2030 GHG Analysis and Climate Implementation Strategy

Executive Board | January 26, 2023

Puget Sound Regional Council

Today's Briefing

- Reminder of work to date and previous briefings on the 2030 climate analysis and sensitivity testing
- Overview of the technical report
- Analysis results of a hybrid scenario
- Discussion of next steps

2030 GHG Analysis and Climate Implementation Strategy

As directed by the adopted Regional Transportation Plan:

- Develop a 2030 transportation network and inputs to conduct a 2030 analysis aligned with PSRC's adopted Four-Part Greenhouse Gas Strategy; and
- Continue to work with partner agencies including PSCAA on implementation strategy for achieving climate goals and monitor progress.

Deadline set for this work by December 31, 2022

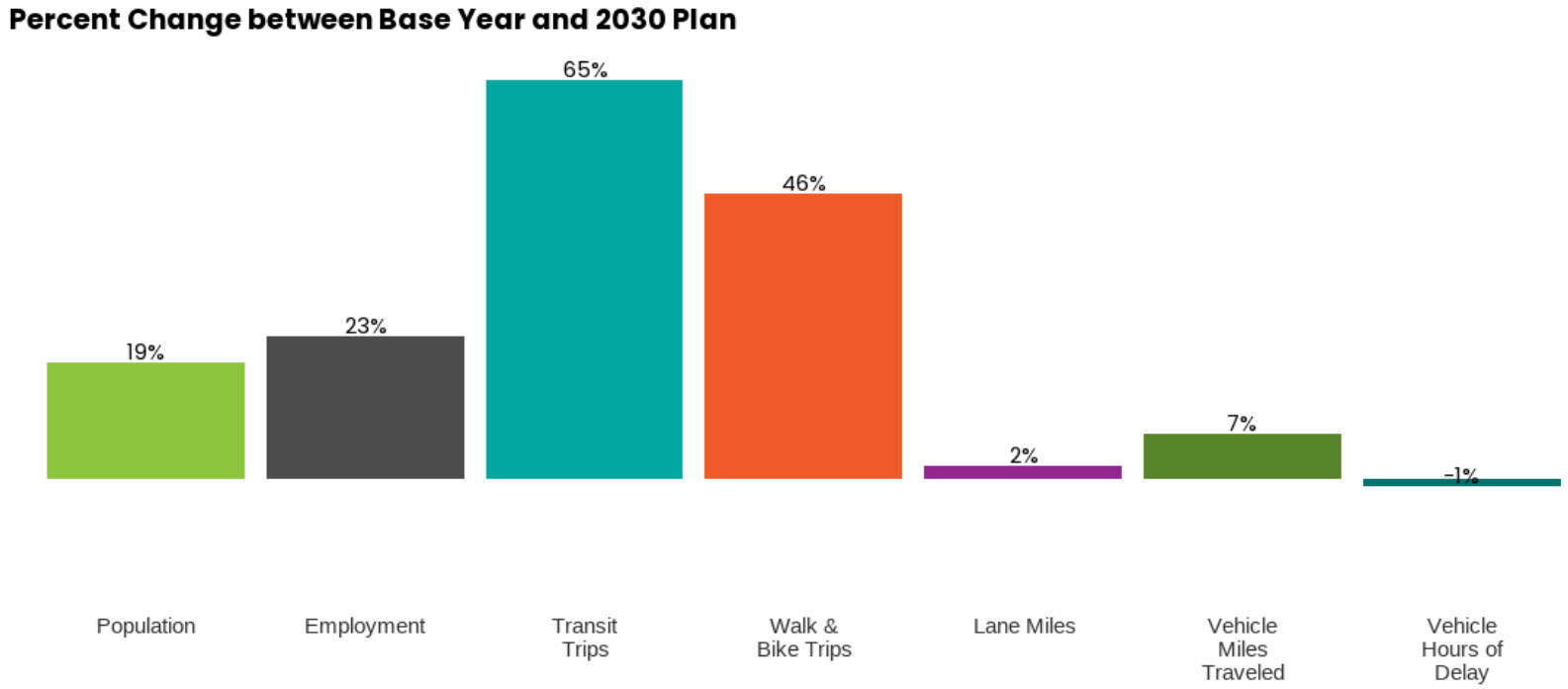
2030 GHG Analysis and Climate Implementation Strategy

