recycling
- Promote the expansion of composting and waste-to-energy generation

...ment encompasses all living and nonliving things ...ly on earth. Ecosystems are natural communities ...interaction of plants, animals, and microbes (living), with ...soil (nonliving). These interactions create many benefits to ...environment such as nutrient cycling, carbon sequestration ...rage, erosion protection, and pollination, to name a few. These ...ts are referred to as ecosystem services.

...mate change is having significant impacts on these natural systems and ecosystem services. Rising sea levels alter the salinity of ...w-lying coastal marshes, increased droughts and wildfires are altering ...e habitat of many plant and animal species, and rising temperatures are altering climate zones and expanding the range of certain species and reducing the range of others. These changes lead to the displacement of humans, plants, and animals and increase the prevalence of invasive species and pests that can have devastating impacts on natural ecosystems. Changes to the natural environment are also increasing the transmission of vector-borne diseases and impacting the health and wellness of both human and wildlife populations as they struggle to adapt.

Protection and management of natural resources, ecosystems, and ecosystem services has become a critical tool in combating climate change and protecting and developing healthy and sustainable environments for all species. The earth's natural ecosystems not only sequester carbon, they support the hydrological cycle and reduce flooding, regulate temperature, and support every living thing, including plants, bacteria, animals, and humans—collectively referred to as "biodiversity." Adapting natural systems to help respond to future climate change impacts will require renewed focus on agricultural, natural resources, and ecosystem management techniques. Understanding and incorporating biodiversity and ecosystem services into all aspects of planning is essential to ensure that plans, polices, and guidelines that support conservation and development practices are in harmony with the natural environment. An interdisciplinary approach is necessary due to the scale and complexity of the issues. Planners will need to consult with experts and practitioners in ecosystem management, agriculture, forestry, and public health in order to develop effective plans to guide development that is in harmony with nature and that will help combat climate change.

### GENERAL POLICY C—HARMONY WITH NATURE

The American Planning Association and its Chapters and Divisions support planning policies and strategies that integrate natural systems thinking into all planning decisions. We strive to ensure that the contributions of natural resources to human well-being are explicitly recognized and valued and that maintaining their health is a primary means to help mitigate and adapt to a changing climate.

### Harmony with Nature Policy C.1.
Enact policies to reduce GHG emissions

GHGs from human activities have a significant impact on the natural environment. From resource extraction and processing to energy generation, transmission, and consumption, the way we plan, develop, and operate the built environment has a direct impact on the amount of greenhouse gas we emit. The current rate of $CO_2$ emissions in the atmosphere is greater than the rate of absorption by the natural environment, creating an imbalance in the carbon cycle which is contributing to anthropogenic climate change and negative impacts to land, air, water, and all inhabitants. This rapid environmental degradation is the result of unsustainable consumption and production patterns which are compounding the impacts of climate change. The following strategies should be employed to achieve this policy outcome:

**C.1.1 Develop GHG inventories, analysis methods, and action plans.** All levels of government should adopt goals and targets for reducing GHG emissions and seek to identify and quantify those emissions. Where emissions cannot be precisely quantified, plans should discuss the impacts of recommended measures for reducing GHG emissions on a qualitative basis. Climate planning elements should be incorporated into comprehensive plans, public investments, regulations and incentives, and environmental and development review processes.

**C.1.2 Support energy and water conservation.** Support energy and water conservation in all planning and development processes to reduce indirect habitat loss from resource extraction and pollution to land, water, and air resources. Promote district and decentralized energy systems to improve energy efficiency and resiliency and reduce energy loss during transmission. These efforts will protect existing natural resources to help rebalance the carbon cycle, preserve water resources, and reduce GHG emissions.

**C.1.3 Promote a circular economy.** Incorporate life-cycle cost analyses into planning processes and look beyond first costs. Design all developments and infrastructure for disassembly and reuse or recycling (cradle to cradle).

**C.1.4 Eliminate waste.** Create regulations that require developers to mimic natural systems in the built environment, to the extent practical, by designing for reuse through regenerative design processes, using waste as a resource and achieving a climate positive/carbon negative result.

# Advancing Climate Policy



## Goals and Guiding Principles

Goals and guiding principles can also be an important component of decision-making, particularly as part of post-adoption implementation. As set out below, there are six goals and associated guiding principles which frame recommendations identified in Chapter 5, *Future Directions*.

### GOAL 1 – GROWTH & CAPACITY

Accommodate anticipated community growth through smart growth principles and strategic investments in utilities while protecting the natural resources and small-town character of Boerne.

