LINKS: Because City of Richmond staff do not have the ability to contribute to the chat feature in MS Teams, we will create a list of links to be shared with the WG here - slides, agenda, other materials, etc.

- <u>Meeting slides</u>
- <u>Agenda</u>
- Equity Screening Tool
- <u>Feedback survey</u>
- <u>RVAgreen 2050 Community Capacity Survey</u>

Q&A: Because City of Richmond staff do not have the ability to contribute to the chat feature in MS Teams, we will use this slide to communicate questions and answers throughout the meeting

• Type your questions here!

RVAgreen 2050 Buildings & Energy Working Group Wednesday, November 17, 2021

Plan Deliverables



Equitable climate action for a healthy and resilient Richmond

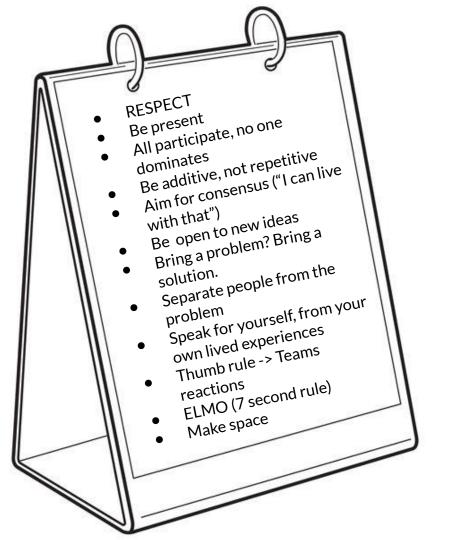
Agenda

- I. Intro: Settling in & ground rules
- II. Partner Updates: What are your recent "wins" for equitable climate action and resilience?
- III. Review: Where we've been
- IV. Discussion: Elements of the plan & strategy and subcomponent information
- V. Discussion: What's your pitch?
- VI. Conclusion: Wrap-up and next steps

Today's Objectives

- Discuss updates, questions, etc. related to the RVAgreen 2050 planning process
- Provide input on the deliverables for the RVAgreen 2050 plan
- Help create content for the plan why is this so important?

Ground Rules / Group Expectations



Partner Updates What are your recent "wins" for equitable climate action and resilience?

Bill Nickerson- residential energy auditor (funded through Dominion and non-profits); Dominion recently gave him a client list to work from so this is an opportunity for partnership / case study

Andrew Grigsby- lots out there currently funded and Dominion knows they need to do better marketing and public awareness about resources out there (e.g. rebates, low income weatherization programs); Solarize RVA campaign to share the word about residential solar (4 installs) and home energy audits Michael Donnenberg - gave a climate and health talk at a VCU Climate Crisis event. Working with other to have VCU declare a Climate Emergency. Will be engaged in VCU new Sustainability Plan and eager to link to City of Richmond.

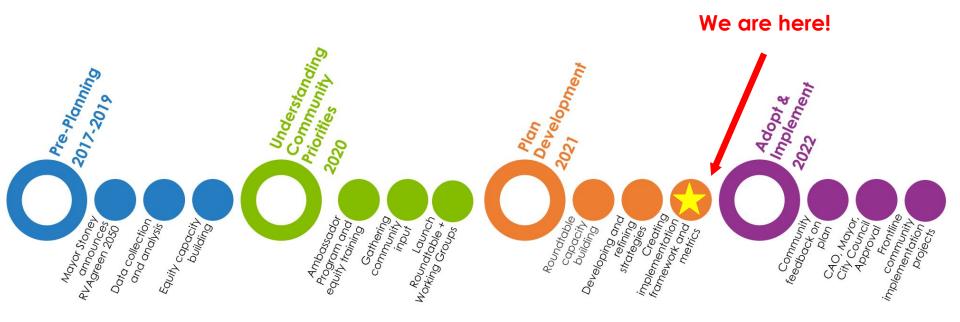
Joe Sarver RRHA: real estate division doing redevelopment and he is reminding them that we always need to embrace RVAgreen2050 in all conversations; 5 yr physical needs assessment/study to incorporate and stress these initiatives for all upgrades and remodels; also incorporating ghg tracking into financial tracking Ongoing interagency work to coordinate municipal Fleet and Facilities plans, each of which includes components that should support elements of RVAgreen2050 Michael - just a concept for now - but very cool! https://media.ford.com/cont ent/fordmedia/fna/us/en/ne ws/2021/11/02/all-electric-f-100-eluminator-concept.htm