Deliverables:

- 2030 network and analysis
- Identification of gap to 2030 goal (on-road transportation only)
- Identification of strategies and implementation and monitoring plan towards meeting goal
- Consider in future project selection processes

Regional Transportation System in 2030

The Plan is focused on transportation options

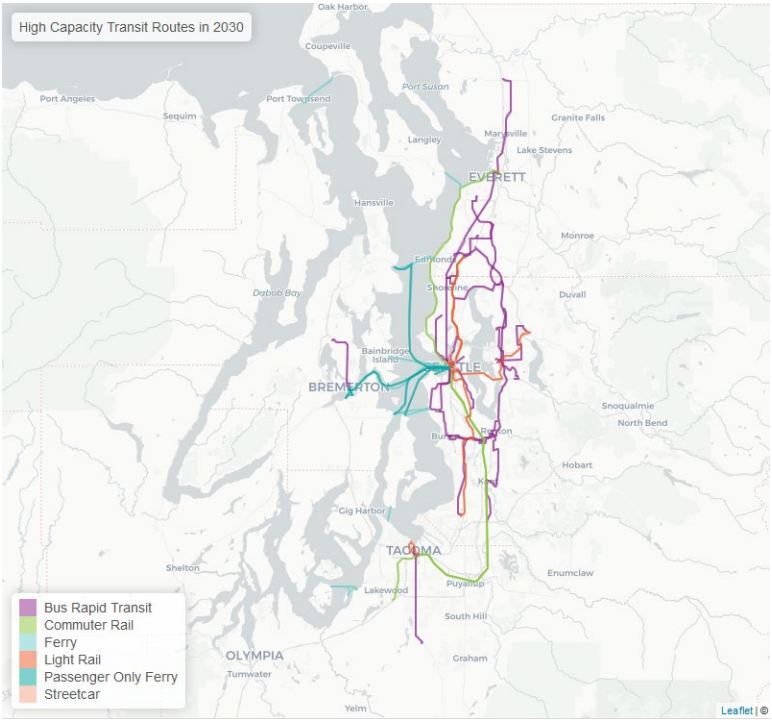


Source: PSRC SoundCast Activity Based Model, Fall 2022 for King, Kitsap, Pierce and Snohomish counties.

2030 High-Capacity Transit Network

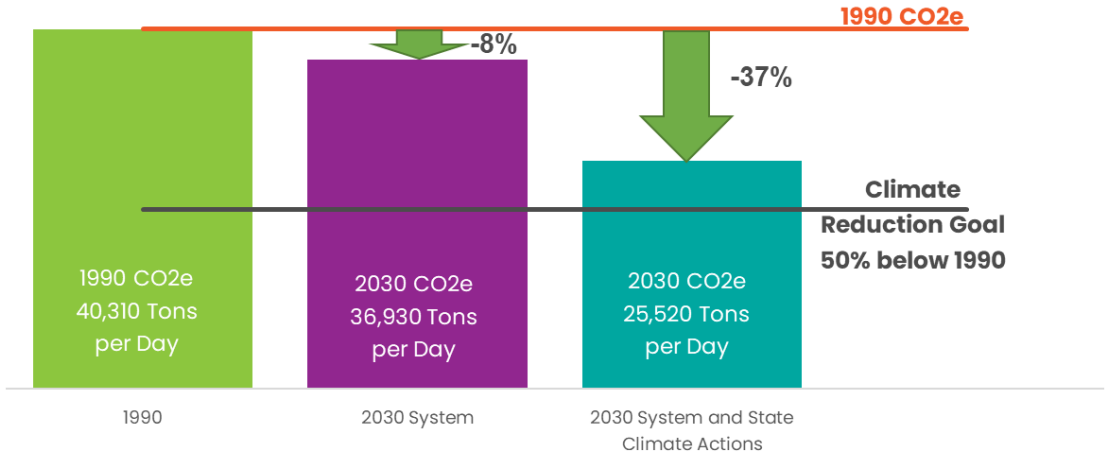
By 2030, expanded High-Capacity Transit options would operate in all four counties