#### Guiding Principles

- Promote growth that is balanced and diversified to create a sustainable and resilient economy.
- Consider the fiscal and social implications of annexation (or non-annexation) to understand its impacts on City capital investments, staffing, operations, maintenance, and debt.
- Ensure that there is well-planned and fiscally sustainable public utility infrastructure (e.g., drainage, water, and wastewater) to support community growth objectives.
- Proactively plan for the upgrade or expansion of infrastructure to create opportunities for growth in areas that have the potential for infill, revitalization, or redevelopment.
- Protect integrity of, and public access to, Boerne City Lake; Cibolo, Menger, and Currey Creeks; and all public parks and greenspaces.

### GOAL 2 – LAND USE & DEVELOPMENT

Diversify housing and employment opportunities through a focus on the character and quality of development and redevelopment around Boerne.

#### Guiding Principles

- Guide the types, patterns, and designs of different land uses using the Future Land Use Plan, zoning map, and associated development regulations.
- Promote changes in the built environment which embody real placemaking reflective of Boerne and the Hill Country character.
- Evaluate modifications to development regulations to create environmentally-friendly and high-quality spaces that reflect Boerne's community pride, history, and Hill Country character.
- Promote public and/or private investment in downtown Boerne that maintains or creates an urban, walkable, mixed-use environment in a manner that enhances and grows this unique sense of place.
- Encourage new development and redevelopment where adequate public services and utilities are already in place and have adequate capacity (infill properties).
- Foster the development of new neighborhoods comprised of diverse and quality housing options (i.e., a range of price, size, and design preferences) to meet the needs of a growing workforce and multigenerational life-cycle community.

### GOAL 3 – MOBILITY

Proactively plan for a multimodal transportation system to reduce congestion, accommodate anticipated travel demand, and provide quality of life amenities.

#### Guiding Principles

- Create a mobility network of interconnected activity centers, corridors, and neighborhoods through a well-connected street layout that provides multiple route options to external destinations. This includes protection and development of future rights-of-way designated on the City's Thoroughfare Plan.
- Consider adoption of "Complete Streets" principles, meaning new street and thoroughfare development or redevelopment provides for pedestrian, bicycle, and vehicular options for all users.
- Reduce truck traffic through downtown and encourage alternative routes outside of established neighborhoods.
- Develop and utilize street cross-sections using context sensitive design reflective of the character of the adjacent land uses.
- Consider changing needs for on- and off-street parking requirements in context of fiscal and economic sustainability.





### GOAL 4 – COMMUNITY FACILITIES & SERVICES

Provide high-quality facilities and services which create a healthy, safe, and well-educated community and include the residents in decision-making processes.

#### Guiding Principles

- Continue to maintain and improve the City's facilities as appropriate.
- Consider locating new publicly-accessible facilities in areas that contribute to Boerne's character and sense of community. This should include giving new community facilities accessible and prominent sites.
- Continue proactive and effective public safety services to ensure the public health, safety, and welfare.
- Consider increased collaboration with BISD as a means to support mutually beneficial programs offered by each entity and locating new schools as the center of neighborhoods within safe and easy walking distance from the areas they are intended to serve.
- Consider public facilities as economic development investments for the future. New public facilities should set the bar for what quality, durable development should look like within the City and should include an evaluation of both first and long-term costs to the City.



### GOAL 5 – ECONOMIC DEVELOPMENT

Foster a thriving and diverse economy through business attraction, retention, expansion, employment diversification and attraction of higher paying jobs, and destination amenities which maintain the overall financial viability of the City.

#### Guiding Principles

- Encourage commercial redevelopment opportunities consistent with Land Use and Community Livability policies.
- Continue to promote Boerne as an excellent and desirable place to locate a business.
- Continue to support existing business development and expansion opportunities and initiatives.
- Continue to promote economic development opportunities both within downtown and along the City's arterial corridors and activity centers. This includes strengthening and diversifying downtown's economic base on equal footing as efforts along the City's arterial corridors.
- Ensure that the City is a well-governed, transparent, and ethical organization that provides excellent customer service.

### GOAL 6 – COMMUNITY LIVABILITY

Maintain Boerne's unique character through celebration of Boerne's culture, placemaking initiatives, vibrant community interaction, and a diversified event calendar.

