

RVAgreen 2050 Buildings & Energy Working Group

Wednesday, May 26th, 2021

Community Engagement Results &
Strategy Prioritization



Equitable climate action for a healthy and resilient Richmond

Agenda

- I. Settling in & ground rules
- II. Community engagement results
- III. VCU Equity Assessment
- IV. Prioritization - what gets us to our 2030 goal?
- V. Wrap-up and next steps

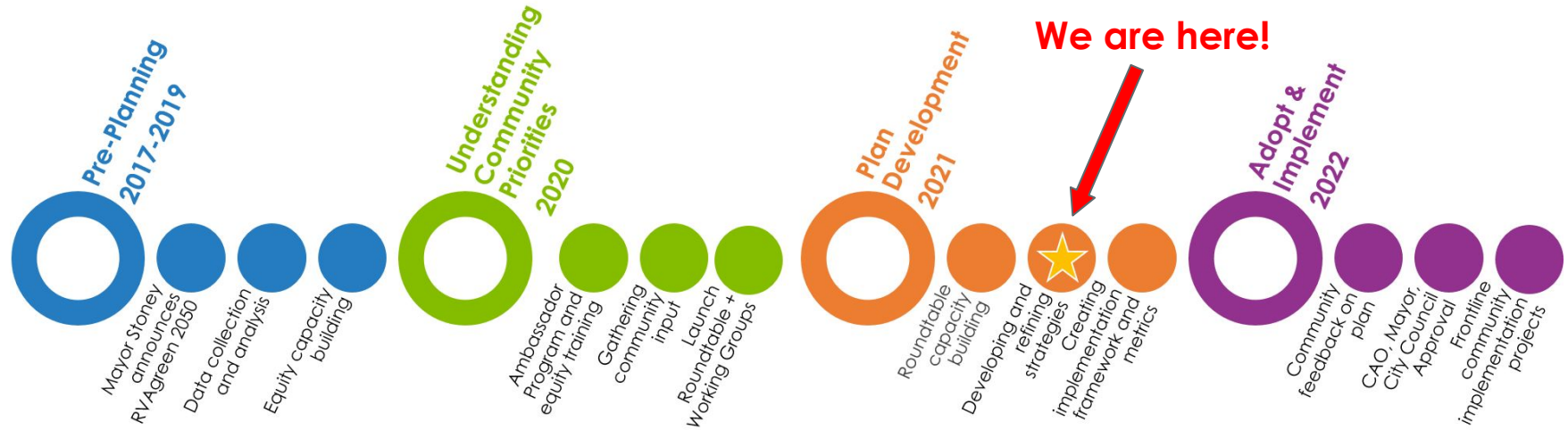
Today's Objectives

- Understand the community's feedback on our draft strategies - ***How does this feedback inform next steps?***
- Agree on a prioritization scheme for the strategies to see which ones "rise to the top" - ***Which strategies should we elevate as top priorities and how should that be decided?***

Ground Rules / Group Expectations



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?
Strategies	What are the SMARTIE actions that will lead us toward our objectives?
Implementation Plans	How are we going to implement, measure progress, and ensure accountability in this plan?

Strategy Refinement Process Summer 2021



June 16

July 14 &
August 4

Community engagement
and feedback

Prioritization

Indicators and
impacts

Implementation and
accountability

- 10-, 30-minute surveys
- Direct response to draft vision, objectives, and strategies