- 21 BRT routes are planned to be in operation by 2030 with routes operated in each county
- 7 passenger-only ferry routes are planned to be in operation by 2030 connecting Bremerton, Port Orchard, Kingston, Vashon Island and West Seattle with Downtown Seattle
- 50 light rail stations spanning 79 miles connecting Federal Way, Redmond and Lynnwood in addition to Downtown Tacoma



2030 GHG Gap Analysis

- The 2030 system reflects VISION 2050, the RTP and the region's vehicle fleet under current federal fuel economy standards
- Further gains are seen from the latest adopted state actions – clean fuels, zero emission vehicles and the Climate Commitment Act

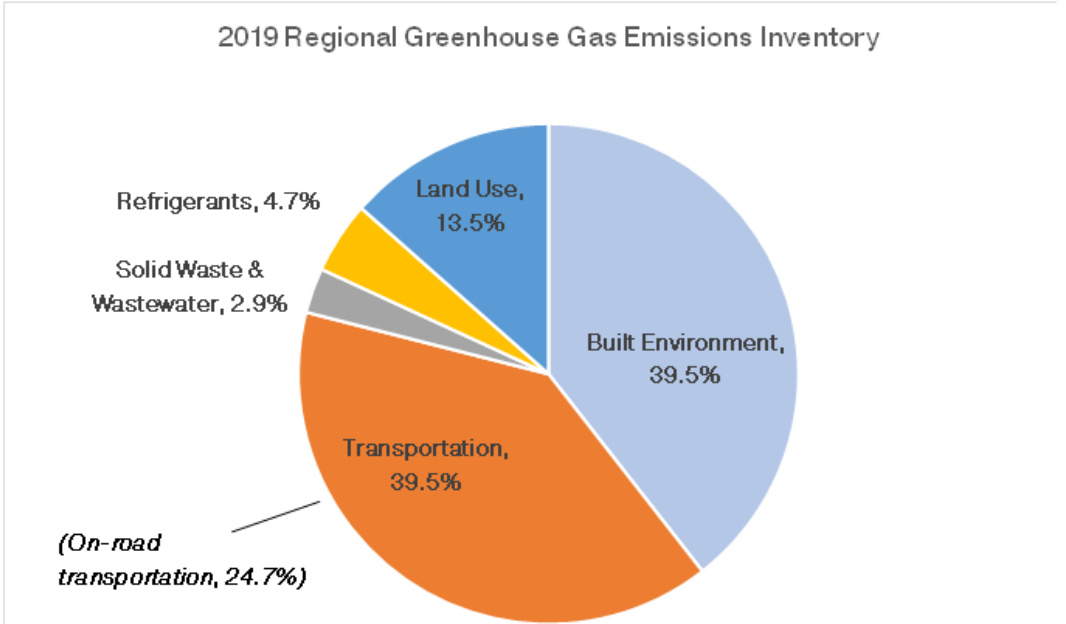


The region needs to reduce GHG an additional 13% to meet climate goals

Working with our Partners

- Assumptions are based on the recently completed Puget Sound Regional Emissions Analysis Project
  - Seven agency partnership to update greenhouse gas inventories for each county (PSRC, PSCAA, King, Kitsap, Pierce, Snohomish Counties, City of Seattle and Seattle City Light)
  - Includes forecast “wedge analyses” for 2030 and 2050, understanding the contribution of all sources and potential levers to reduce emissions
- Specific to on-road transportation, estimates emission impacts from:
  - Clean Fuel Standard
  - Internal Combustion Engine Ban / Move Ahead WA
  - Climate Commitment Act

