RVAgreen 2050 Buildings & Energy Technical Working Group 2/3/2021

Drafting Objectives

City of Richmond RVA9 reen 2050

Equitable climate action for a healthy and resilient Richmond

Agenda

- I. Settling in and ground rules
- II. Review proposed RVAgreen2050 structure
- III. Review RVAgreen2050 inputs
- IV. Discussion: Pathways to climate action & resilience goals
- V. Discussion: Objectives
- VI. Wrap-up and next steps

TODAY'S OBJECTIVES:

- Review proposed structure of RVAgreen 2050
- Review key inputs for RVAgreen 2050
- Review and provide input on draft pathways
- Review and provide input on draft objectives

Desired takeaways: Get your input and buy-in



Ground Rules & Group Expectations







RVAgreen 2050 Structure

Goals	What are the long-term aims we want to accomplish?
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?
Strategies	What are the SMARTIE actions that will lead us toward our objectives?
Implementation Plan	How are we going to implement, measure progress, and ensure accountability in this plan?



Goals

Climate Action:

- Achieve a 45% reduction in greenhouse gas emissions by 2030 from the 2008 baseline
- Achieve net zero greenhouse gas emissions by 2050

Climate Resilience:

• Prepare for, adapt, and improve the City of Richmond's resilience to the local impacts of climate change.





Vision

All Richmonders, regardless of their identity or neighborhood, thrive in a climate-resilient and climate-neutral community.

Supporting Principles:

- Community and personal **well-being**, **local ecosystems**, **and economic vitality are balanced** in a truly sustainable Richmond.
- Everyone has **equitable access across the entire city to resources** that are clean, sustainable, and affordable, including air, water, food, energy, housing, transportation, economic opportunities, and natural resources.
- Everyone has the ability and resources to take ownership of equitable climate action and community resilience planning and implementation.
- "Identity" includes but is not limited to: race, ethnicity, age, ability, gender, sexual orientation, and religion. **We lead with race in our work to transform systems** impacting all historically disenfranchised communities.





Community Priorities



Racial Equity & Environmental Justice



Engagement & Communication



Accountability





Health & We Being



Where we are today...

Goals

- 45% reduction in GHG by 2030
- Net Zero GHG by 2050
- Prepare for, adapt, and improve Richmond's resilience to the local impacts of climate change

Vision

All Richmonders, regardless of their identity or neighborhood, thrive in a climate-resilient and climateneutral community. Community Priorities

- Racial Equity & Environmental Justice
- •Engagement & Communications
- Government Accountability
- •Community Wealth
- Housing & Buildings
- Neighborhoods
- Health & Well-Being

Pathways

- Buildings & Energy
- Transportation
- Waste
- Environment
- Community

Objectives

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Strategies

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Implementation

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Draft Pathways & Objectives - Inputs

- Climate Vulnerability & Risk Assessment
- Climate and Energy Modeling
- Richmond 300 Master Plan
- Examples from other peer cities









way due to climate threats?

Sensitivity

their own?

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Probability

Consequence

Adaptive Capacity

Literal costs Public safety services Economic activities Public health Natural environment

How much would assets/systems be affected?

People, especially those most vulnerable

What assets/systems are actually in harm's

Can the assets/systems "bounce back" on

What are the potential impacts to ...







Richmond's Current GHG emissions

2018 GHG Emissions 2.64 MMTCO₂





Richmond's Potential 2050 GHG Emissions



Energy Efficiency Significantly Reduces Electricity Demand





Energy Pathways for Richmond EXPLORE RICHMOND'S ENERGY FUTURE Inputs ABOUT HOW TO USE Energy Measure Input No. 1 - 4 **Modelin** Industrial Potential Achieved Energy Measure Input No. 2 O

