

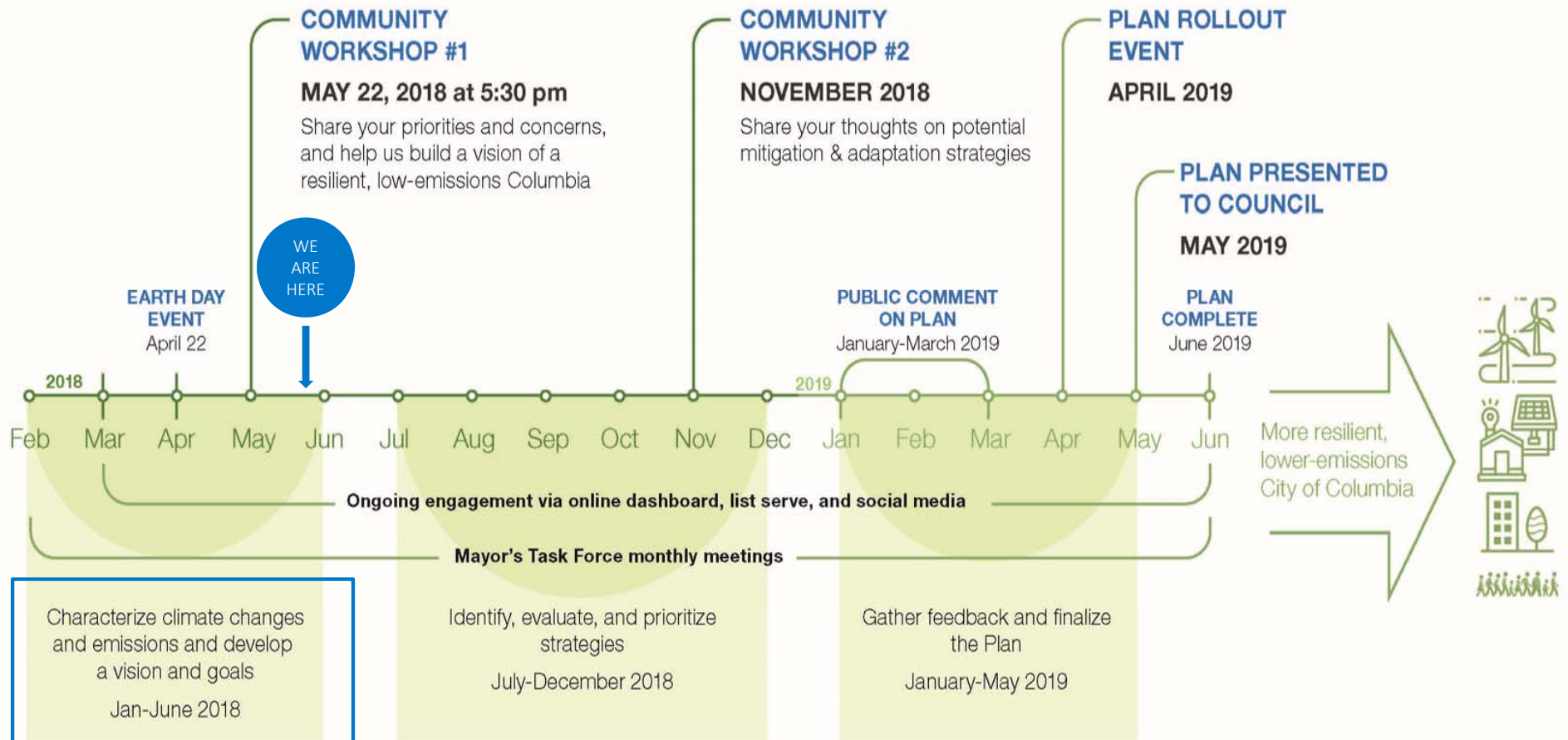


# City of Columbia Climate Action & Adaptation Plan

City Council Work Session | June 4, 2018

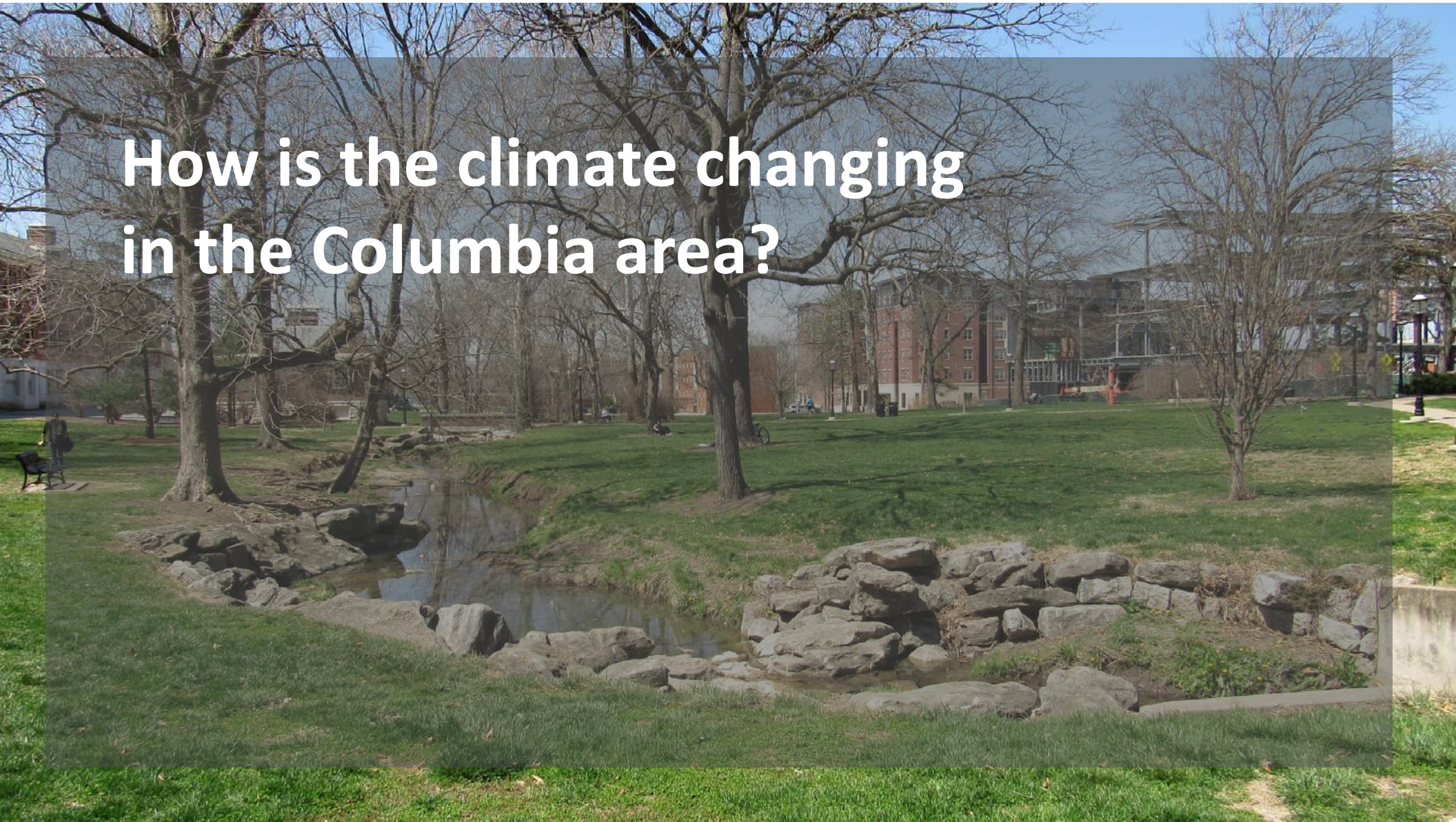


## COLUMBIA CLIMATE ACTION AND ADAPTATION PLANNING PROCESS



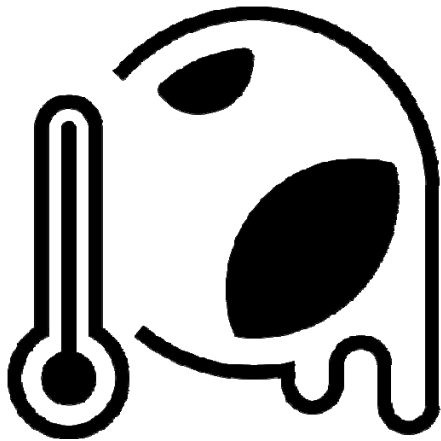


