2030 GHG Analysis and Climate Implementation Strategy

Transportation Policy Board | December 8, 2022

Puget Sound Regional Council

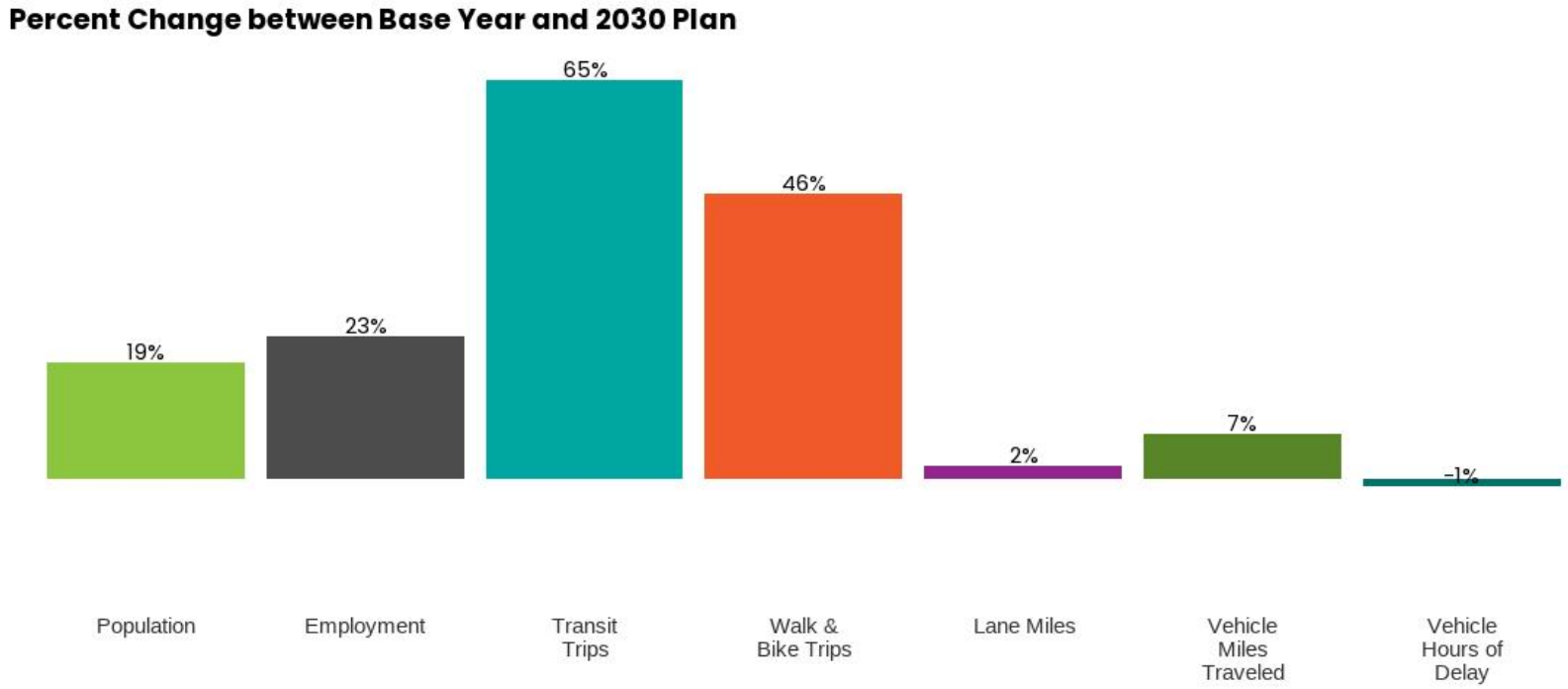
Today's Briefing

This presentation is focused on the Climate impacts of the sensitivity tests. A full set of transportation impacts for the sensitivity tests will be shared in January.

- 2030 GHG Analysis and Climate Implementation Strategy work program
- Board feedback on range of sensitivity results
- Next Steps