2050

City of Richmond

Energy Pathways for Richmond



Achieved



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Draft Pathways

Working Groups	Description
Buildings & Energy	Accelerate the transition to healthy, resilient, zero-carbon buildings and equitable energy sources
Transportation	Accelerate the transition to clean, and equitable mobility systems
Waste	Eliminate our dependency on landfill disposal and foster sustainable consumption habits
Environment	Invest in Ecosystem Resilience, Regeneration, and Conservation
Community	Create an equitable, healthy, prosperous, and resilient Richmond for all while ensuring focus and honoring community priorities



Draft Pathway - Buildings & Energy

"Accelerate the transition to healthy, resilient, zerocarbon buildings and equitable energy sources"

Discussion questions:

- What do you like?
- What don't you like?
- What's missing?



Where we are today...

Goals

- 45% reduction in GHG by 2030
- Net Zero GHG by 2050
- Prepare for, adapt, and improve Richmond's resilience to the local impacts of climate change

City of Richmond

2050

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Objectives

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Implementation

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Richmond300 Goals	Greenlink Policies	Peer City CAAP Objectives	DICHM
High Quality Places: City-Owned Assets			
Energy Benchmarking- Public Buildings	Energy Benchmarking	Commercial Benchmarking	in the second
Green Building	Decarbonization	Net-Zero Buildings	A GUIDE FOR
ligh Quality Places: Historic Preservation			Garee
Green Building	Decarbonization	Clean Energy Standards	
Building Retrofits	Building Retrocommissioning	Energy Retrofits	Carbo
ligh Quality Places: Urban Design			Bostor
Green Building	Performance Standards	Building Electrification	Social Equity Report 20
Utility Infrastructure	Renewable Energy Initiatives	Municipal Solar	The City of Provide
nclusive Housing			CLIMATE JU
Energy Efficiency- Residential	Residential Energy Efficiency	Residential Energy Efficiency	
nriving Environment: Clean Air			CLEA
City Govt Energy Management Program	Deep energy efficiency retrofits	Commercial Energy Retrofits	ENERG
Outdoor lighting	Municipal Energy Efficiency	Municipal Energy Efficiency	
Natural Gas Leakage	Decarbonization	Building Decarbonization	
Industrial Energy Management	Industrial Energy Efficiency	Industrial Energy Efficiency	
Clean Energy Financing	Clean Energy Financing	Clean Energy Financing	PA
Sustainability Legislation	Energy Efficiency Incentives	State advocacy for carbon neutrality	OAKLAND 2030
Building Codes	Energy Code Enforcement	Energy Performance Standards	EQUITABLE
Renewable Energy	Renewable Energy Initiatives	Renewable Energy Initiatives	PLAN (ECAP
hriving Environment: Clean Water			
Water Conservation	Performance Standards	Green Building Standards	ROST
hriving Environment: Resilient & Healthy Communities			AN EQUITABLE AND CONNECTED CITY
Utility Infrastructure	Renewable Energy Initiatives	100% Clean Energy Supply	17

Draft Objectives

- #1 Lead by example in government buildings, operations, and infrastructure.
- #2 Improve energy performance in existing buildings.
- #3 Ensure all buildings have access to affordable, clean energy
- #4 Achieve net-zero carbon emissions in all new buildings and infrastructure











Objectives vs. Strategies

Lead by example in government buildings, operations, and infrastructure. #1 Example Strategy: Implement utility performance tracking for all city buildings and facilities.

- #2 Improve energy performance in existing buildings. Example Strategy: Implement an energy performance tracking & reporting program (benchmarking).
- #3 Ensure all buildings have access to affordable, clean energy Example Strategy: Mitigate cost burdens to low income households to install solar.
- #4 Achieve net-zero carbon emissions in all new buildings and infrastructure Example Strategy: Build market demand for net-zero energy buildings through incentives. 19