**How is the climate changing  
in the Columbia area?**





# Changes to date: Temperature



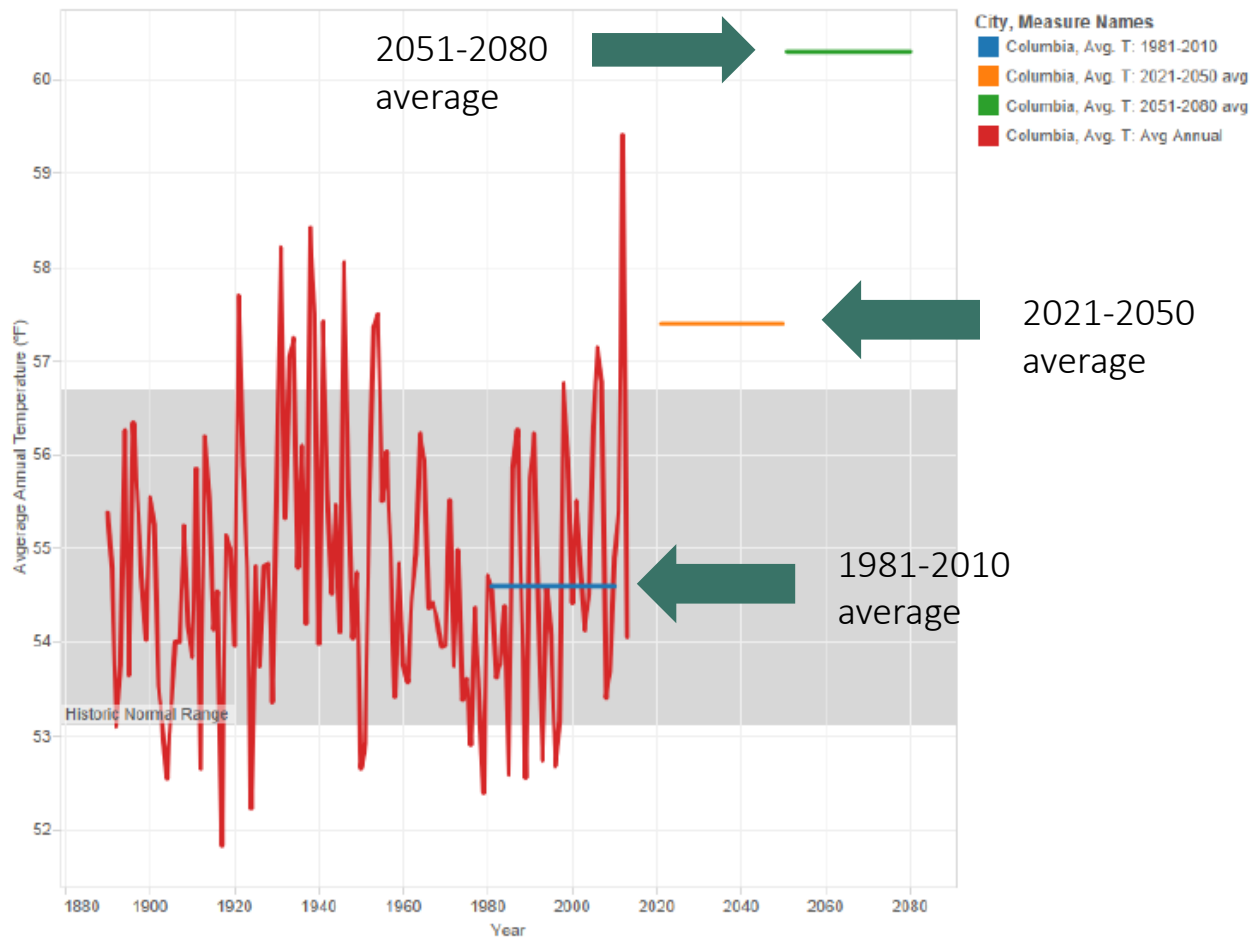
- Compared to the 1900-1950 average, annual temperatures in the Midwest are now 1.3°F warmer on average.
- Winter and spring have seen the most warming.
- The coldest day of the year is now 2.9°F warmer.