Regional Transportation System in 2030

The Plan is focused on transportation options

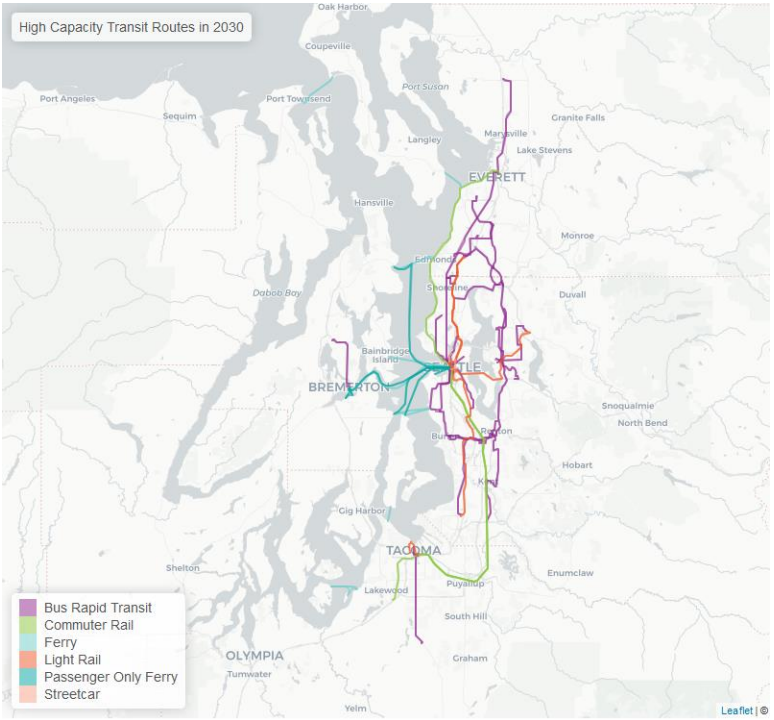


Source: PSRC SoundCast Activity Based Model, Fall 2022 for King, Kitsap, Pierce and Snohomish counties.

2030 High-Capacity Transit Network

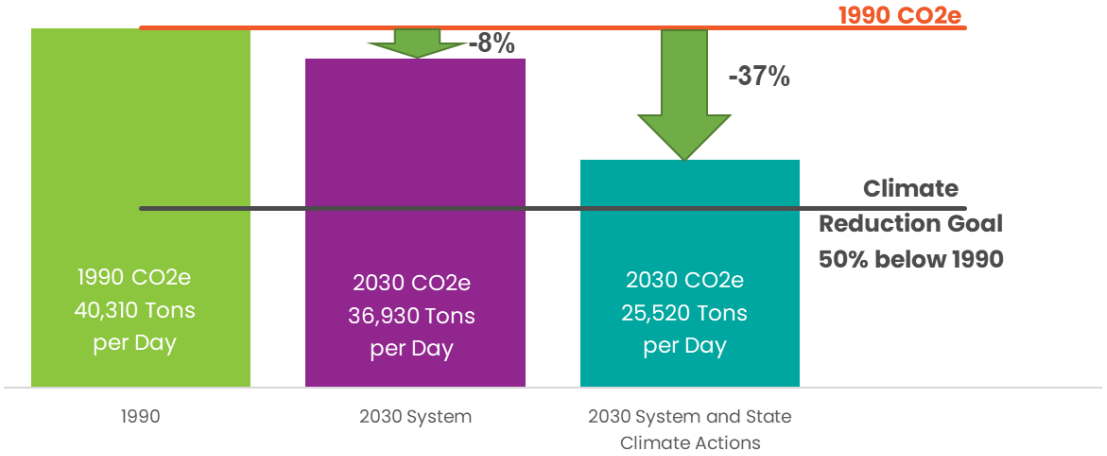
By 2030, expanded High-Capacity Transit options would operate in all four counties

- 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

PSREA Conservative Assumptions

- **Clean Fuel Standard**
  - 20% reduction in fuel carbon intensity by 2038
  - *For PSREA analysis, 10% reduction by 2030*
- **Internal Combustion Engine Ban / Move Ahead WA**
  - Sales of gasoline/diesel passenger vehicles are banned starting in 2030
  - *For PSREA analysis, 65% of new sales by 2030 are EV*
- **Climate Commitment Act**
  - Cap and Invest – economy wide cap on carbon; state estimates a 26% reduction in emissions by 2030
  - *For PSREA analysis, 23% reduction factor to transportation fuel emissions*