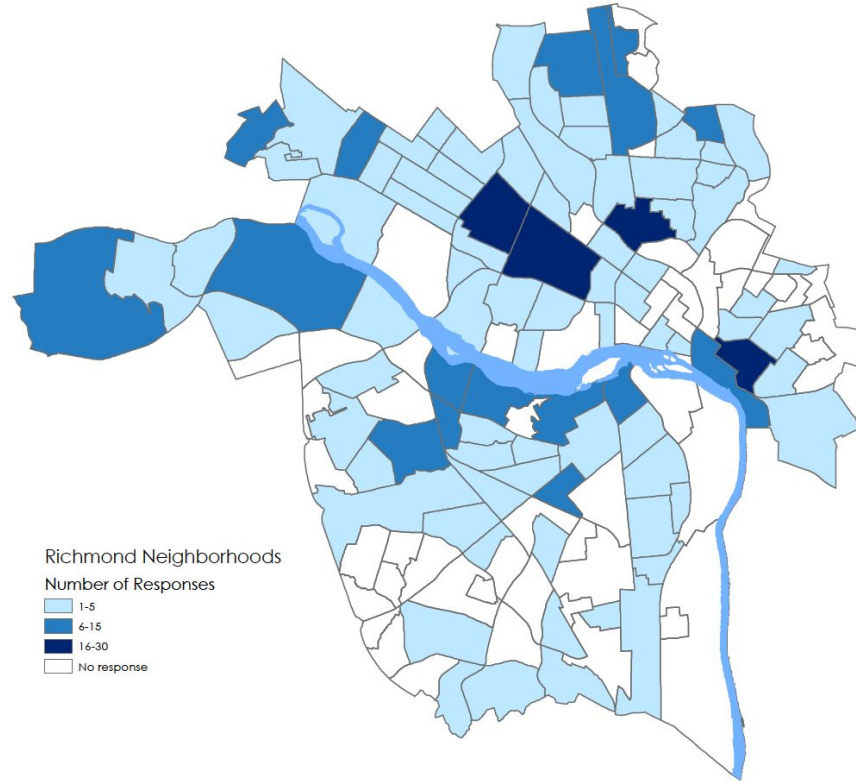
- What values do we want reflected in our plan (via selection of objectives & strategies)?
- What strategies will most help us achieve our 2030 goals?

- What is our shared understanding of what is achievable and what success looks like for each strategy?
- What are the indicators that we will use to measure the success of our objectives?

- How will we equitably implement the plan?
- How will we ensure accountability and transparency in implementation?

Community engagement results

Overview of Engagement




Survey Feedback

-  **1. Green Spaces & Trees:** Partner with the community to increase outdoor space and natural resources access, and reduce impacts of extreme heat
-  **2. Planning & Operations:** Maintain existing and create new public outdoor space
-  **3. Urban Agriculture:** Increase access to healthy foods
-  **4. Air Quality:** Identify air pollution sources and opportunities for reduction
-  **5. Complete Streets:** Improve and increase pedestrian infrastructure
-  **6. Composting:** Create organic waste diversion programs city-wide (i.e. food waste and yard debris)
-  **7. Environmental Justice:** Eliminate the impacts of illegal dumping and industrial pollution on neighboring communities
-  **8. Connectivity:** Increase pedestrian infrastructure that connects people to jobs, schools, business, etc.
-  **9. Resilience Planning:** Prioritize historically disenfranchised communities in planning for climate impacts
-  **10. Engagement:** Increase resident engagement and access to outdoor space
-  **11. Public Transit:** Expand the bike share program and increase GRTC access, frequency, reliability, and convenience
-  **12. Community Solar:** Increase incentives and remove barriers to community solar
-  **13. Government Operations:** Integrate climate action and resilience in all city plans and processes

How did the Buildings & Energy strategies rank?



 Strategy Bucket	Ranking
Community Solar	82
Government Relations	82
Residential Energy Efficiency	80
Residential Solar	79
Green Building	78
Building Codes	77
Resilient Infrastructure	76
Commercial Energy Efficiency	75
Municipal Clean Energy	74
Municipal Energy Efficiency	74
Carbon Capture	73
Education & Awareness	73
Electrification for Clean Energy	71

Draft Strategies- Public Engagement



Buildings & Energy

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

Topic	Strategy	Potential GHG Reduction Impact	Potential Climate Resilience Impact	Potential Community Priorities Impact
Clean Energy	Electrification: Catalog and track natural gas usage in all buildings and develop capital improvement plans (CIPs) to convert buildings to clean energy by 2050.			
	New Construction: Require all new municipal building construction to achieve net zero energy. Incorporate the infrastructure required to make them solar-ready, wired for EV chargers, and compatible for demand response enrollment.			
Municipal Solar	Municipal Solar: Develop a municipal renewable energy goal and draft corresponding ordinance for City Council adoption.			
Municipal Energy Efficiency	Energy Management Program-Benchmarking: Develop a municipal energy management program to benchmark energy use in all city buildings, set a goal to meet Energy Star certification guidelines, improve building energy use, and make information available in a public portal.			