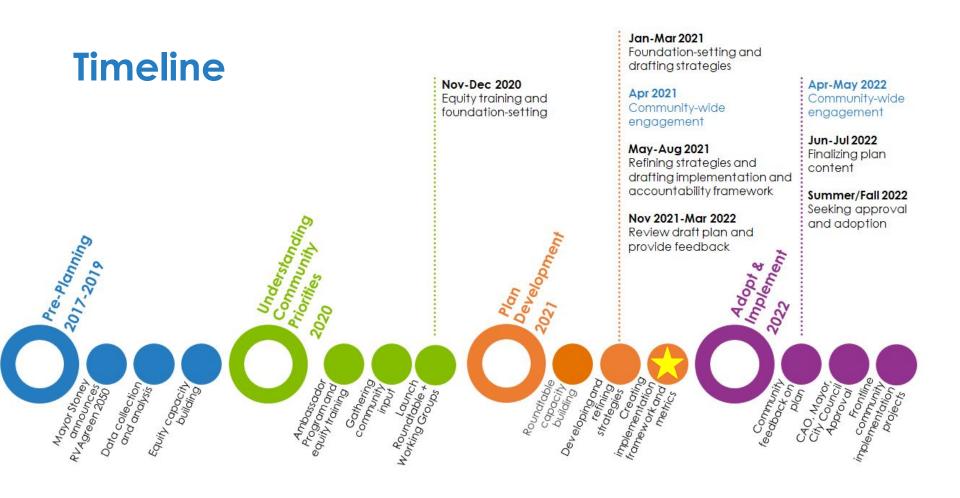
SO COOL! Thanks

Damian Pitt - solar AND EV at home! VCU Urban Planning program reaccredited for 7 years (max you can get) - UVA only got 5 :) Great work everyone!

Where we've been

Process Overview

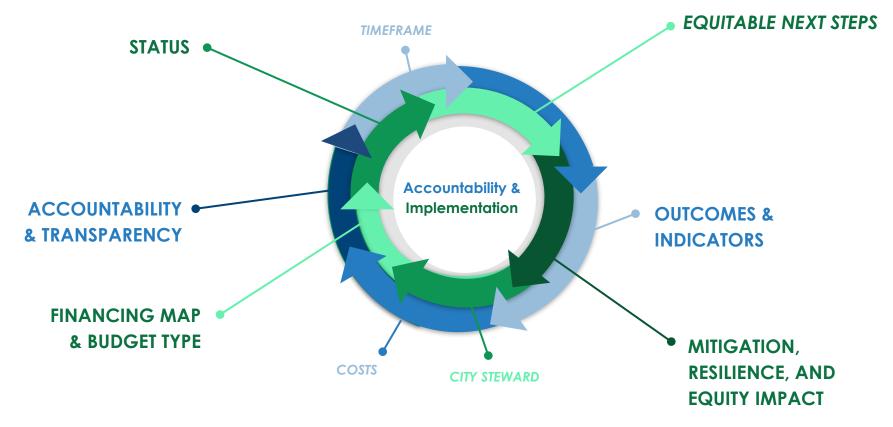




RVAgreen 2050 DRAFT Structure

Goals	What is the purpose of RVAgreen 2050?
Vision	What does the ideal future look like when RVAgreen 2050 is implemented?
Community Priorities	What cross-cutting public values do we want to center in our plan?
Pathways	What leverage points will lead us towards realizing and operationalizing the goals and community priorities?
Objectives	What are the long-term aims we want to accomplish, organized into the different pathways?
Prioritized Strategies	What are the strategies that will help us achieve our goals and what are the SMARTIE <u>actions</u> that will lead us there?
Impacts	How will our strategies impact the community and lead to a more equitable, resilient, and adaptive Richmond?
Indicators	How will we measure success?
Implementation	How are we going to equitably implement, measure progress, and ensure accountability in this plan?