#### Guiding Principles

- Continue to prioritize revitalization and enhancement of downtown to create a historical, cultural, and governmental heart of Boerne.
- Protect and/or enhance areas and buildings of historic value in accordance with historic preservation guidelines and appropriate development standards.
- Continue to promote multigenerational events which encourage social interaction and cohesion.
- Encourage and consider incentives for vertical development in the downtown comprised of retail, restaurants, and other commercial activity.
- Encourage and consider incentives for new development and redevelopment that includes a mix of uses and live, work, play environment.
- Consider changing needs for on- and off-street parking requirements in context of fiscal and economic sustainability.
- Prioritize the development of sustainable recreational facilities to meet the needs of all users.

# Climate Ordinance Summary

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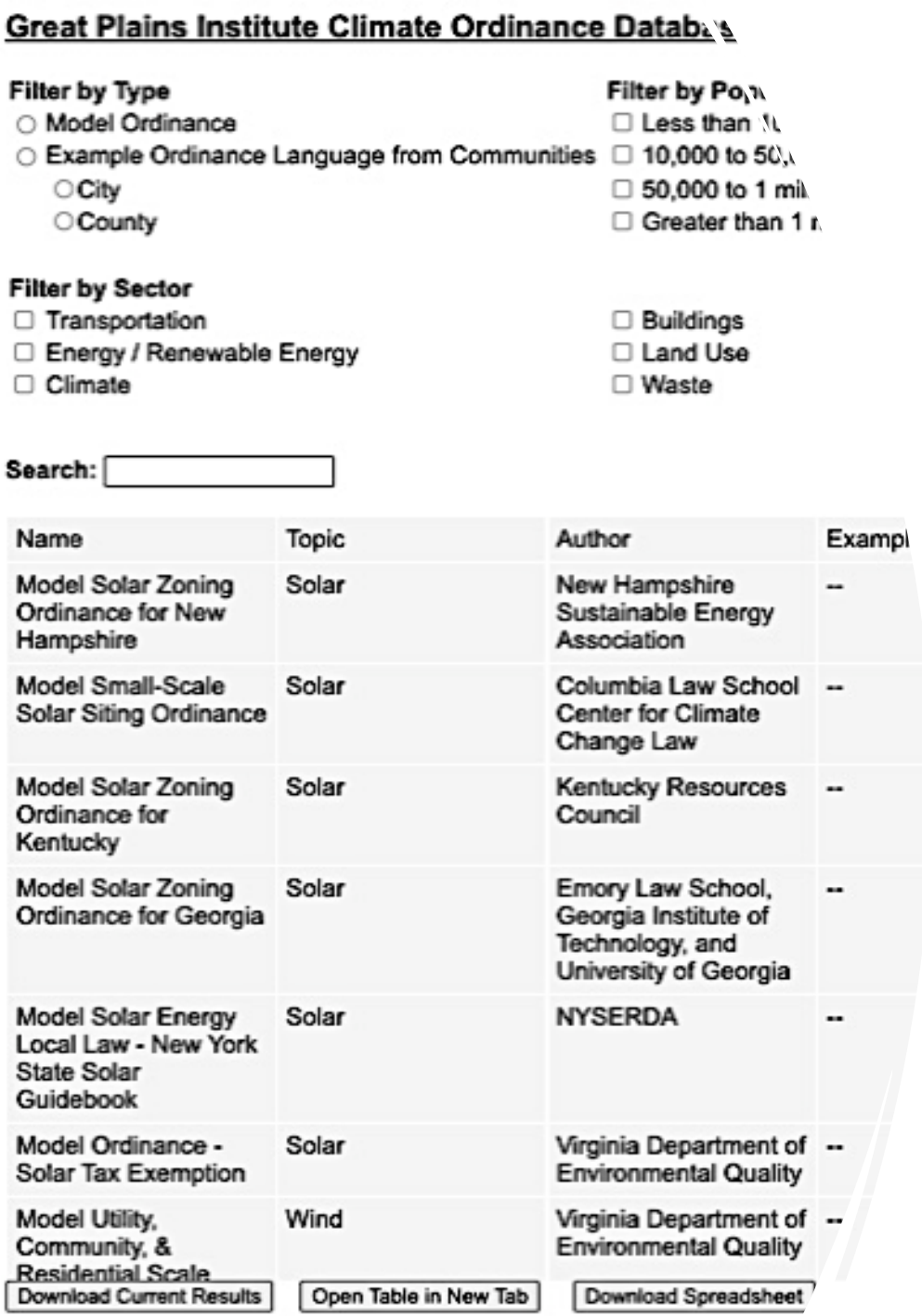