# Changes to date: Precipitation



- Columbia is getting about 10 percent more precipitation, with more of that increase coming in the winter and spring.
- The biggest storms are bringing more rain than they used to.

# Projections: Average Temperature

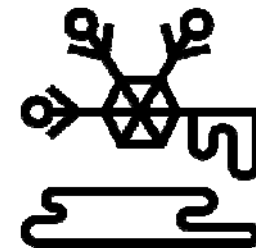


# Projections: Extreme Temperatures

Today we have an average of

5

days per year with a  
temperature above 95°F



That is projected to increase to

50

days per year by mid-century.

Meanwhile, cold days will not be as cold.

The coldest day of the year could be  
9.5°F warmer by mid-century.

# Projections: Precipitation

On average:

7%

more total annual  
rainfall by 2050



More rain in  
spring and fall



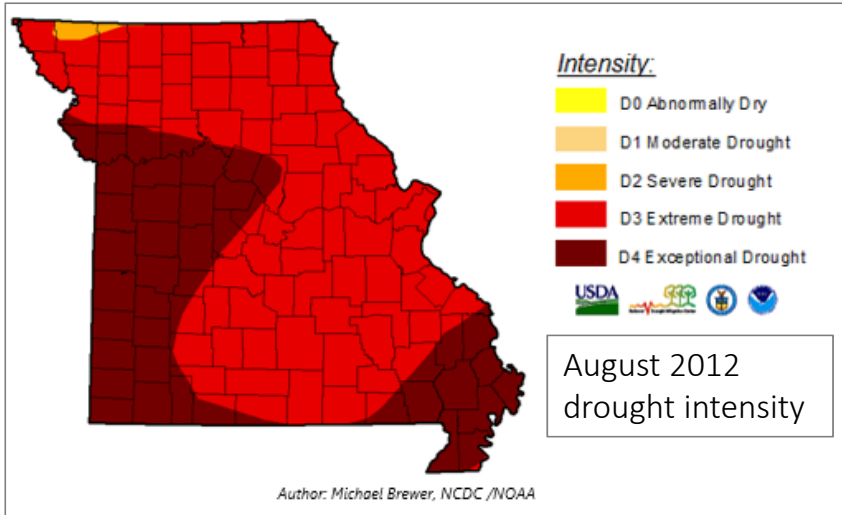
Less rain  
in the  
summer



Heavier  
rain events



# What do the changes mean?

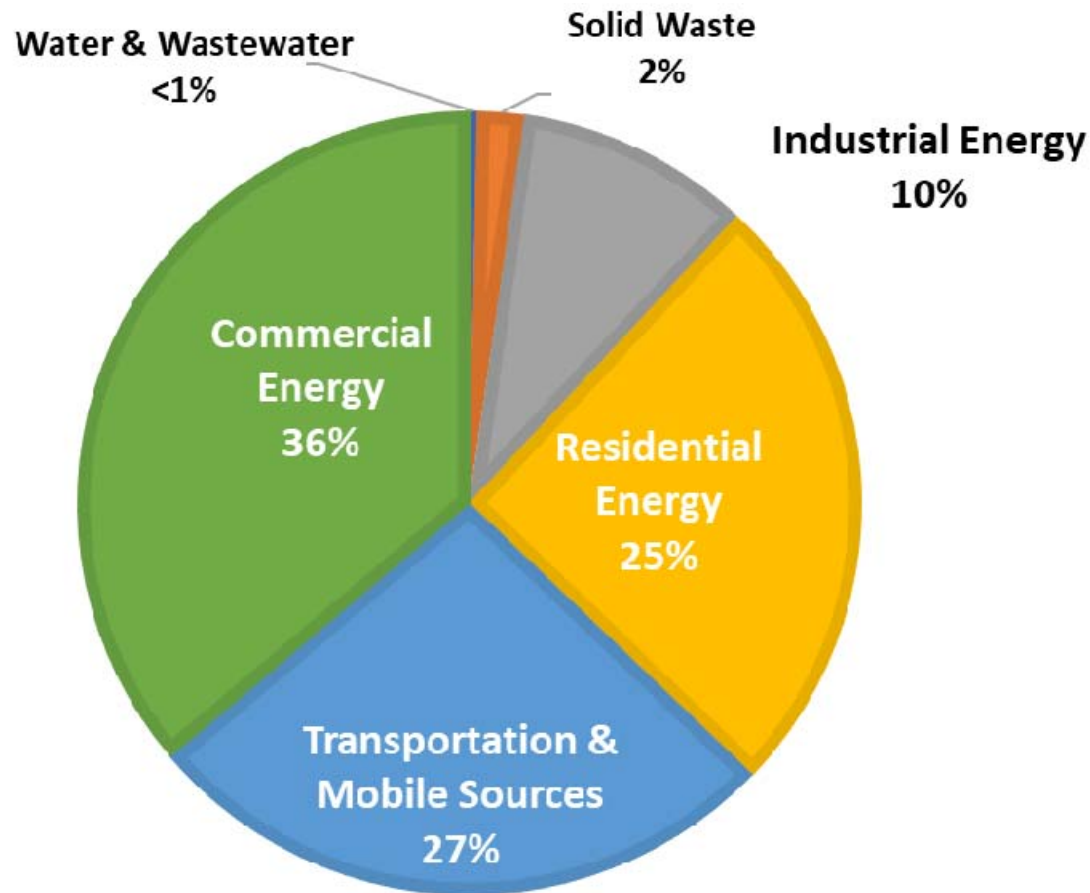




How do our greenhouse gas emissions contribute to the climate challenge?