Updated Regional GHG Inventory



King County

Pierce County

Snohomish County
Washington

Seattle

PUGET SOUND
Clean Air Agency

Puget Sound Regional Council

Sensitivity Test Results

Four-Part Greenhouse Gas Strategy

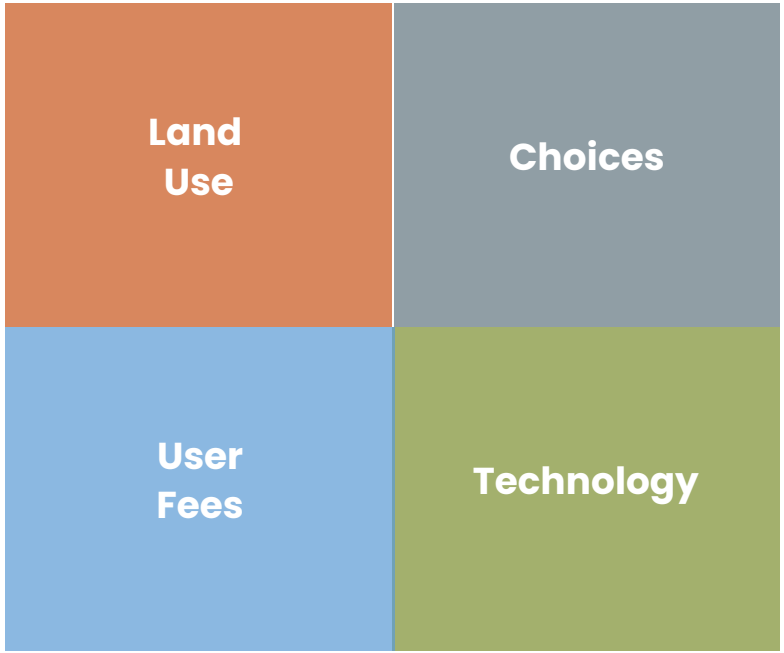
Relative to PSRC's role in on-road transportation:

Land Use: VISION 2050 regional growth strategy

Choices: Expanded and integrated regional transit network, active transportation and other multimodal investments

User Fees: State facility tolls, transition to road usage charge in later years

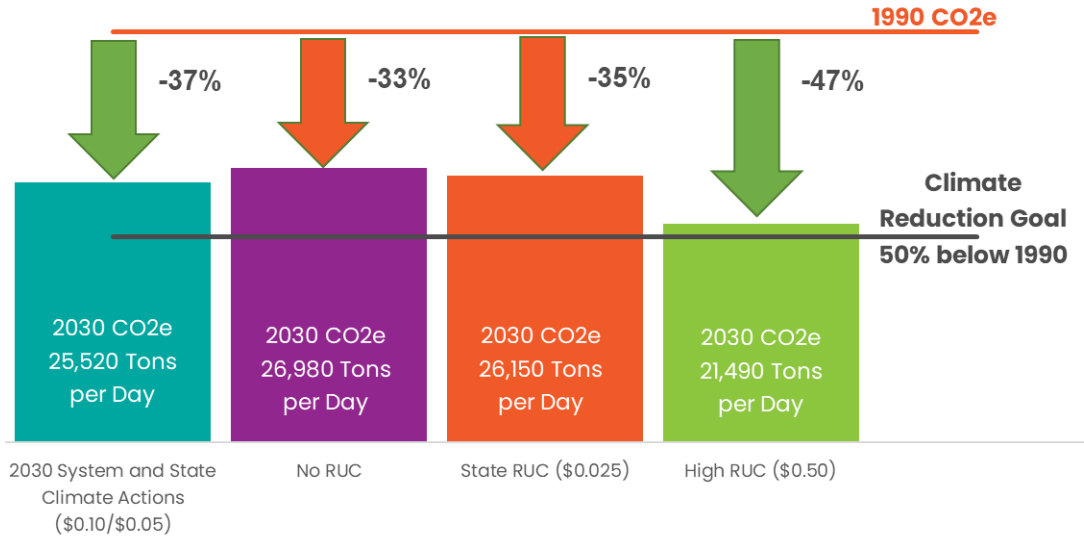
Technology: Shift to zero emission vehicles, Clean Fuels Standard, etc.