# Climate Ordinance Summary

- Climate ordinance database using a searchable web tool developed by the Great Plains Institute (GPI), APA SCD, and APA ENRE
- Examples of adopted ordinance language and model ordinances from cities, states, and national legislation
- Result of extensive national survey for planners on what tools needed to advance climate and GHG reduction goals
  - The greatest community need was for examples of climate-related ordinances and ordinances that integrate climate
- Topics include Building Benchmarking, Energy Efficiency, Development Review, Electric Vehicles, Emissions, Solar, Wind, Waste, Water Conservation and Multimodal Transit

# Climate Data Guide

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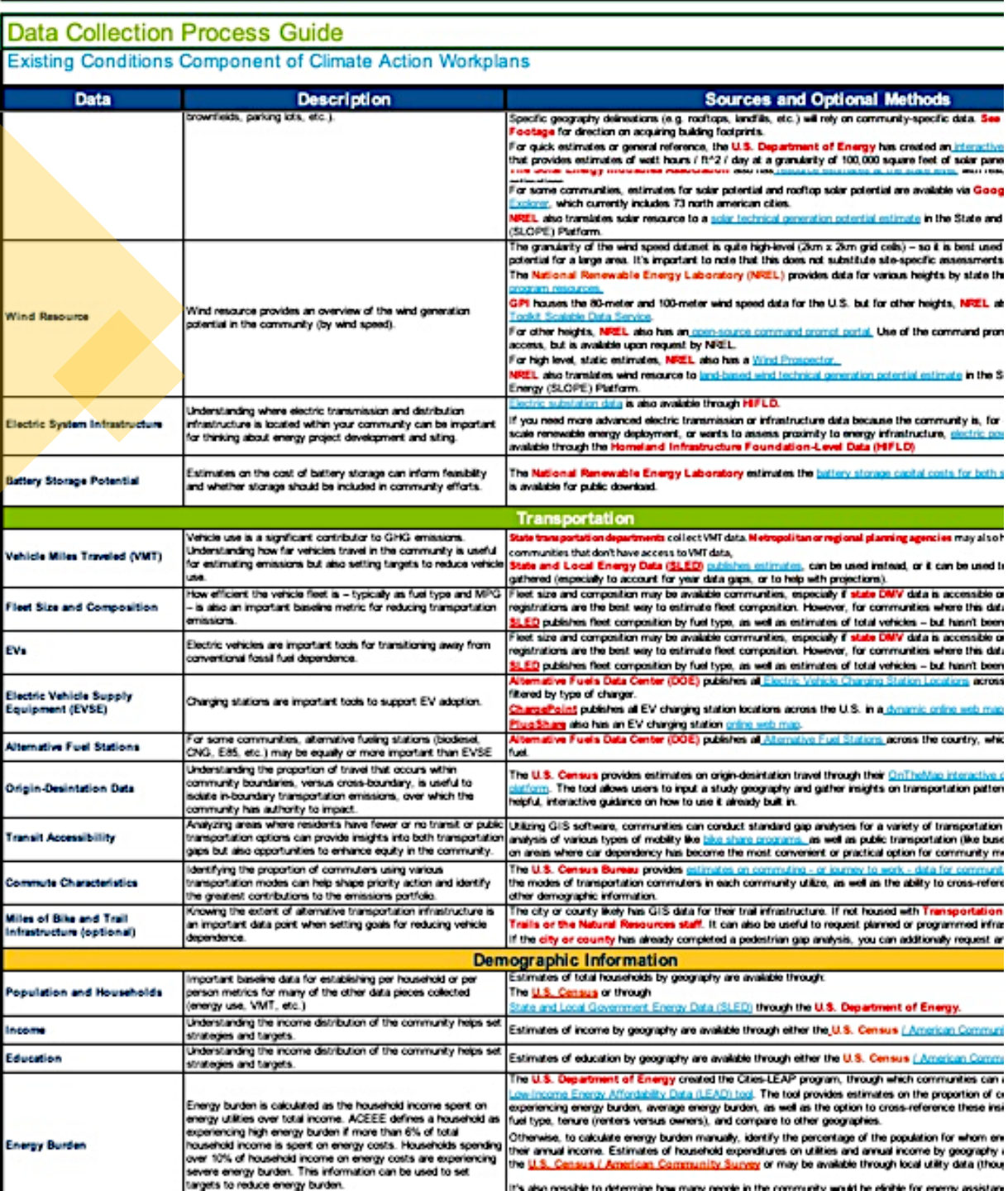