Equitable Implementation and Accountability Framework



RVAgreen 2050 Outcomes

- 1. Advanced green economy
- 2. Cleaner and more efficient buildings
- 3. Cleaner and more efficient transportation
- 4. Climate-ready community
- 5. Engaged and involved community
- 6. Improved air quality
- 7. Increased flood resilience
- 8. Increased heat resilience
- 9. Increased support for climate action and resilience
- 10. Less landfill waste
- 11. Lower greenhouse gas emissions
- 12. More green space and trees

Measuring progress of RVAgreen 2050



An aspect of the future Richmond the community wants to see

Supporting Pathways and Objectives

Indicator

Data point that demonstrates progress towards an outcome

Equity Indicator

Data point that demonstrates **equitable** progress towards an outcome

RVAgreen 2050 "THE PLAN"

What is "the plan"?



What informs the plan?



DRAFT OUTLINE (high level)

- I. Letter from the Mayor
- II. Land stewardship acknowledgment
- III. Acknowledgments
- IV. Definitions & acronyms
- V. Guide: how to read the plan / at a glance map
- VI. Vision, guiding principles + why now? + cost of inaction
- VII. Background, context, accomplishments
- VIII. Planning process
- IX. Racial equity and environmental justice (context, maps, planning process)
- X. Richmond today: climate conditions and GHG emissions
- XI. Richmond 2030: pathways, objectives, and strategies
- XII. Advocacy: what can I do?
- XIII. Lessons learned
- XIV. Appendices
- XV. Methodologies

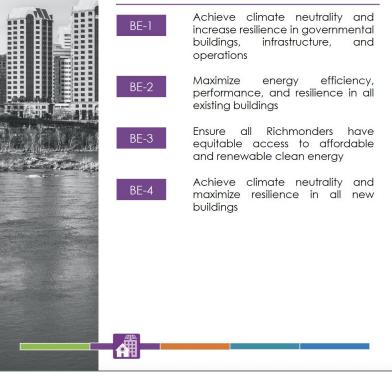


Each pathway section begins with the pathway description and objectives

BUILDINGS & ENERGY

Accelerate the equitable transition to healthy, resilient, climate-neutral buildings and energy sources.

OBJECTIVES



Symbols and/or text to indicate which of the 12 outcomes are supported by this objective

BUILDINGS & ENERGY



Achieve climate neutrality and increase resilience in governmental buildings, infrastructure, and operations

OUTCOMES

How does this objective contribute to a more resilient, adaptive, healthy, and equitable Richmond?



STRATEGIES

BE-1.1 Municipal Energy Efficiency

Develop a program to achieve the energy efficiency goals for RVAgreen 2050 and Richmond300.

BE-1.2 Municipal Clean Energy and Net Zero Construction

Incorporate measures toward the goal of converting all city buildings to clean energy by 2050.

BE-1.3 Municipal Climate Impact Mapping

Establish a protocol for tracking greenhouse gas emissions and planning for climate impacts.

BE-1.4 Municipal Resilient Infrastructure Assessment

Conduct a climate vulnerability and risk assessment of all city property to identify and prioritize areas for resilience projects.



List of strategies for each objective

Context information. data, maps, and research to show why this strategy is important

Each action will have:

Status

- Ongoing -
- Ready to go -
- Facing obstacles -

City steward

Cost

- \$ = under 100k -
- \$\$ = 100k 1M -
- \$-

Time

- Near: 2022-25 -
- Far: 2026-30

BUILDINGS & ENERGY

MUNICIPAL ENERGY EFFICIENCY BE-1. Develop a program to achieve the energy efficiency goals for

RVAgreen 2050 and Richmond300.

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2030 Convert all city-owned	STATUS	CITY STEWARD	Cost	TIME Near	MITIGATION	RESILIENCE	EQUITY
scentre air city-owned streetlights to LED, integrate solar options where feasible, and streamline efficiency measures; Prioritize improvements in formerty realined neighborhoods and practively communicate climate impact and resilience benefits with communities.	\ominus	lighting	\$	Nedr	L M H	.	<u> </u>
Track energy usage in all city- owned buildings and set energy usage benchmarks according to building type and climate equity impacts.	\ominus	DPW Facilities	\$\$	Near	L M H		₫
Equitably prioritize energy efficiency retrofits of city-owned buildings in those that serve the public, hereby improving their health, safety, and accessibility while rating the highest return on investment in cost savings and greenhouse gas reductions.	0	DPW Special Projects	\$\$	Near	L M H	. ₩	۩ €
Create an Energy Manager position with authority to identify equity gaps in energy management, work across all departments, and coordinate partnerships with frontline communities.	×	DCAO Operations	\$	Near	L M H		

Additional information will go in an appendix:

- Equitable next steps
- Financing map -
 - Budget type

Symbols to demonstrate impacts:

- GHG reduction (high, med, low)
- Climate resilience (heat, extreme weather, flooding, and community)
- Equity (7 community priorities)

Discussion ~15 minutes

Discussion questions:

- What information is most important/relevant to you?
- Is anything missing?
- What format/design would work best to communicate this information?