User Fees

Road Usage Charge

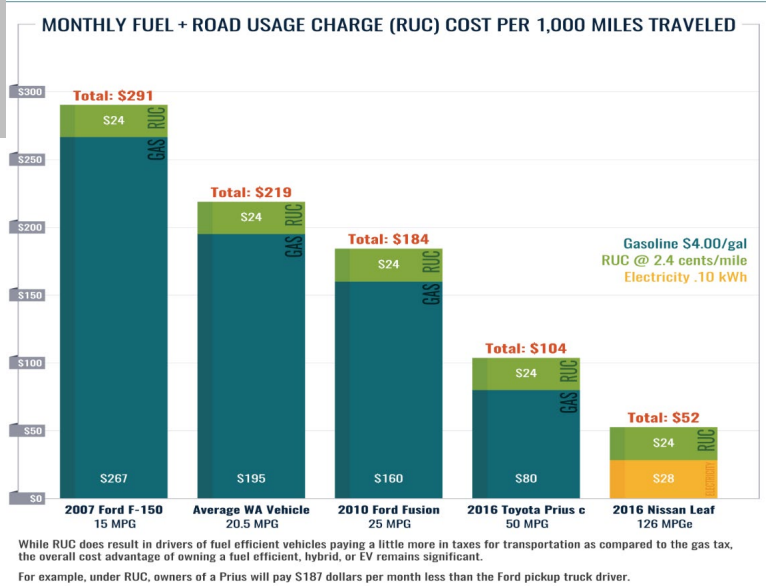
- User fees can help lower emissions
- Any reduction in Road Usage Charge rates from the Plan ($0.10/mile Peak and $0.05/mile Off-Peak) increases emissions
- There is a rate that could close the gap but it is significantly higher than the Plan.



Road Usage Charge

Source: Washington State Transportation Commission *Forward Drive* research

- Overall costs to own and operate a vehicle will look different given a zero-emission vehicle future



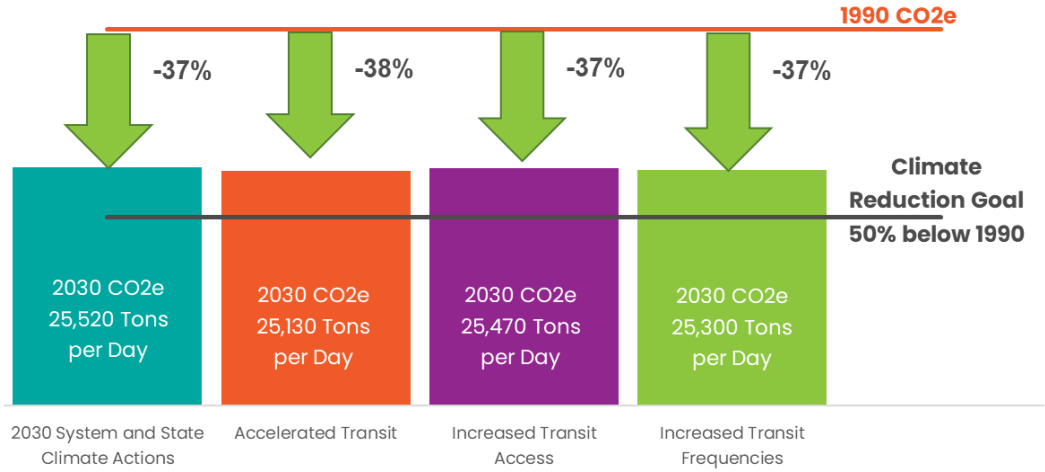
- Lower income households currently pay more per mile in gas taxes than higher income households

Figure 3-21 Average State Gas Tax Paid by Vehicles by Census Tract Income Bracket