Strategy Feedback - External Responses

Obj.	Strategy Bucket	Strategy	Comment/Question	Response
	Carbon Capture	Methane Leakage: Minimize methane leakage: (1) Ensure Richmond Gasworks leaks identified in leak surveys are addressed quickly in order to minimize leakage and improve resilience. (2) Assign staff responsible for tracking and advocating for the reduction of upstream methane leakage.	Natural gas consumption is counterintuitive to a long term plan for reduction of green house gases. Alternatives such as tapping into landfills for methane gas should be considered with the long term goal toward using renewable technologies and reducing consumption.	To be considered
	Carbon Capture	Methane Leakage: Minimize methane leakage: (1) Ensure Richmond Gasworks leaks identified in leak surveys are addressed quickly in order to minimize leakage and improve resilience. (2) Assign staff responsible for tracking and advocating for the reduction of upstream methane leakage.	Richmond can't continue running a natural gas utility and effectively execute a plan to decarbonize - it's a blatant and direct conflict of interest. A clear statement of intent to dissolve Richmond Gasworks is a serious omission from this document.	To be considered during further work in Financing (Buildings & Energy)
	Carbon Capture	Methane Leakage: Minimize methane leakage: (1) Ensure Richmond Gasworks leaks identified in leak surveys are addressed quickly in order to minimize leakage and improve resilience. (2) Assign staff responsible for tracking and advocating for the reduction of upstream methane leakage.	Somewhere the loss of revenue from moving away from natural gas must be addressed. The model right now is that the more gas they sell the better.	To be considered
	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	Reforestation along with building more infrastructure for alternative forms of transportation.	This concept is addressed in the plan under Trees
	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	Could the city to sell carbon credits to fund reforestation efforts?	To be considered
	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	When using concrete, invest in using CO2 injected concrete: https://www.carboncure.com/ . Again, you can reduce your building's carbon footprint with wiser material selection. Foam is not always the answer.	Interesting idea! We will consider it.
	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	What would carbon offsets look like if the city was planting trees anyway (for example)?	This concept is addressed in the plan under Trees
	Clean Energy	General (no strategy)	What does "clean energy" mean in this context? Some would argue that natural gas is clean because it has a much lower climate impact than coal. Is what you're really saying that you want to electrify all buildings and eliminate natural gas, with the assumption that the electricity comes from renewable sources? Where does nuclear fit into this?	A clean energy framework relying on energy efficiency upgrades. We will consider it.
	Clean Energy	Electrification: Catalog and track natural gas usage in all buildings and develop capital improvement plans (CIPs) to convert buildings to clean energy by 2050.	When I took solar energy classes in the early 80's at J Sarge it was presented then that new construction if built faced right and had no windows on the northside, coniferous plantings on the north side to blockwind and deciduous plantings to open the structure to the sun's heat in winter, and dozens of other easy to design preconstruction ideas easily could have saved us individually maybe millions. Had they been implemented Reagan's attack on clean energy in the form of Jimmy's solar panels that came off and Dominion buying all the rights to windmills in the Chesapeake and then never building a single one. I'd like to see the option of not having to sell your excess solar power to Dominion and get rid of these reverse meters. They are still the most costly part of the solar initiative and it's a monopoly that needs to be broken. I'm sure the technology and thought has progressed light years from the early 80's but we could have had every building optimised with this knowledge from the early 70's and municipalities and permits and planning and review just turned their backs on it. There a long way back for all that back construction practices. We need a path to show existing homeowners new ways that are affordable to make a difference. I'm sure there's all kind of new stuff out there. Like epoxy on bridges and concrete structures instead of tearing them down now they spray them, shore the cracks with specialized epoxy products and they are stronger than first built. This should be available online to help people learn about all the new stuff.	Thanks for the thoughtful comments!