Data Collection Process Guide

Existing Conditions Component of Climate Action Workplans

| Data | Description | Sources and Optional Methods |
|---|---|---|
| | brownfields, parking lots, etc.). | Specific geography delineations (e.g. rooftops, landfills, etc.) will rely on community-specific data. See Footage for direction on acquiring building footprints.<br>For quick estimates or general reference, the U.S. Department of Energy has created an interactive that provides estimates of watt hours / ft^2 / day at a granularity of 100,000 square feet of solar pane<br>For some communities, estimates for solar potential and rooftop solar potential are available via Goog Explorer, which currently includes 73 north american cities.<br>NREL also translates solar resource to a solar technical generation potential estimate in the State and (SLOPE) Platform. |
| Wind Resource | Wind resource provides an overview of the wind generation potential in the community (by wind speed). | The granularity of the wind speed dataset is quite high-level (2km x 2km grid cells) – so it is best used potential for a large area. It's important to note that this does not substitute site-specific assessments<br>The National Renewable Energy Laboratory (NREL) provides data for various heights by state th program resources.<br>GIPI houses the 80-meter and 100-meter wind speed data for the U.S. but for other heights, NREL at Toolkit Available Data Service.<br>For other heights, NREL also has an open-source command prompt portal. Use of the command pron access, but is available upon request by NREL.<br>For high level, static estimates, NREL also has a Wind Prospector.<br>NREL also translates wind resource to land-based wind technical generation potential estimate in the S Energy (SLOPE) Platform. |
| Electric System Infrastructure | Understanding where electric transmission and distribution infrastructure is located within your community can be important for thinking about energy project development and siting. | Electric substation data is also available through HIFLD.<br>If you need more advanced electric transmission or infrastructure data because the community is, for scale renewable energy deployment, or wants to assess proximity to energy infrastructure, electric po available through the Homeland Infrastructure Foundation-Level Data (HIFLD) |
| Battery Storage Potential | Estimates on the cost of battery storage can inform feasibility and whether storage should be included in community efforts. | The National Renewable Energy Laboratory estimates the battery storage capital costs for both s is available for public download. |
| **Transportation** | | |
| Vehicle Miles Traveled (VMT) | Vehicle use is a significant contributor to GHG emissions. Understanding how far vehicles travel in the community is useful for estimating emissions but also setting targets to reduce vehicle use. | State transportation departments collect VMT data. Metropolitan or regional planning agencies may also h communities that don't have access to VMT data,<br>State and Local Energy Data (SLED) publishes estimates, can be used instead, or it can be used t gathered (especially to account for year data gaps, or to help with projections). |
| Fleet Size and Composition | How efficient the vehicle fleet is – typically as fuel type and MPG – is also an important baseline metric for reducing transportation emissions. | Fleet size and composition may be available communities, especially if state DMV data is accessible o registrations are the best way to estimate fleet composition. However, for communities where this dat SLED publishes fleet composition by fuel type, as well as estimates of total vehicles – but hasn't been |
| EVs | Electric vehicles are important tools for transitioning away from conventional fossil fuel dependence. | Fleet size and composition may be available communities, especially if state DMV data is accessible o registrations are the best way to estimate fleet composition. However, for communities where this dat SLED publishes fleet composition by fuel type, as well as estimates of total vehicles – but hasn't been |
| Electric Vehicle Supply Equipment (EVSE) | Charging stations are important tools to support EV adoption. | Alternative Fuels Data Center (DOE) publishes all Electric Vehicle Charging Station Locations across filtered by type of charger.<br>ChargePoint publishes all EV charging station locations across the U.S. in a dynamic online web map<br>PlugShare also has an EV charging station online web map. |
| Alternative Fuel Stations | For some communities, alternative fueling stations (biodiesel, CNG, E85, etc.) may be equally or more important than EVSE | Alternative Fuels Data Center (DOE) publishes all Alternative Fuel Stations across the country, whic fuel. |
| Origin-Desintation Data | Understanding the proportion of travel that occurs within community boundaries, versus cross-boundary, is useful to isolate in-boundary transportation emissions, over which the community has authority to impact. | The U.S. Census provides estimates on origin-desintation travel through their OnTheMap interactive platform. The tool allows users to input a study geography and gather insights on transportation patter helpful, interactive guidance on how to use it already built in. |
| Transit Accessibility | Analyzing areas where residents have fewer or no transit or public transportation options can provide insights into both transportation gaps but also opportunities to enhance equity in the community. | Utilizing GIS software, communities can conduct standard gap analyses for a variety of transportation analysis of various types of mobility like bike share programs, as well as public transportation (like bus on areas where car dependency has become the most convenient or practical option for community m |
| Commute Characteristics | Identifying the proportion of commuters using various transportation modes can help shape priority action and identify the greatest contributions to the emissions portfolio. | The U.S. Census Bureau provides estimates on commuting – or journey to work – data for communit the modes of transportation commuters in each community utilize, as well as the ability to cross-refere other demographic information. |
| Miles of Bike and Trail Infrastructure (optional) | Knowing the extent of alternative transportation infrastructure is an important data point when setting goals for reducing vehicle dependence. | The city or county likely has GIS data for their trail infrastructure. If not housed with Transportation Trails or the Natural Resources staff. It can also be useful to request planned or programmed infra If the city or county has already completed a pedestrian gap analysis, you can additionally request ar |
| **Demographic Information** | | |
| Population and Households | Important baseline data for establishing per household or per person metrics for many of the other data pieces collected (energy use, VMT, etc.) | Estimates of total households by geography are available through:<br>The U.S. Census or through<br>State and Local Government Energy Data (SLED) through the U.S. Department of Energy. |
| Income | Understanding the income distribution of the community helps set strategies and targets. | Estimates of income by geography are available through either the U.S. Census / American Communi |
| Education | Understanding the income distribution of the community helps set strategies and targets. | Estimates of education by geography are available through either the U.S. Census / American Comm |
| Energy Burden | Energy burden is calculated as the household income spent on energy utilities over total income. ACEEE defines a household as experiencing high energy burden if more than 6% of total household income is spent on energy costs. Households spending over 10% of household income on energy costs are experiencing severe energy burden. This information can be used to set targets to reduce energy burden. | The U.S. Department of Energy created the Cities-LEAP program, through which communities can Low-Income Energy Affordability Data (LEAD) tool. The tool provides estimates on the proportion of c experiencing energy burden, average energy burden, as well as the option to cross-reference these ins fuel type, tenure (renters versus owners), and compare to other geographies.<br>Otherwise, to calculate energy burden manually, identify the percentage of the population for whom en their annual income. Estimates of household expenditures on utilities and annual income by geography the U.S. Census / American Community Survey or may be available through local utility data (thou<br>It's also possible to determine how many people in the community would be eligible for energy assistan |