NOTES

- How can the advocacy section work to connect Richmonders to all the programs, events, etc. in which they can get involved directly?
- Link to sustainability resource hub
- What can i do in my day to day life? How can my community implement it here?
- Intro page- dashboard with indicators and data over time
- Try to steer the mayor's letter as an executive summary with headers to orient readers
- Consider targets for indicators for 2030? Have **numbers-based and financial-based accountability**
 - It won't be perfect but it can evolve over time
 - Need to tie city line item budgets and funding requests / KPIs? Make the document a basis for budgetary requests and part of the feedback loop for accountability once financing is provided
 - Suggested metrics for each strategy?
 - From Andrew to Damian: a great MURP student project might be a survey of community sustainability indicators - which are most widely used (worldwide) - and which might have some claim to be

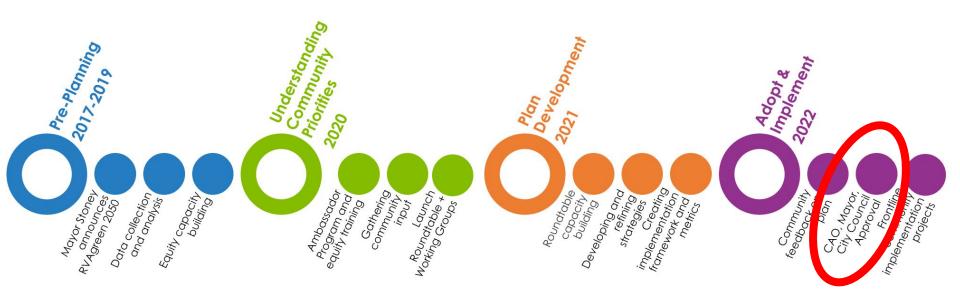
NOTES

- Suggested metrics for each section of the plan? Could we associated metrics with each action item?
- How are we defining equity? How are other departments? Is there alignment (or potential for it)?
 - Reach out to Osita
 - Look at equity agenda

Break time! Come back at ...

We need your help! Why is this so important?

Process Overview



DRAFT OUTLINE (high level)

- I. Letter from the Mayor
- II. Land stewardship acknowledgment
- III. Acknowledgments
- IV. Definitions & acronyms
 - /. Guidert

VI. Vision, guiding principles + why now? + cost of inaction

- VII. DUCKGreend, eti
- VIII. Planning process
- IX. Racial equity and environmental justice (context, maps, planning process)
- X. Richmond today: climate conditions and GHG emissions
- XI. Richmond 2030: pathways, objectives, and strategies
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Context information: data, maps, and research to show why this strategy is important

Each action will have:

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City steward

Cost

- \$ = under 100k _
- \$\$ = 100k 1M -
- \$-

Time

- Near: 2022-25 -
- Far: 2026-30

BUILDINGS & ENERGY

MUNICIPAL ENERGY EFFICIENCY BE-1.1

Develop a program to achieve the energy efficiency goals for RVAgreen 2050 and Richmond300.

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ACTIONS TO BE COMPLETED BY 2030	STATUS	CITY STEWARD	Cost	TIME	MITIGATION	RESILIENCE	EQUITY
Convert all city-owned streetlights to LED, integrate solar options where feasible, and streamline efficiency measures; Prioritize improvements in formerly realined neighborhoods and practively communicate climate impact and resilience benefits with communities.	\ominus	DPU Street- lighting	\$	Near	L M H	"	<u>^</u> ∩ */*
Track energy usage in all city- owned buildings and set energy usage benchmarks according to building type and climate equity impacts.	\ominus	DPW Facilities	\$\$	Near	L M H		٦
Equitably prioritize energy efficiency retrofits of city-owned buildings in those that serve the public, thereby improving their health, safety, and accessibility while rating the highest return on investment in cost savings and greenhouse gas reductions.	0	DPW Special Projects	\$\$	Near	L M H	₩	۩ €
Create an Energy Manager position with authority to identify equily gaps in energy management, work across all departments, and coordinate partnerships with frontline communities.	×	DCAO Operations	\$	Near	L M H		

Additional information will go in an appendix:

- Equitable next steps
- Financing map
- Budget type

Symbols to demonstrate impacts:

- GHG reduction (high, med, low)
- Climate resilience (heat, extreme weather, flooding, and community)
- Equity (7 community priorities)

Discussion ~15 minutes

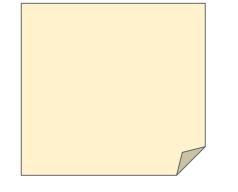


What's your pitch? Why is this important? What's the cost of inaction?