Sensitivity Test Results

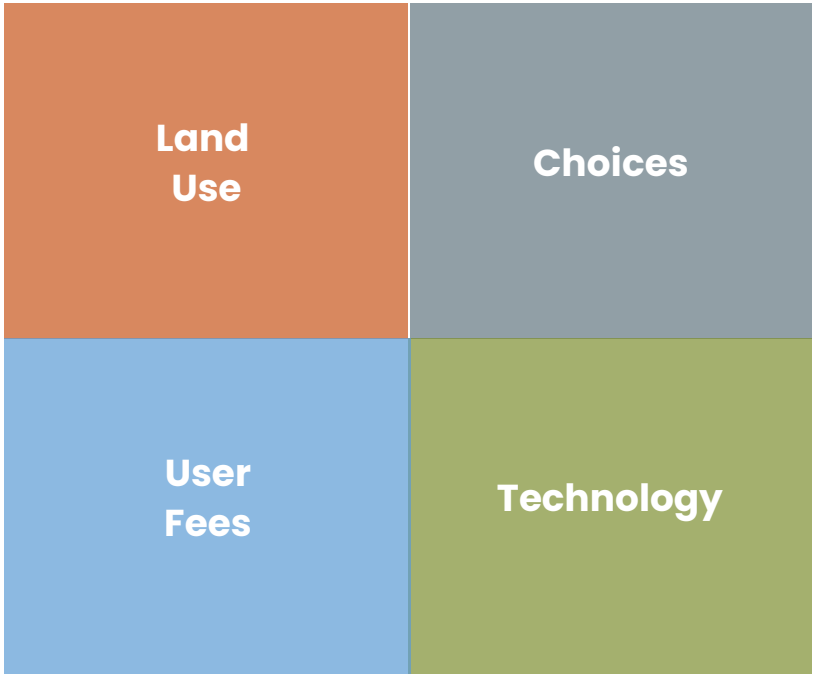
Four-Part Greenhouse Gas Strategy

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

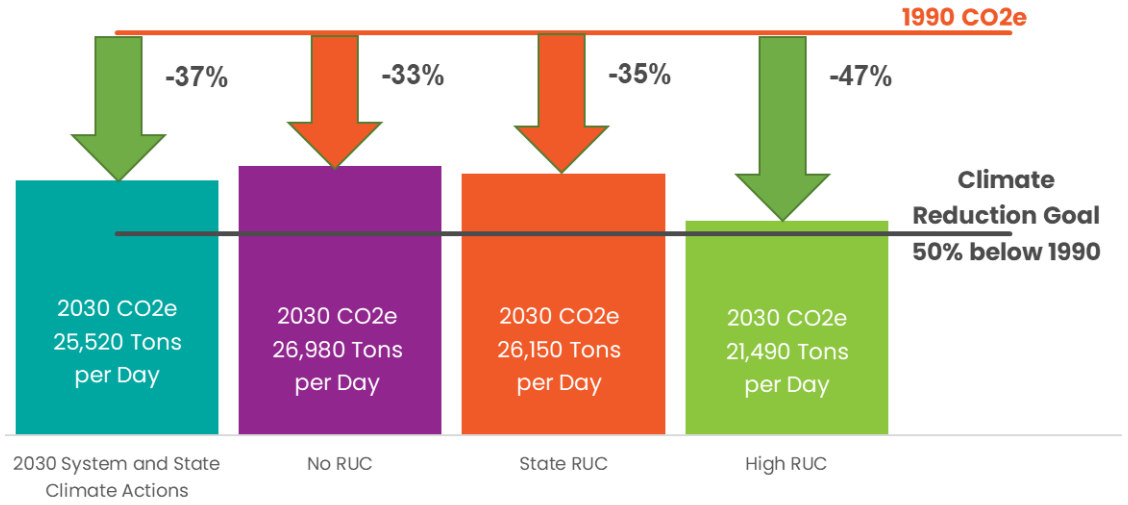
Technology: Shift to zero emission vehicles, Clean Fuels Standard, etc.



User Fees

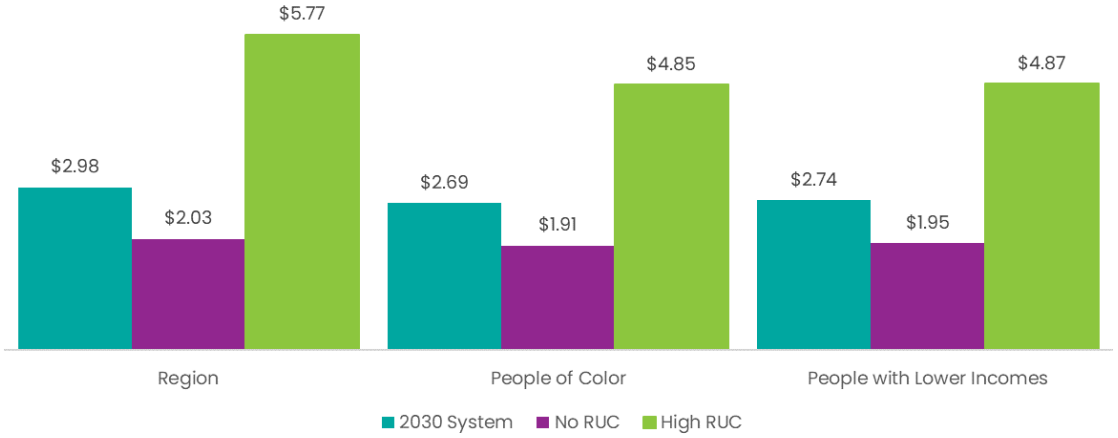
Road Usage Charge

- 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.