# Data Collection Process Guide

- Guidance on accessible data collection and calculation methodologies for climate action - emphasis on developing a Climate Action Plan or GHG inventory
- Guide for documenting existing conditions and creating indicators for measuring success
- 6 sectors - how communities break down their comprehensive planning/staffing, and how evaluate emissions
  - Buildings
  - Renewable Resources
  - Transportation
  - Demographic Information
  - Waste
  - Existing Policies and Plans
- Tab for each sector for evaluating targets, and guidance on calculating datapoints
- Reach out to see if community-specific/local data available!

# Climate Development Review

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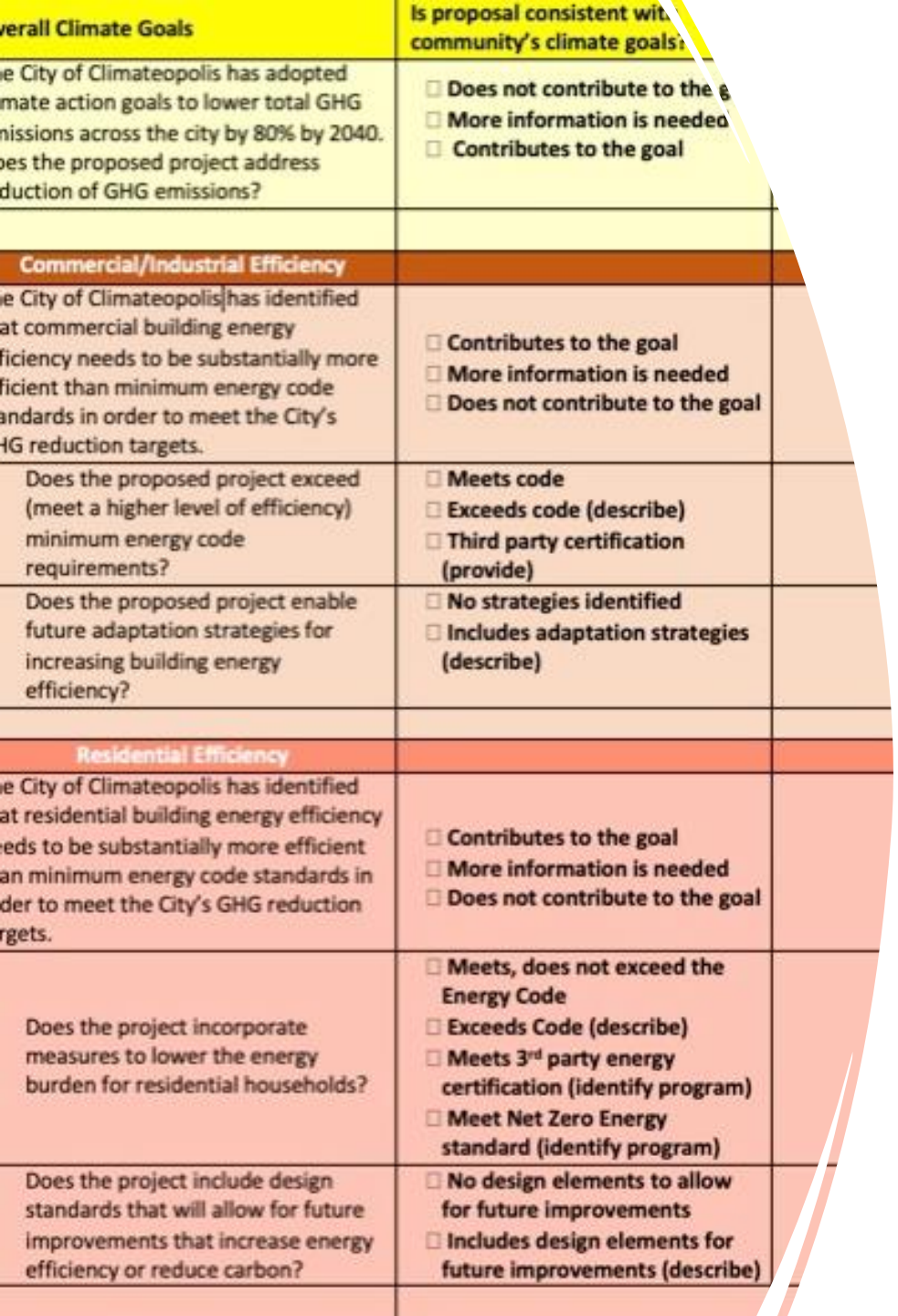
# Development Review Checklist