# Where do our greenhouse gas emissions come from?





# What is our carbon footprint?

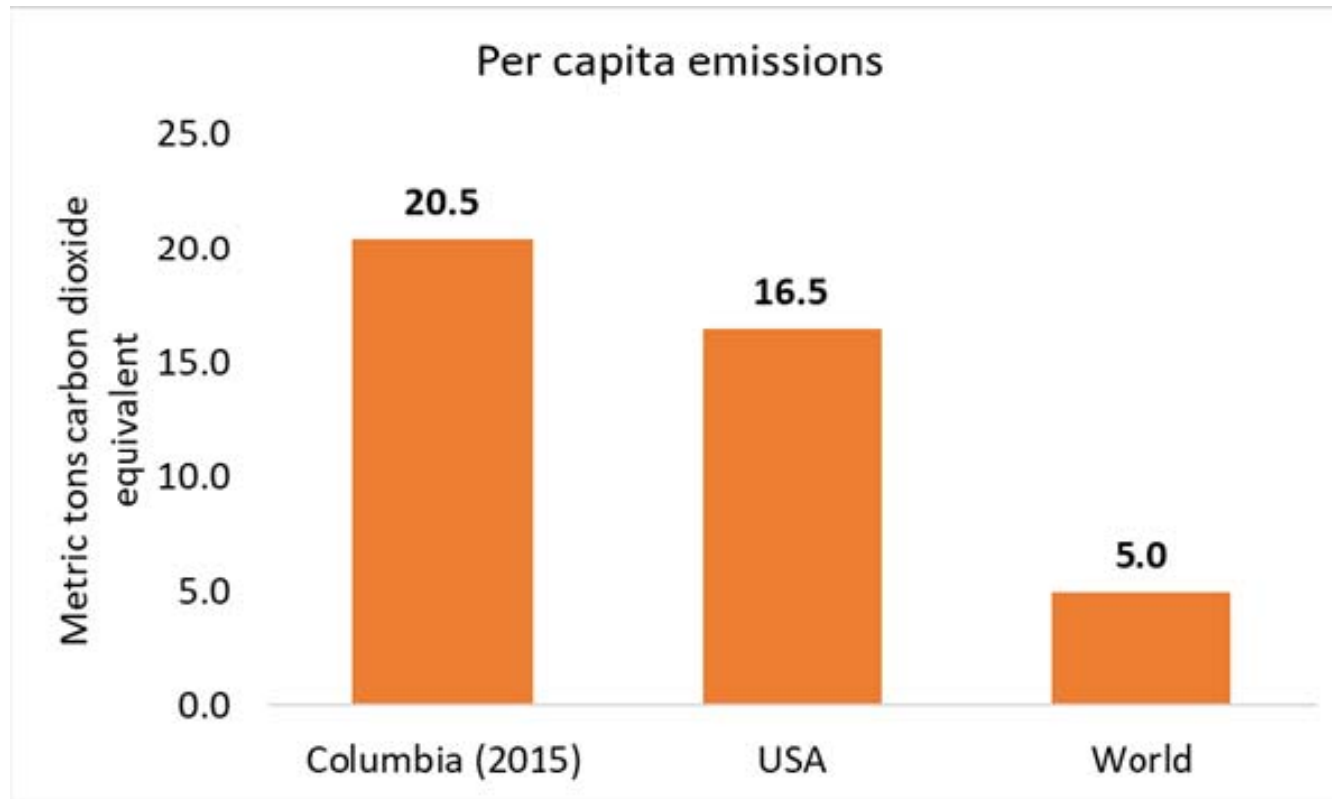


Between 2010 and 2015:

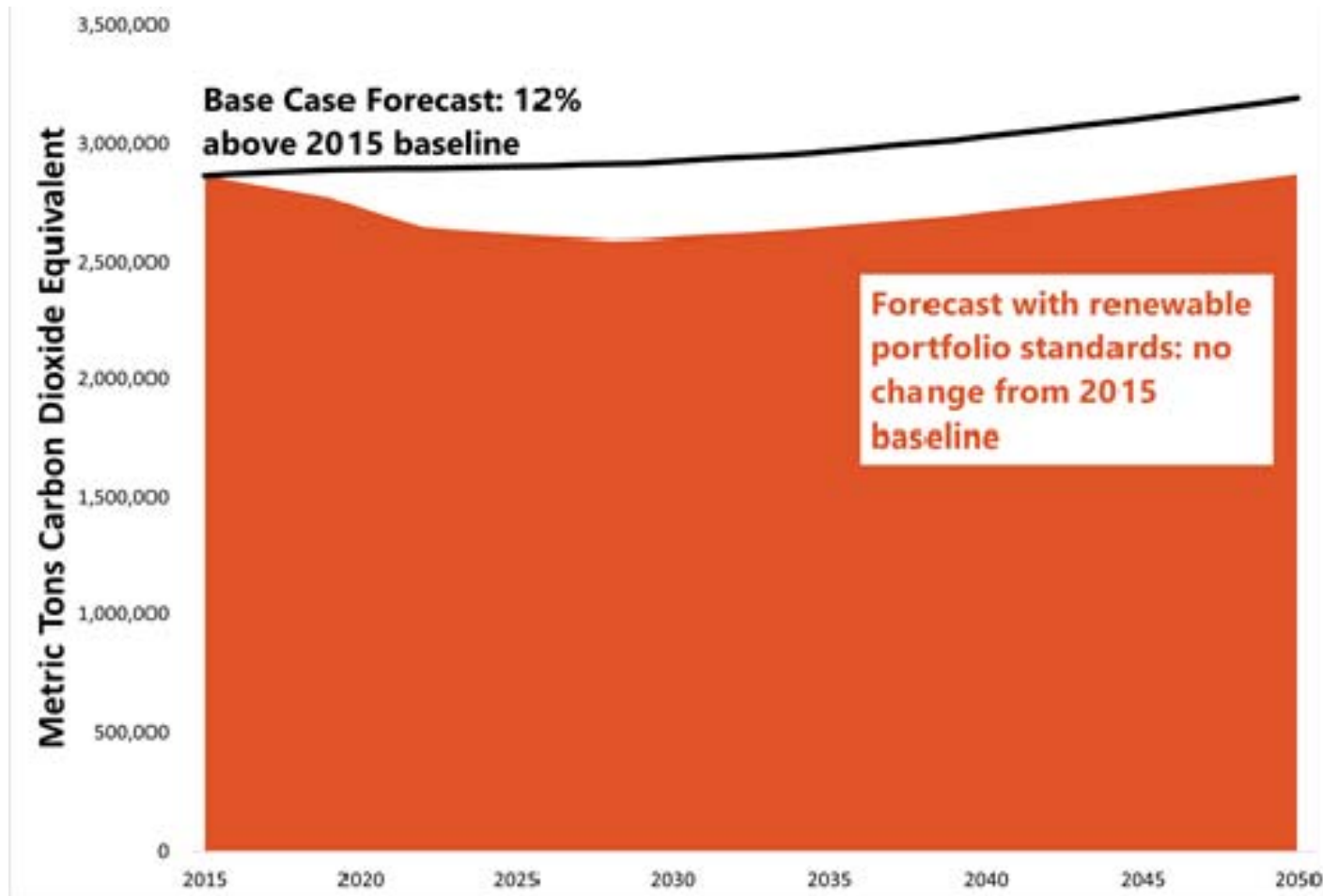
Total greenhouse gas emissions increased by 10%.

Per capita emissions increased from 20.3 to 21.1 metric tons of CO<sub>2</sub> per person