Strategy Feedback - Internal Process

Objective #	Strategy Bucket	Strategy	Feedback Type	Comment	Milestone Indicator	Financing	Community Support	New Strategy	Existing Strategy	Revise Str. Language	Innovative Concept	Action Items	Response
1	Carbon Capture	Methane Leakage: Minimize methane leakage: (1) Ensure Richmond Gasworks leaks identified in leak surveys are addressed quickly in order to minimize leakage and improve resilience. (2) Assign staff responsible for tracking and advocating for the reduction of upstream methane leakage.	Suggestion	Somewhere the loss of revenue from moving away from natural gas must be addressed. The model right now is that the more gas they sell the better.		✓						How to offset Gasworks revenue?	See B&E
1	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	Suggestion	Reforestation along with building more infrastructure for alternative forms of transportation.						✓			See Environment
1	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	Question	Could the city to sell carbon credits to fund reforestation efforts?						✓			See Environment
1	Carbon Capture	Carbon Offsets: Develop criteria to determine which buildings cannot be made neutral and identify carbon offsets in lieu of retrofits.	Suggestion	When using concrete, invest in using CO2 injected concrete: https://www.carboncure.com/ . Again, you can reduce your building's carbon footprint with wiser material selection. Foam is not always the answer.							✓	Explore CO2 injected concrete	

VCU Equity Assessment

An Equity-focused Assessment of
the City of Richmond's RVAgreen 2050
Planning Process

May 2021

Report Prepared By:

URSP 637: Sustainable Community Development

L. Douglas Wilder School of Government and Public Affairs

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Example recommendations:




















- *Diversify Working Groups*, incorporate youth engagement, and attend existing community meetings to retain newly established frontline community partnerships
- Enhance the Working Groups with their own *dedicated [equity] facilitators and trainers* to expand capacity building beyond the Roundtable members
- Consider *quantifying co-benefits* in order to focus on the strategies that will have the greatest impact
- Define and publish a series of *equity-related indicators* to center the plan's implementation around continued equity















Prioritization

Why do we need to prioritize?



Quantifying Impacts of Strategies

IMPACT		
Potential Greenhouse Gas (GHG) Reduction Impact		
	High Relatively high GHG reduction potential if fully implemented (estimate)	
	Medium Relatively moderate GHG reduction potential if fully implemented (estimate)	
	Low Relatively low GHG reduction potential if fully implemented (estimate)	
Potential Climate Resilience Impact		
	Extreme Heat Potential to reduce impacts from extreme heat and heat waves	 High (direct)  Medium (indirect)  Low
	Severe Weather Potential to reduce impacts from storms / heavy precipitation	 High (direct)  Medium (indirect)  Low
	Flooding Potential to reduce impacts from river, localized, or sea level rise-related flooding	 High (direct)  Medium (indirect)  Low
	Community Potential to increase resilience of the Richmond community	 High (direct)  Medium (indirect)  Low

EQUITY		
Potential Community Priorities Impact		
	Racial Equity & Environmental Justice Potential to promote racial equity and support historically disenfranchised communities	 High (direct)  Medium (indirect)  Low
	Government Accountability Potential to promote government accountability and transparency	 High (direct)  Medium (indirect)  Low
	Community Wealth Potential to build community wealth and increase jobs and education access	 High (direct)  Medium (indirect)  Low
	Housing & Buildings Potential to expand affordable housing and reduce housing cost burden	 High (direct)  Medium (indirect)  Low
	Neighborhoods Potential to support beautiful and safe neighborhoods	 High (direct)  Medium (indirect)  Low
	Health Potential to promote physical and mental health and well-being	 High (direct)  Medium (indirect)  Low
	Engagement & Communications Potential to support equitable engagement and communication	 High (direct)  Medium (indirect)  Low

How are we prioritizing strategies?