Objective 1: Achieve climate neutrality and increase resilience in government buildings, infrastructure, and operations.

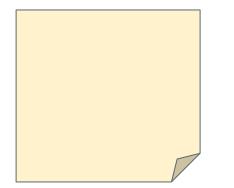


Don't talk about this to city council, focus on bigger picture of how the plan will help community, particularly from an equity lens



Lead by example.

Emphasis on public engagement process- plan is reflective of community goals



We must act now. The science continues to confirm our need to act. We should be a leader in this effort. Efficiency has the benefit of saving the city money. There are opportunities in a wide range of city operations to become more efficient. It's most cost effective to build structures right the first time rather than paying to retrofit. Let's maximize efficient design and systems now. Solar too. For a building owner that will always own, the long-term ROI is fantastic to get them as close to net-zero as possible.

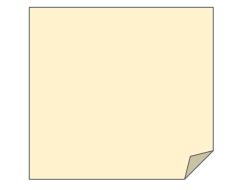
We will pay for climate change one way or another; now or in the future. What is presented before you today functional plan to reduce future costs, enhance livability for all of our residents, and move into a sustainable future in an equitable fashion.

What's your pitch? Why is this important? What's the cost of inaction?

Objective 2: Maximize energy efficiency, performance and resilience in all existing buildings.



This is one of the most direct ways in which RVAGreen 2050 can fulfill the City's equity objectives... by weatherizing the existing housing stock and reducing residents' energy bills.



Residents, businesses, organizations, and the City government are losing money right now. There are huge, cost-effective strategies available today to save money. We need to start doing this at scale and that should produce a self-reinforcing cycle.

Buildings are among the leading sources of climate-changing greenhouse gas emissions. Rapid transition to efficient and clean buildings will lower costs, reduce harmful air pollution, and help prevent the worst effects of climate change.

This is an opportunity for the city to contribute to the effort to reduce emissions. The building I work in is nearly 100 years old, for example. Talking about fighting global warming needs to be matched with what looks like on your resident's corner, their bus stop, their street, etc. Think globally but show benefits locally.

Efficiency equals savings. Savings equals money that can be spent elsewhere. Money that is spent elsewhere can be put into capital projects in your district.

What's your pitch?

Why is this important? What's the cost of inaction? Objective 3: Ensure all Richmonders have equitable access to affordable and renewable clean energy.





Locally controlled renewable clean energy presents an opportunity for energy independence for Richmond residents and businesses.

You can be part of the solution when we adopt this program to make clean and less expensive energy sources available to you and all Richmond residents regardless of their income and address

We owe it to our children and their children to act. They will inherit what we leave behind.

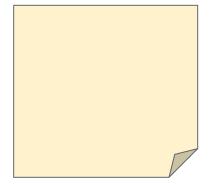
Solar works.

The cost of inaction is the furthering of economic and social divide. Renewable clean energy access has the power to reduce costs for those who who are least able to access it. Increasing access to clean energy means increasing equity.

What's your pitch?

Why is this important? What's the cost of inaction? Objective 4: Achieve climate neutrality and maximize resilience in all new buildings.





New construction is the easiest, most cost-effective opportunity for implementing clean energy, advanced energy efficiency technology, and other sustainable features into the built environment.

All of the needed tools and technology are off-the-shelf today: design, equipment, materials, etc.



It's most cost effective to build structures right the first time rather than paying to retrofit. Let's maximize efficient design and systems now. Solar too. For a building owner that will always own, the long-term ROI is fantastic to get them as close to net-zero as possible. Building reuse instead of new construction as an option wherever possible.

The impacts of global warming are already impacting RVA (urban heat island effect, increased demand on grid when AC peaks, etc.). Resilience is not a matter of preference it is a matter of need that will only increase. You have before you a plan forward for resilient Richmond in to 2050 and beyond.

Adopted unanimously! Woo hoo!