Choices

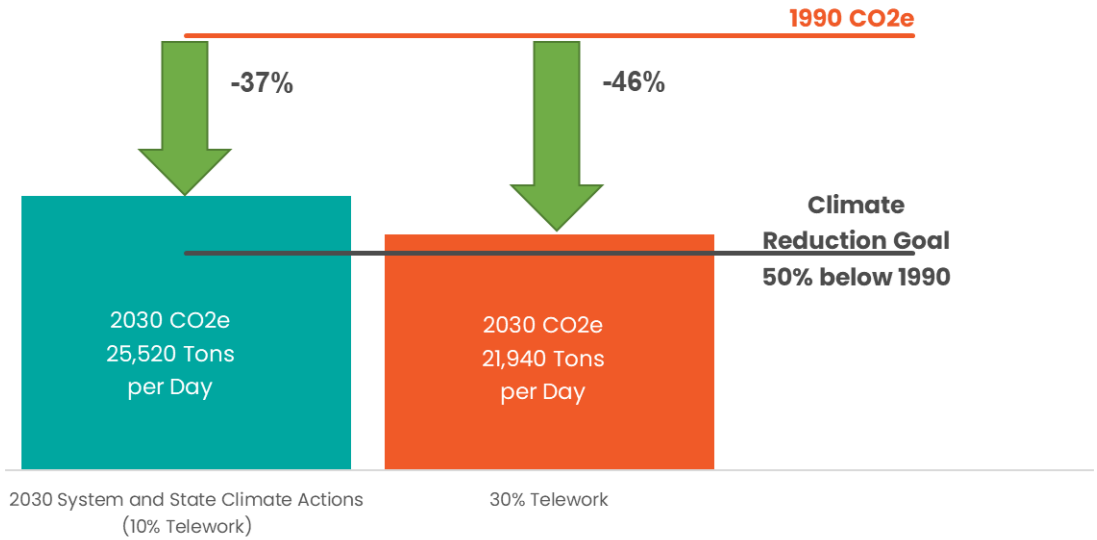
2030 Transit

- Increased transit access has a bigger impact in 2050 when the system is covering more places.
- Increased frequency increases transit usage and lowers delay and VMT but has minimal emission impacts in 2030.
- Accelerating Transit and the increased accessibility has a greater impact in 2050 due to further population growth around those station areas, especially around BRT.



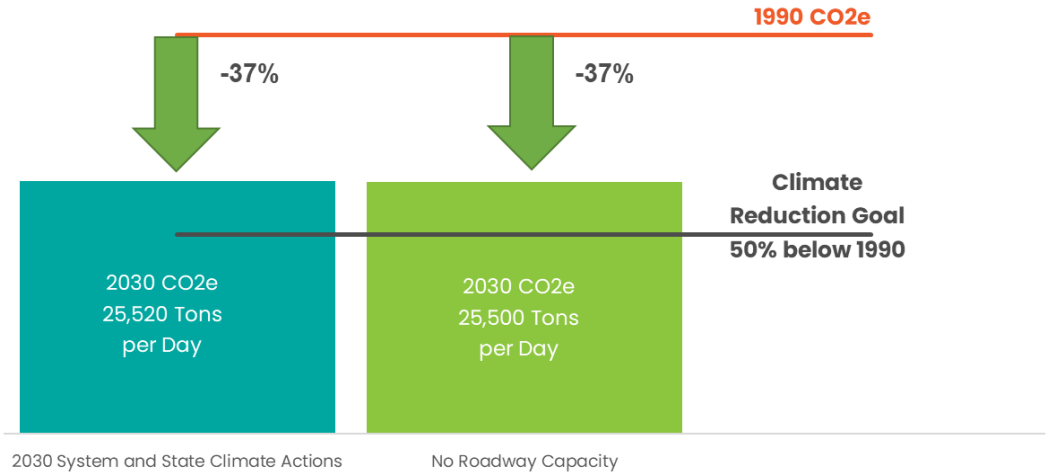
Work from Home

- 2021 Work from home levels in 2030 can help lower emissions
- Working from Home is not available for all markets and locations and lowers usage of all transportation modes.



Roadway Capacity Projects

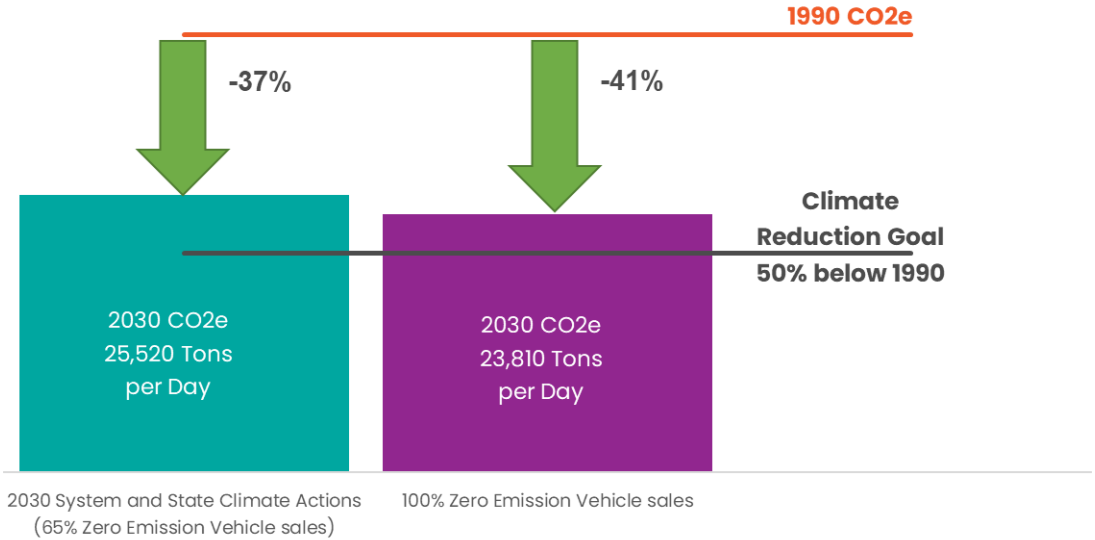
- Removal of roadway projects reduces VMT slightly but increases delay
- Emissions are not reduced due to the increased delay and amount of time vehicles are in congestion
- Several roadway projects impact transit performance and result in slightly lower transit usage