IMPACT SCORE

GHG	The amount of GHG emissions reductions	x8
Resilience	Improved resilience to climate change impacts	x4
Feasibility	Barriers and amounts of financial and political capital required	x4
Cost-Effectiveness	The cost of implementation vs. the rate of return	x4
Community Support	Priority rankings from the 30 min survey	x4
Economic Development	The number of jobs created and sustained	x2
6 Criteria		26 Total

EQUITY SCORE

Racial Equity/Env. Justice	x6
Health and Wellbeing	x5
Gov. Accountability	x3
Community Wealth	x3
Housing and Buildings	x3
Neighborhoods	x3
Engagement and Communications	x3
7 Criteria	26 Total

Strategy Prioritization Matrix

Pathway	Objective	Strategy Bucket	Greenlink Policy Action Row	Strategy	x1	x8	x4	x4	x2	x4	WEIGHTED COMBINED FACT SCORE	% IMPACT SCORE	Racial Equity / Environmental Justice	x5	x3	x3	x3	x3	x3	WEIGHTED COMBINED FACT SCORE	% EQUITY SCORE	WEIGHTED COMBINED FACT SCORE	% COMBINED SCORE
Transportation	Objective 2	Public Transit	63	Bus Service - Improve public transit frequency, reliability, access, convenience, user experience, and local and regional connectivity. Prioritize underserved communities by connecting high-density housing to shopping and jobs.	1	5	3	4	2	4	32	95%	3	1	1	5	3	3	1	62	94%	154	100%
B&E	Objective 3	Residential Solar	50	Solar Installations: Provide financial assistance and education for clean energy upgrades and retrofits to make homes and small businesses healthy, safe, and affordable, focusing on frontline communities reducing disproportionately high energy burden in these neighborhoods.	1.5	5	4	4	2	3	34	97%	3	1	3	1	5	1	1	56	86%	150	99%
Environment	Objective 3	Engagement	3	Neighborhood Prioritization - Use community input and data (such as the Climate Equity Index, RVA311, RVAH20, and other sources) to identify and prioritize neighborhoods for extreme precipitation and flooding resilience projects including assessing existing stormwater infrastructure, green alleyways, stream restoration, and depaving.	3	1	5	3	1	4	70	62%	3	3	5	1	1	3	5	78	100%	148	99%
B&E	Objective 2	Residential Energy Efficiency	7	Energy Efficiency Assistance: Aid households that have the highest energy burden with energy efficiency upgrades through community-based programs, advocacy, partnerships, and Residential PACE (Property Assessed Clean Energy).	1.5	5	3	4	3	4	36	99%	3	1	1	1	5	1	1	50	73%	146	97%
Transportation	Objective 2	Public Transit	62	Bus Stops - Improve and maintain priority transit stops in low-income and low car ownership areas with amenities for enhanced safety, accessibility, convenience, and resilience.	2	5	3	4	2	4	36	99%	3	1	1	1	1	5	1	50	73%	146	97%
Waste	Objective 4	Environmental Justice		Site Plan Review - As part of site plan review, implement measures to identify the potential impacts of new industrial facilities on neighboring communities, identify potential risks of locating hazardous materials in flood-prone areas, and incentivize waste reduction programs and manufacturing processes that minimize greenhouse gas emissions and other environmental impacts.	2	3	5	4	2	5	92	95%	3	3	1	1	1	3	1	54	84%	146	97%
Community	Objective 1	Funding	38	Climate Impact Grant - Provide a grant program through the creation of a climate impact fund to help target communities recover from extreme weather events, weatherization of homes, and appliance ownership and provide grant opportunities for local nonprofits to work on climate action and resilience projects in target neighborhoods	2	3	2	4	4	4	80	82%	3	3	3	1	3	3	1	66	96%	146	97%
Environment	Objective 2	Planning & Operations	5	Urban Heat Islands - Develop an urban heat island readiness and reduction plan with a focus on vulnerable populations and ecosystems. Include tactics such as mandating benches and shade structures at all bus stops and establishing "rubber-stamped" shade structure designs that businesses can build and install in the public right-of-way.	3	1	4	3	2	5	72	67%	3	3	1	1	3	5	3	72	99%	144	96%
B&E	Objective 3	Community Solar	52	Ground-Mounted Solar: Incentivize opportunities for local ground-mounted solar and community solar farms on parking lots, non-buildable, or previously disturbed land, with access to community solar for energy-burdened communities.	2	5	4	3	3	4	38	100%	3	1	1	1	3	1	1	44	58%	142	95%
Environment	Objective 1	Urban Agriculture		Community Gardening - Develop - and make visible and accessible - an urban agriculture program that partners with food justice community organizations and includes an apprenticeship training program. Identify changes needed in the community garden ordinances for sales and increased funding for staffing, maintenance, and materials needed. Incentivize owners of multifamily dwellings to remove barriers to individuals growing their own food and allow universal access to community gardening and composting.	1.5	3	4	4	3	5	88	91%	1	3	1	3	1	3	3	54	84%	142	95%