# What is our carbon footprint?

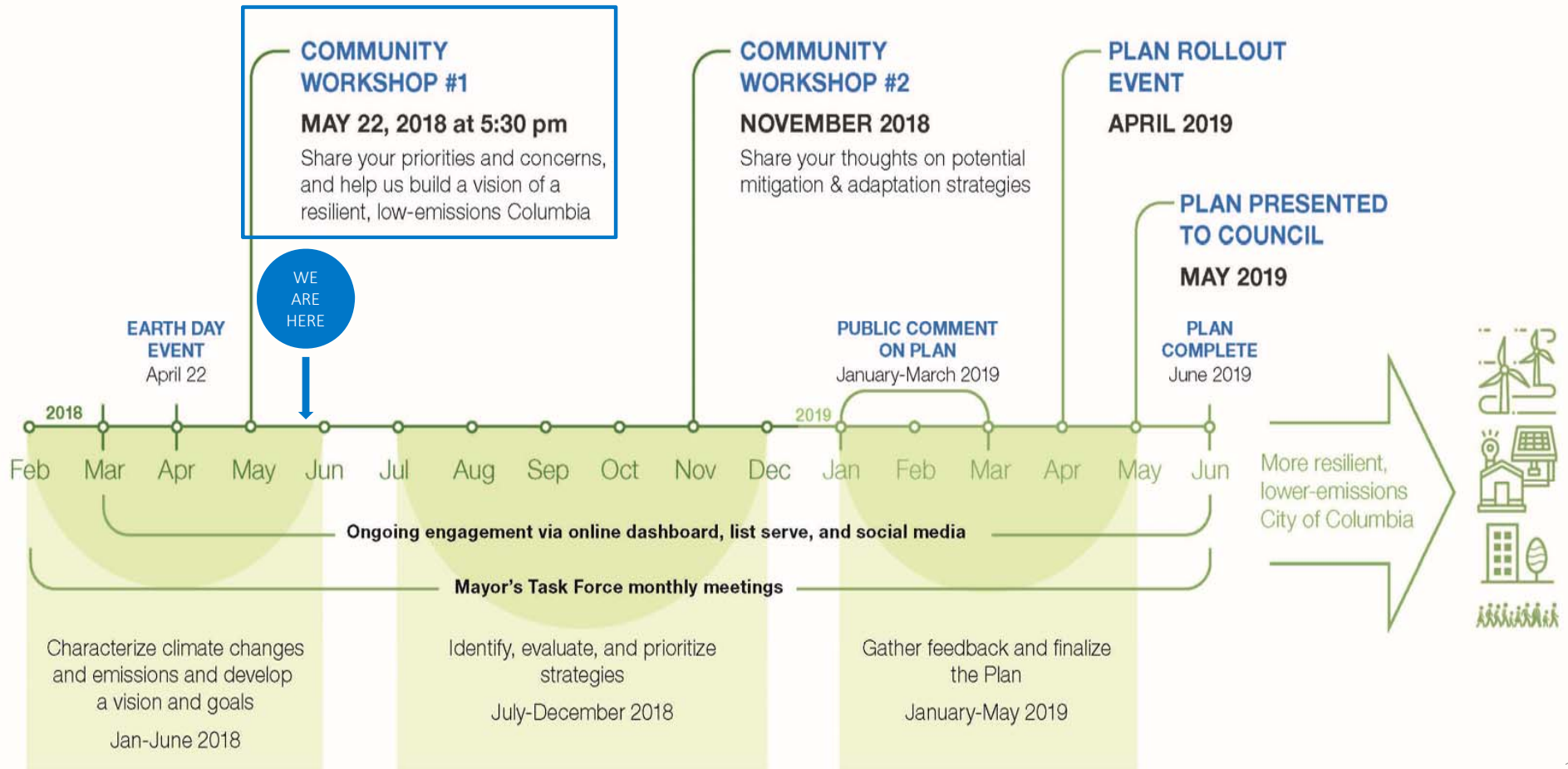


# What does the future look like?





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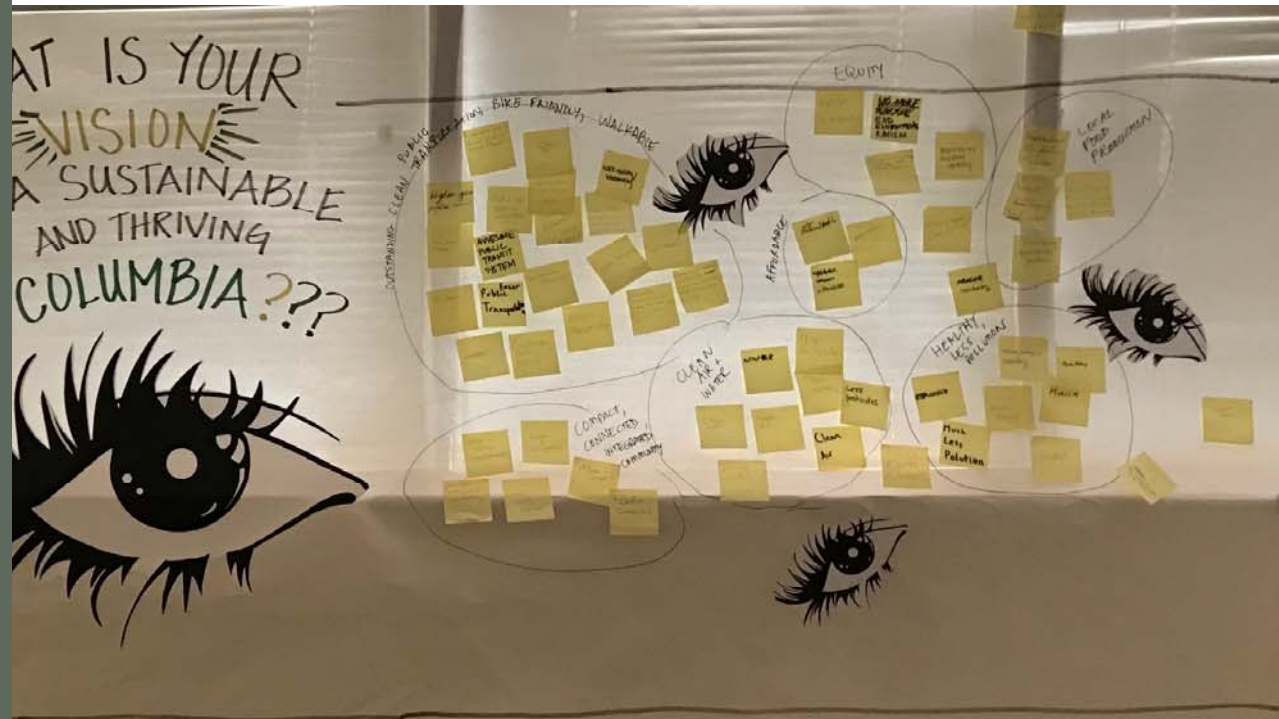
# What we heard on May 22....