Technology

Increased Zero Emission Vehicle (ZEV) Sales

- Current state actions are forecasted to result in ZEVs being approximately 65% of all new sales by 2030.
- Assuming all new vehicle sales in 2030 are ZEVs can lower overall emissions.
- More time is needed to fully turn over the region's vehicle fleet.



Hybrid Scenario

User Fees

Choices

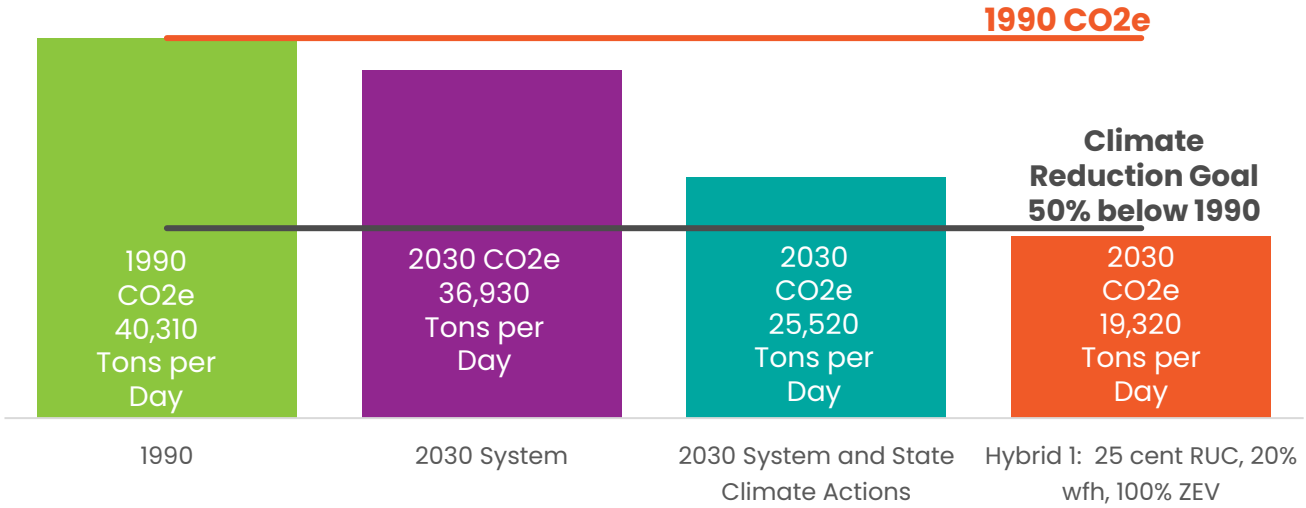
Technology

Looked at the three most promising levers from the sensitivity testing:

- RUC – new test at midpoint of sensitivity tests -- $.25 per mile
- Work from home – new test at midpoint of observed levels -- 20%
- Increase in ZEV sales – *same as sensitivity test*

Hybrid Scenario

The combination of the 2030 RTP, VISION 2050, state actions and these three sensitivity levers have the capacity to achieve the 2030 climate goal of 50% below 1990 levels



Continued commitment to implementation of each element is critically important in order to achieve the results

Next Steps

From board and committee feedback to date, additional hybrid scenarios to pursue:

- *Current RTP levels of RUC in combination with additional levers*
- *Include transit access / frequency sensitivities*
- *Consider more aggressive ZEV turnover*

Are there other hybrid combinations to test?

Additional board feedback on implementation actions and next steps?

Thank you

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