Wrap-up and next steps

• NEXT STEPS:

- Volunteers-we'll be reaching out
- Next meeting in February: THE DRAFT PLAN!
- NOW:
 - General reflections
 - Fill out <u>feedback survey</u>
 - Share updates, upcoming events, and resources

THANK YOU!

EXTRA SLIDES Examples from other cities

an Antonio operations hat will allo greener an	o's municip only acco ow the City id more eff	TION STRATEGIES ad government will take the lead on GHG miligation efforts within the City. While municipal government unt for 3% of the city's total GHG emissions, the municipal miligation strategies set a significant reduction goal to pilot approaches before implementing them in the broader community. The City of San Antonia commits to iscient government to benefit all San Antonians and will confinue to strive for excellence through implementation g the SA Tomorrow Sustainability. Comprehensive and Multi-Modal transportation Plans.				Initiatio Phase NT Neor- (Inition by 20: LT Long-	term ed 21)	Constraints A Awareness BC Behavior Change I Investment P Policy T Technology	In Current City Plan* Y Yes	AQ NC QJ H	Bene Air Qu Natur Ecosy Qualit Healt Afford	ality al Cap stem 5 ly Job n Outo	
		STRATEGIES			LEAD DEPARTMENTS	PHASE	GHG	CONSTRAINTS	IN PLAN	AQ	NC	QJ	
òz	M1	BENCHMARKING AND PUBLIC DISCLOSURE OF BUILDING ENERGY CONSUMPTION Benchmark and publicly disclose building energy and water use for municipal buildings.] ∢ ⊺ [+	Office of Sustainability, Finance Department	NT	L	Р	Y	\odot			
REDUCE BUILDING ENERCY CONSUMPTION	M2	MUNICIPAL ENERGY POLICY To reduce energy consumption, adopt an Energy Policy Ordinance for City-owned buildings and facilities.			Office of Sustainability, Building and Equipment Services	NT	L	Р	Y	\oslash			
REL	M3	ZERO NET ENERGY (ZNE) BUILDINGS Achieve ZNE for all municipal buildings by 2040.	-	-	Transportation & Capital Improvements, Office of Sustainability	LT	н	I, P	Y	\oslash		0)
BU	M4	COOL/GREEN ROOFS Install cool or green roofs on municipal government buildings, as appropriate.	- L	+	Transportation & Capital Improvements	LT	L	I, P	Y	\oslash	\odot	0)
NOL	M5	STREETLICHT CONVERSION Convert all streetlights to LEDs with daylight sensors by 2021 and implement the recommendations of the Urban Lighting Master Plan.	1	+	Finance Department, Transportation & Capital Improvements, Center City Development & Operations Department, CPS Energy	NT	L	L.	Y			0)
REDUCE TRANSPORTATION ENERGY CONSUMPTION	M6	CLEANER AND MORE EFFICIENT VEHICLE TECHNOLOGIES Convert all fleet passenger vehicles and small frucks to more efficient options by 2023, with a priority on electrification based on recommendations of the Bechic Reet Conversion and Infrastructure Study (currently in development). Additionally, research and pilot the electrification of heavy frucks.		4	Office of Sustainability, Building and Equipment Services, Solid Waste Management Department, Transportation & Capital Improvement	NT	н	12	Y	0			
TRAN	M7	TRANSPORTATION DEMAND MANAGEMENT Reduce the GHG impact of employee commuting.	4	+	SA Metro Health District, Transportation & Capital Improvements, Human Services	NT	L-H	I, P, BC	Y	\odot		0)
	M8	AIRPORT ACCREDITATION Consider pursuing and achieving Airport Carbon Accreditation.		-	Aviation	LT	н	E.		\odot			
MAY	M9	PRIORITIZATION IN DECISION-MAKING To encourage angoing education and decision-making around GHG reduction, niculade a carbon impact analysis in City projects and budgeting processes as well as consideration of City investments.	*	+	City Manager's Office, Mayor and City Council, Office of Management & Budget, Office of Sustainability	NT	L	P, BC	Y	\oslash	Ø	0)
ACE THE	M10	ENVIRONMENTALLY-PREFERABLE PURCHASING Update the City's green purchasing policy to consider the lifecycle impacts when choosing products.		4	Finance Department	LT	L	Р	Y			0)
ADVANCE THE CIRCULAR ECONOL	M11	GREEN SPECIFICATIONS Reduce the GHG impact of materials specified in public works and roadway projects.	-	+	Transportation & Capital Improvements, Finance Department	NT	L	P	Y	\oslash		0)
0	M12	ZERO WASTE Strive to achieve zero waste for all municipal government operations by 2030 with a focus on overall reduction, product reuse, and circularity.	ager L	4	Solid Waste Management Department, Office of Sustainability	LT	L	BC	¥	\oslash	\oslash		
EDUCATE & ENABLE	M13	GHG EDUCATION Develop and implement a comprehensive sustainability and GHG education program for municipal employees.	4	4	Office of Sustainability	NT	L	BC	Y	0	0	0)