- The built environment is a critical part of our infrastructure and defines a community's carbon footprint for generations
- Development review assesses whether development proposals are consistent with standards and policies
- Climate or carbon-reduction standards and policies are rarely integrated into the development
- Most development is through the private sector on private property, so it is critical that we close the loop advancing climate policy through these processes

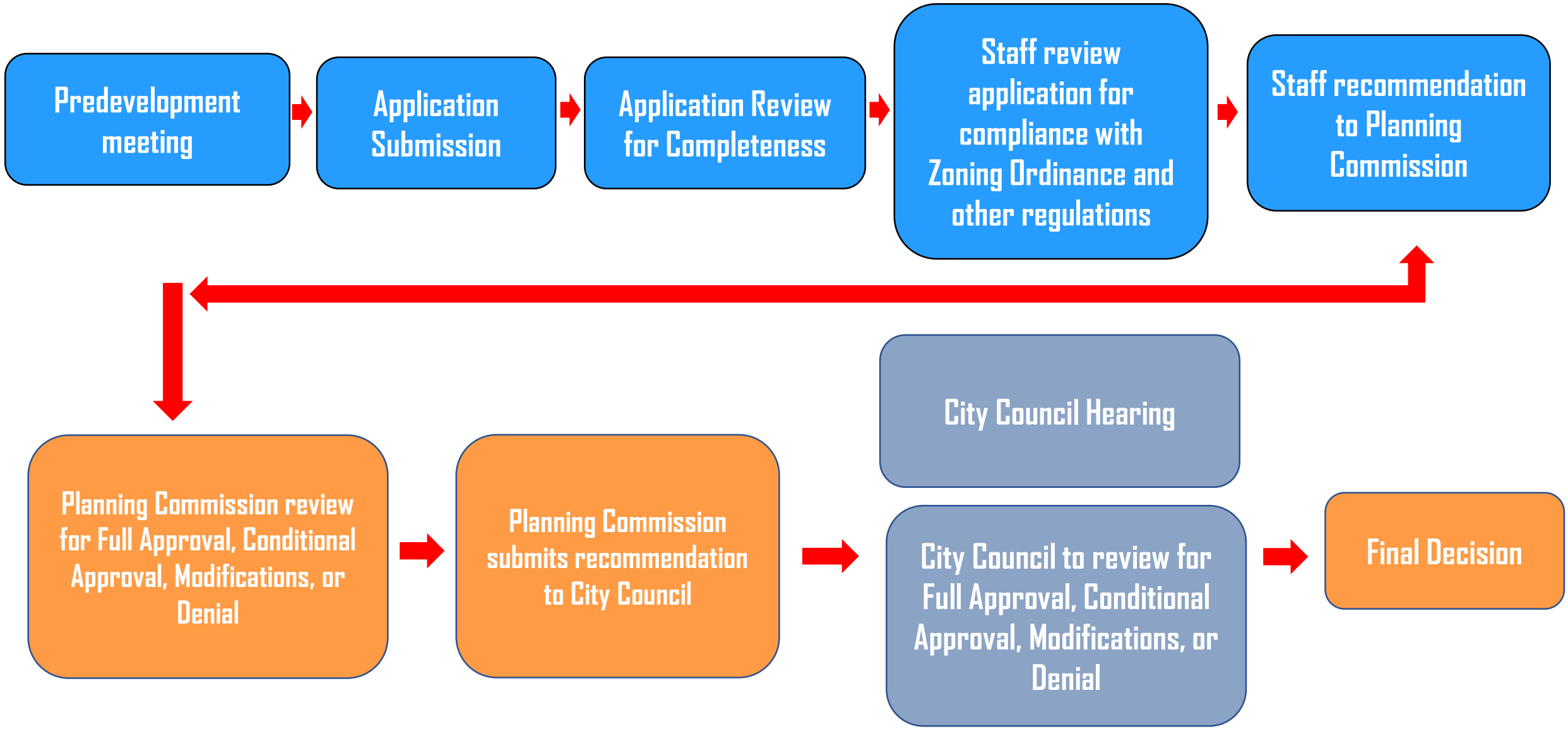


| verall Climate Goals | Is proposal consistent wit community's climate goals: |
|---|---|
| e City of Climateopolis has adopted mate action goals to lower total GHG nissions across the city by 80% by 2040. oes the proposed project address duction of GHG emissions? | ☐ Does not contribute to the g<br>☐ More information is needed<br>☐ Contributes to the goal |
| **Commercial/Industrial Efficiency** | |
| e City of Climateopolis has identified at commercial building energy ficiency needs to be substantially more ficient than minimum energy code andards in order to meet the City's HG reduction targets. | ☐ Contributes to the goal<br>☐ More information is needed<br>☐ Does not contribute to the goal |
| Does the proposed project exceed (meet a higher level of efficiency) minimum energy code requirements? | ☐ Meets code<br>☐ Exceeds code (describe)<br>☐ Third party certification (provide) |
| Does the proposed project enable future adaptation strategies for increasing building energy efficiency? | ☐ No strategies identified<br>☐ Includes adaptation strategies (describe) |
| **Residential Efficiency** | |
| e City of Climateopolis has identified at residential building energy efficiency eeds to be substantially more efficient an minimum energy code standards in der to meet the City's GHG reduction rgets. | ☐ Contributes to the goal<br>☐ More information is needed<br>☐ Does not contribute to the goal |
| Does the project incorporate measures to lower the energy burden for residential households? | ☐ Meets, does not exceed the Energy Code<br>☐ Exceeds Code (describe)<br>☐ Meets 3rd party energy certification (identify program)<br>☐ Meet Net Zero Energy standard (identify program) |