Ranking Methodology

1	Sort by IMPACT score, informed by equity	×		<ul style="list-style-type: none">• Looked like a traditional climate action plan• Resilience is not prioritized• Equity is not centered
2	Sort by EQUITY score, informed by impact	×		<ul style="list-style-type: none">• Looked like a resilience plan• Mitigation is not prioritized
3	Top IMPACT and EQUITY only	×		<ul style="list-style-type: none">• Too limiting; number of strategies would make it difficult to achieve our 2030 goals
4	Sort by combined IMPACT + EQUITY scores	✓		<ul style="list-style-type: none">• “Not too hot, not too cold, just right”• Isolate strategies in the top 75th percentile based on combined scores



Top 75th Percentile Strategies by Objective

	Total	Obj 1	Obj 2	Obj 3	Obj 4
B&E	14	4	5	4	1
Community	13	11	2		
Transportation	5	2	3	0	
Environment	11	2	4	3	2
Waste	4	0	1	1	2



Example Buildings & Energy Strategies

Top 3

Obj. 3	150 (99%)	Solar Installations: Provide financial assistance and education for clean energy upgrades and retrofits to make homes and small businesses healthy, safe, and affordable, focusing on frontline communities reducing disproportionately high energy burden in these neighborhoods
Obj. 2	146 (97%)	Energy Efficiency Assistance: Aid households that have the highest energy burden with energy efficiency upgrades through community-based programs, advocacy, partnerships, and Residential PACE (Property Assessed Clean Energy)
Obj. 3	142 (95%)	Ground-Mounted Solar: Incentivize opportunities for local ground-mounted solar and community solar farms on parking lots, non-buildable, or previously disturbed land, with access to community solar for energy-burdened communities

Bottom 3

Obj. 1	72 (1%)	Green Roofs: Evaluate municipal facilities to identify green roof candidates. Develop green roof design standards and install green roofs in areas that will benefit most from increased green space, reduced stormwater runoff, and cost reductions
Obj. 1	68 (0%)	Methane Leakage: Minimize methane leakage: (1) Ensure Richmond Gasworks leaks identified in leak surveys are addressed quickly in order to minimize leakage and improve resilience. (2) Assign staff responsible for tracking and advocating for the reduction of upstream methane leakage
Obj. 2	68 (0%)	Enforcement: Train building inspectors and cultivate the department's capacity to enforce letter and spirit of current building code provisions related to energy efficiency requirements during plan review

Activity

Discuss the strategies based on the IMPACT+EQUITY combined score

Breakout room discussion (15 min. per objective):

1. Do the strategies that “made the cut” seem appropriate to you?
 - Keep in mind our first goal is to reduce carbon emissions by 45% by 2030.
 - Use stars & x’s to show support or recommend the ↑ or ↓ prioritization of a strategy
2. Are we comfortable with the # of strategies to be prioritized?
3. Can we all fully commit to ensuring the success of these strategies?
4. Does it make sense to include this strategy within the timeline of the 2030 goal?

Link to activity

5.26 - Buildings and Energy - Prioritization Activity

- Breakout Room #1 (Dawn) : Start with Objective 1
- Breakout Room #2 (Wendy) : Start with Objective 2
- Breakout Room #3 (David) : Start with Objective 3

We will rotate every 15 minutes & stay with our groups and facilitator the whole time!

*Go into breakout
rooms!*

Exit breakout rooms!

Wrap-up and next steps

- Next meeting: June 16 @11am, “RVAgreen2050 Indicators & Impacts”
- NOW:
 - General reflections?
 - Fill out feedback survey
 - Share updates, upcoming events, and resources in the chat

THANK YOU!