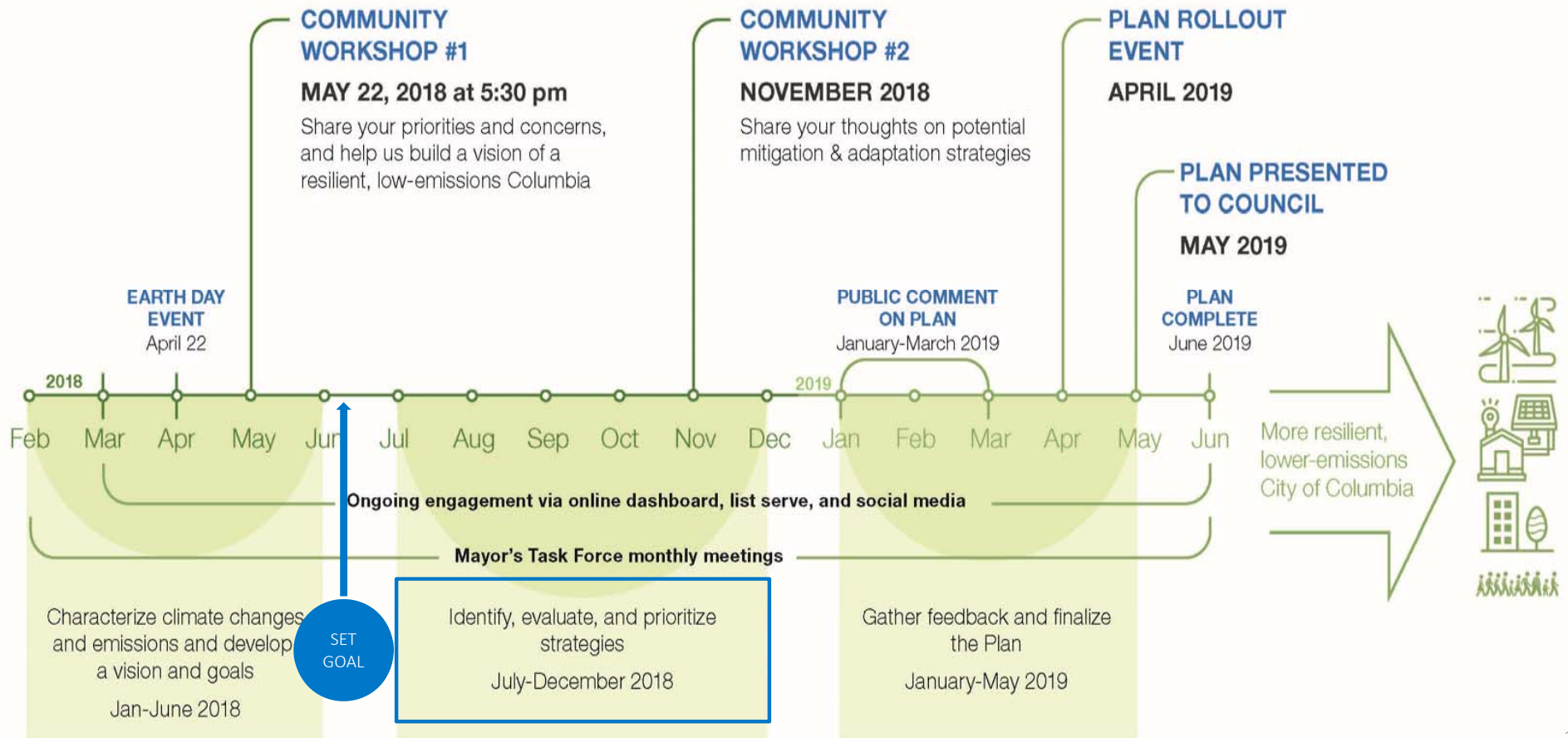
# What they want to see in Columbia

- Outstanding public transit, bike-friendly, walkable
- Clean air and water
- Energy-efficient buildings
- Carbon neutral
- Healthy
- Green space
- Sustainable
- Compact, connected, integrated
- Zero waste, less plastic
- Equity
- Local food production
- Affordable
- Leader in innovation
- Awareness