| Does the project include design standards that will allow for future improvements that increase energy efficiency or reduce carbon? | ☐ No design elements to allow for future improvements<br>☐ Includes design elements for future improvements (describe) |

# Development Review Checklist

- Customizable checklist to identify if projects are designed to meet or adapt over time to the community's near and long-term energy and climate goals
- Puts forward GHG reduction, climate, and energy goals to developers and builders
- Can be a submittal component for: subdivision, conditional use, rezoning, special permit, variance, pre-application meeting, etc.
- Can be targeted to proposals that reach a threshold size or impact, so smaller projects don't have additional submittal requirements
- Organized into 8 topics for review: Overall Climate Goals, Commercial/Industrial Efficiency, Residential Efficiency, Electric Grid Mix, Renewable Energy, Electrification and Fuels, Transportation Strategies, Waste Strategies

# Development Review Flowchart



# Q & A

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# Conversation

- Submit your questions via the Q & A feature or use the "Raise Your Hand" feature
- Please make sure that you include the person's name if questions are directed to a specific panelist
- Please mute yourself to avoid background noise interference

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# Resources

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# Social Media & Connecting

How to Join/Become a Climate Champion: https://www.planning.org/divisions/sustainable/

Website: https://www.apascd.com/

LinkedIn: APA Sustainable Communities Division

Facebook: facebook.com/apascd

Twitter: @apascd

Instagram: @apasustainablecommunities

Youtube: APA Sustainable Communities Division

My email: Fiona@barrettplanningllc.com

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# Thank you!

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