GHG = GHG Reduction Potential (Total to 2030)

H High Reduction Potential: More than 1,000,000 tCO₂e by 2030 M Medium Reduction Potential: 100,000 - 1,000,000 tCO₂e by 2030 L Low Reduction Potential: Less than 10,000 tCO₂e by 2030

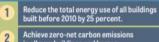
Example: San Antonio

CLIMATE ACTION PLAN AT A GLANCE

This *Climate Action Plan* identifies twenty 2030 objectives and more than one hundred actions to be completed or significantly underway in the next five years. This plan puts Portland and Multnomah County on a path to reduce carbon emissions 80 percent from 1990 levels by 2050 (and 40 percent by 2030) and to prepare for the impacts of a changing climate. It focuses principally on major actions to be taken to accelerate emission reductions.

To draft this *Climate Action Plan*, City and County staff worked with a Steering Committee, an Equity Working Group and technical advisors. These groups helped to identify the near-term actions most likely to result in the long-term changes necessary to achieve these ambitious climate action goals, while also advancing other community goals related to prosperity, the environment, health and equity.

BUILDINGS AND ENERGY



in all new buildings and homes.
Supply 50 percent of all energy used in

3 Supply 50 percent of all energy used in buildings from renewable resources, with 10 percent produced within Multnomah County from on-site renewable sources, such as solar.



URBAN FORM AND TRANSPORTATION

4 Create vibrant neighborhoods where 80 percent of residents can easily walk or bicycle to meet all basic daily, non-work needs and have safe pedestrian or bicycle access to transit. Reduce daily per capita vehicle miles traveled by 30 percent from 2008 levels.

5 Improve the efficiency of freight movement within and through the Portland metropolitan area.

6 Increase the fuel efficiency of passenger vehicles to 40 miles per gallon and manage the road system to minimize emissions.

7 Reduce lifecycle carbon emissions of transportation fuels by 20 percent.



READ MORE ON PAGES 70-87

CONSUMPTION AND SOLID WASTE

Reduce consumption-related emissions by

encouraging sustainable consumption and supporting Portland businesses in minimizing

the carbon intensity of their supply chains.

Reduce food scraps sent to landfills by 90

Reduce per capita solid waste by 33 percent.

Recover 90 percent of all waste generated.

T 🗈

8

9

10

11

percent.

Example:

Portland

2019 CLIMATE ACTION PLAN STRATEGIES

LAST UPDATED FEBRUARY 202	
FEBRUARY 202	

1/3

NOT STARTED Step or initiative has not been started.		AYED COMPLETE Step is implemented and may be ongoing.	ALL STEPS COMPLETE Implementation ongoing.
STRATEGY SUMMARY	STATUS # OF STEPS UNDERWAY	STRATEGY SUMMARY	STATUS # OF STEPS UNDERWAY
Set a net-zero standard for municipal buildings	*	10 Parking and transportation demand management	6/8
2 Set a net-zero standard for City-funded affordable housing	7/9]] Citywide zero-emission vehicle deployment	6/10
3 Update zoning to a zero net carbon standard	3/6	12 Zero-emission municipal fleets	3/5
4 Energy efficiency in municipal buildings	6/7	13 Community Choice Energy	3/5
5 Develop a building emissions performance standard	6/8	14 Carbon-neutral district energy microgrid systems	2/2
6 Green building workforce development	4/5	15 Energy advocacy at the state level	5/4
7 State advocacy on building policy	*	16 Consumption emissions	2/4
8 State advocacy on transportation	8/9	17 Green municipal investments	1/3

3/4

18 Value framework for carbon offsets

Example:

9 Biking and walking infrastructure

Boston

HOW TO READ THE ECAP

Example:

Oakland