Draft Objectives - Activity

- 1. Divide into 4 breakout rooms
- 2. Facilitators will switch between rooms to guide discussions on 1 objective each:
 - Adam- Objective #1
 - Dawn- Objective #2
 - Irina- Objective #3
 - Kendra- Objective #4
- 3. Take 15 minutes per round to:
 - Provide feedback on draft objectives (reference-Drafting Objectives Process Guide)
 - ➤ Is the objective statement overarching yet explanatory enough?
 - ➤ What is missing?
 - ➤ How could it be said better?
 - If time allows, capture potential strategies to achieve objectives
- 4. 5 Minute Break and then we will go into the breakout session



Go into breakout rooms

Examples from other sources:

- 1. Require all major retrofits of city facilities to be all-electric (Oakland, CA)
- 2. Upgrade municipal buildings to shift towards zero energy buildings (Providence, RI)
- 3. Reduce carbon emissions from City and County operations by 53% from FY2006-07 levels (Portland, OR)
- 4. Implement municipal aggregation that enables the City to procure GHG-free electricity on behalf of residents and businesses. (Boston, MA)
- 5. Evaluate and reduce climate impacts of city expenditures and operation (Oakland, CA)
- 6. Phase out fossil fuel dependence in all city agreements and contracts (Oakland, CA)
- 7. Incorporate climate projections into land use, building regulations, and capital investment (Washington, DC)

- Can we live with this (consensus)? What do we like? What's missing?
- Does the objective cover all key sectors (e.g., commercial, residential, and industry)? Does it need to?
- Does the objective allow for different types of strategies (e.g. policy advocacy, construction standards, utility & infrastructure improvements)?

Objective #2 (Dawn):



'Improve energy performance in existing buildings.'

Examples from other sources:

- 1. Replace the natural gas and heating oil currently used to heat space and hot water with GHG-free electricity (Boston, MA)
- 2. Retrofit and renovate existing built environment for energy savings (St. Louis, MO)
- 3. Reduce the total energy use of all buildings build before 2010 by 25% (Portland, OR)
- 4. Quantify energy usage and all reductions benefits and track installation of energy efficient equipment (Boston, MA)
- 5. Align permit and project approvals with climate priorities (Oakland, CA)
- 6. Track and promote utility energy efficiency programs (Greenlink)
- 7. Update building energy codes (Greenlink)

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Examples from other sources:

- 1. Supply 50% of all energy used in buildings from renewable resources, with 10% produced within the county from on-site renewable sources (Portland, OR)
- 2. Transition to 100% clean energy supply with a focus on local generation and equitable access (Providence, RI)
- 3. Advance community scale renewable energy options and utilization (St. Louis, MO)
- 4. Grow local solar (Washington, DC)

- Can we live with this (consensus)? What do we like? What's missing?
- Does the objective cover all key sectors (e.g., commercial, residential, and industry)? Does it need to?
- Does the objective allow for different types of strategies (e.g. policy advocacy, construction standards, utility & infrastructure improvements)?



Examples from other sources:

- 1. Achieve net-zero carbon emissions in all new buildings and homes (Portland, OR)
- 2. Establish strong energy performance standards for all buildings (Boston, MA)
- 3. Plan for all existing buildings to be efficient and all-electric by 2040 (Oakland, CA)
- 4. Make green building the standard practice (St. Louis, MO)
- 5. Decarbonize public utility operations (Greenlink)
- 6. State advocacy for carbon neutrality (Somerville, MA)

- Can we live with this (consensus)? What do we like? What's missing?
- Does the objective cover all key sectors (e.g., commercial, residential, and industry)? Does it need to?
- Does the objective allow for different types of strategies (e.g. policy advocacy, construction standards, utility & infrastructure improvements)?

Exit breakout rooms

Wrap-up and Next Steps

- Homework: Continue to edit 'Draft Objectives' Google slides until COB Monday Feb. 8
- Next Meeting: 'Drafting Strategies', Wednesday Feb. 17
- NOW:
 - ✤ Fill out feedback survey
 - Share updates, upcoming events, and resources in the chat