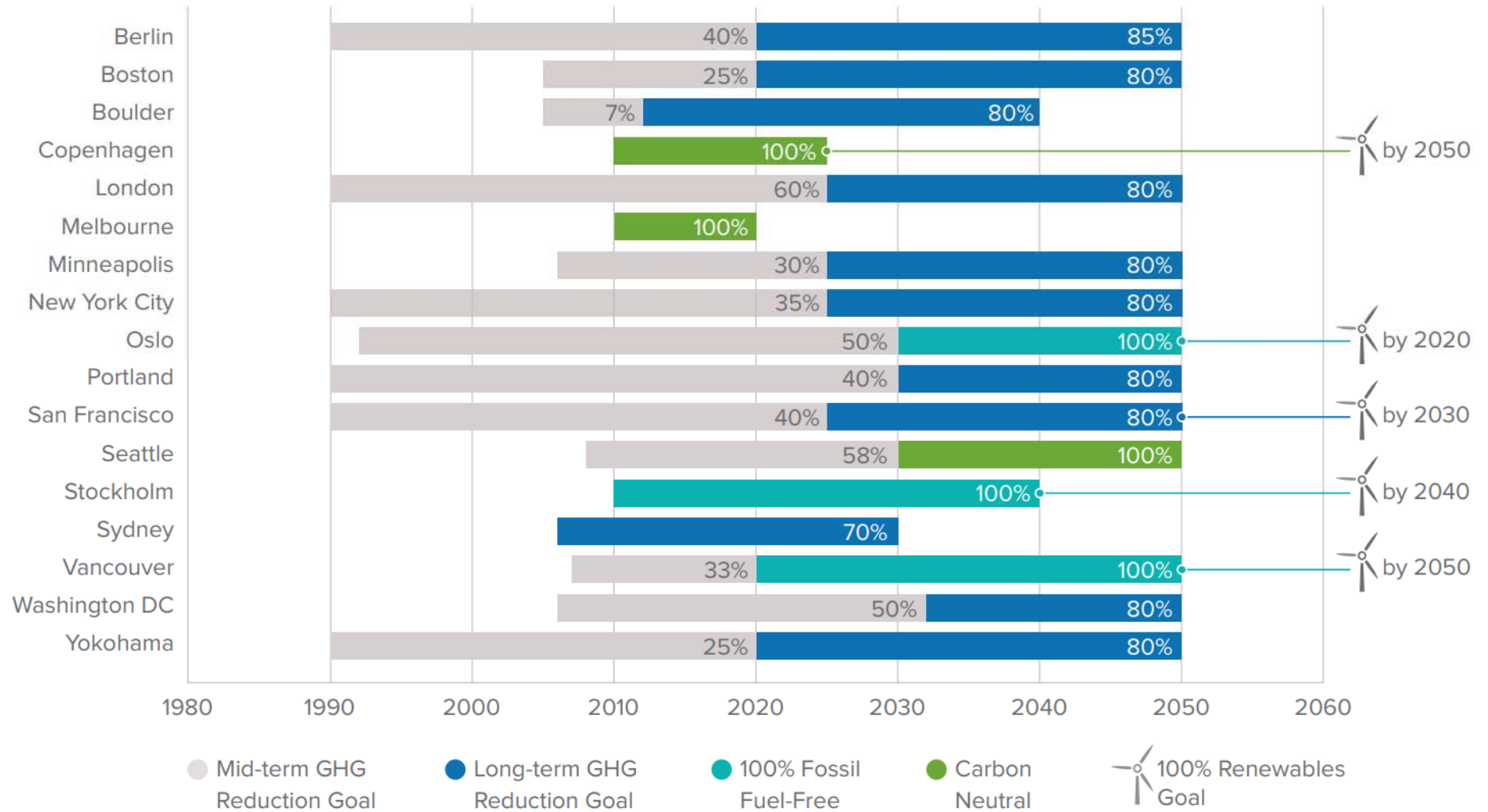




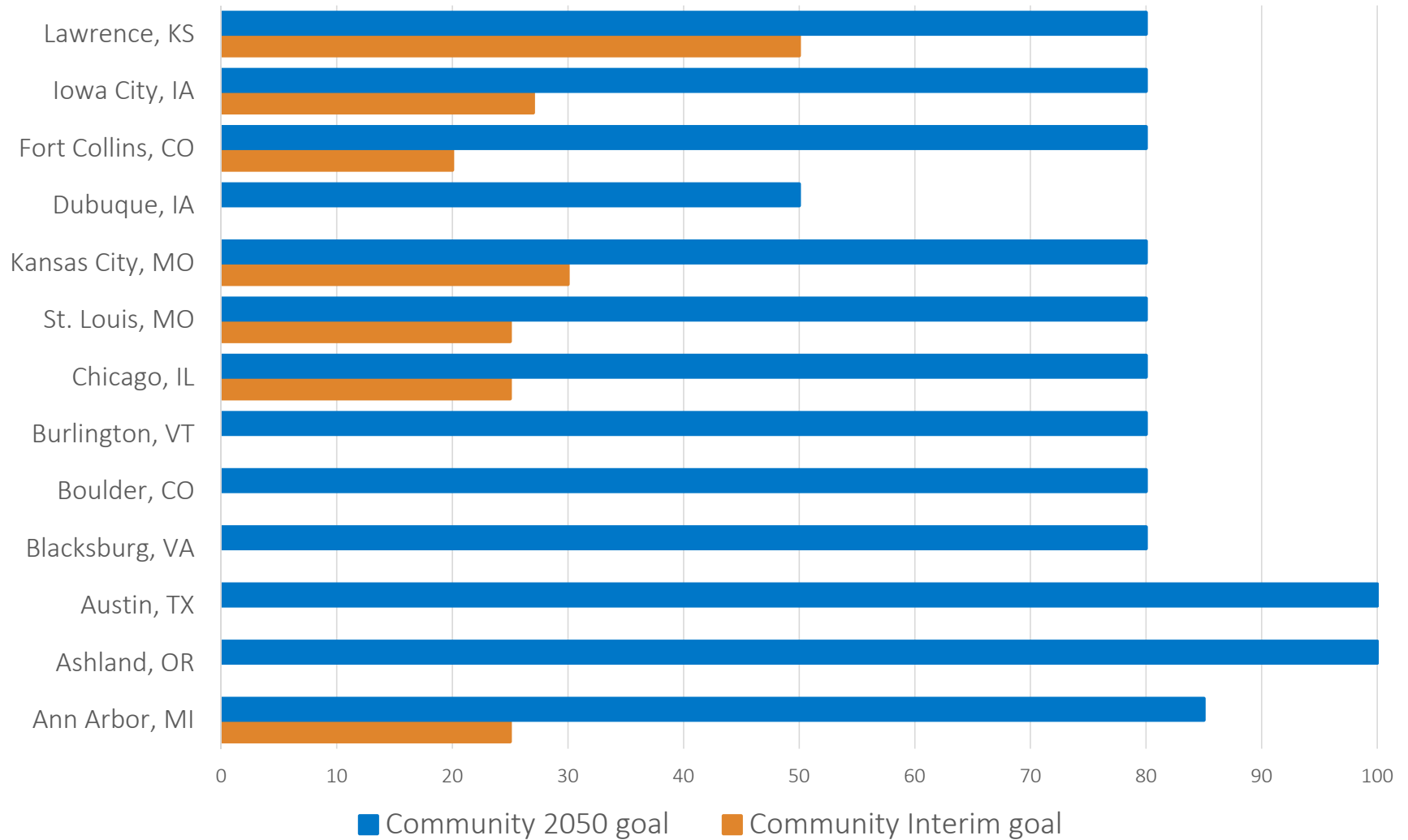
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## CNCA Cities' Long-Term and Interim GHG Reduction Targets



## Emission reduction targets from other cities





# Potential emissions reduction targets

Overarching Target Options seen in other communities	Additional Ways to Present It
<ul style="list-style-type: none"><li>• <b>80x50:</b> 80% reduction by 2050</li><li>• Other reduction % by 2050</li><li>• <b>Carbon neutral:</b> 100% reduction by 2050</li><li>• <b>Per-capita:</b> e.g., reduction to 2 MTCO<sub>2</sub>e per person by 2050</li></ul>	<p>The following targets would be equivalent to an 80% reduction by 2050:</p> <ul style="list-style-type: none"><li>• <b>Annual reduction target:</b> 2.5% reduction per year</li><li>• <b>Interim year goals:</b> providing interim year targets, such as a 2030 target, allows the City to track progress towards meeting a 2050 goal</li></ul>

# Potential emissions reduction targets

80x50	<ul style="list-style-type: none"><li>✓ Aligns with targets set by other cities</li><li>✓ Difficult to achieve</li></ul>
Carbon neutrality	<ul style="list-style-type: none"><li>✓ Highly ambitious</li><li>✓ Relies on credits, which could be expensive, or generating excess renewable energy to offset fossil fuel energy use</li><li>✓ Could be perceived as an “easy out”</li><li>✓ Difficult to achieve</li></ul>
Per capita target	<ul style="list-style-type: none"><li>✓ Can track emission reduction achievements while accounting for expected population growth</li><li>✓ When not paired with an overarching target, could be seen as a cop out (e.g., not as ambitious as a target that does not adjust for population growth)</li></ul>
Annual reduction target	<ul style="list-style-type: none"><li>✓ Requires ongoing action rather than delayed action</li><li>✓ Requires frequent GHG inventories to ensure target is being met</li><li>✓ Difficult to achieve</li></ul>

# Proposed emissions reduction targets

Target recommendations from Task Force	Municipal operation goals
<ul style="list-style-type: none"><li>• Interim year goal: 35% by 2035</li><li>• 80x50: 80% reduction by 2050</li><li>• Carbon neutral: 100% reduction by 2060</li></ul>	<ul style="list-style-type: none"><li>• Interim year goal: 50% by 2035</li><li>• Carbon neutral: 100% reduction by 2050</li></ul>



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