Public Cost of Work Travel

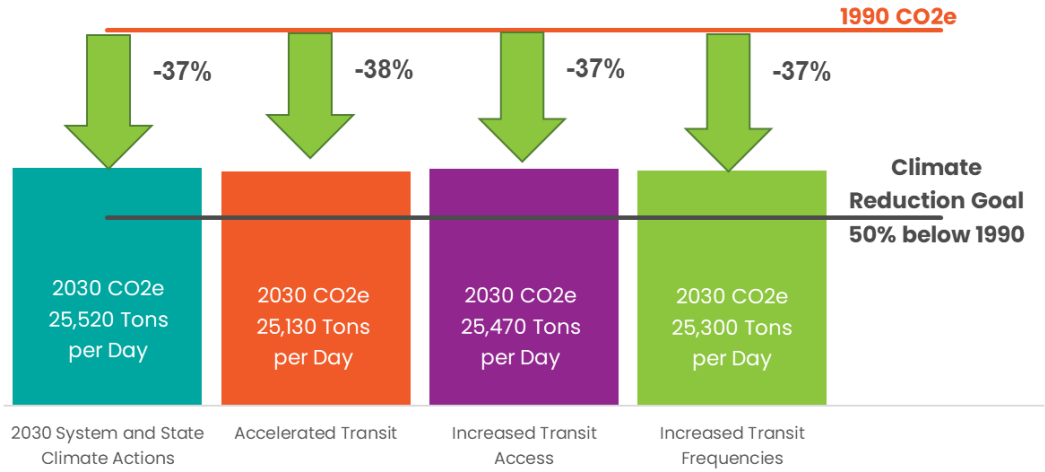
- In the 2030 System, the average daily cost for a work trip would be about **$3.00** per day. This would increase to about **$6.00** per day with a High RUC and reduces the average work trip distance over 11%.
- Costs in a higher priced scenario increase at a lower share for people of color (80%) and people with lower incomes (78%) but the impact on overall costs of transportation are greater for people with lower incomes.



Choices

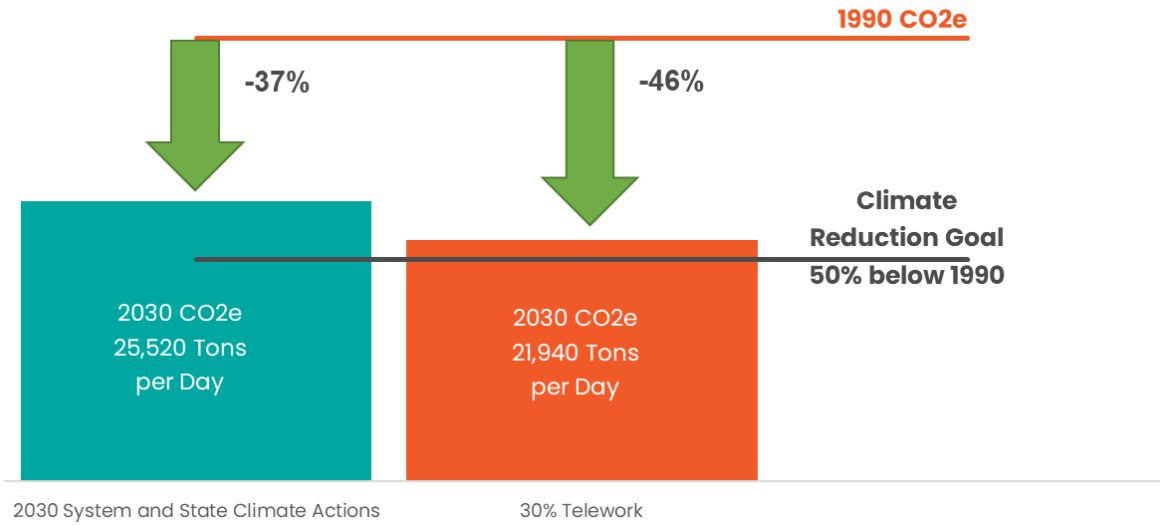
2030 Transit

- 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.



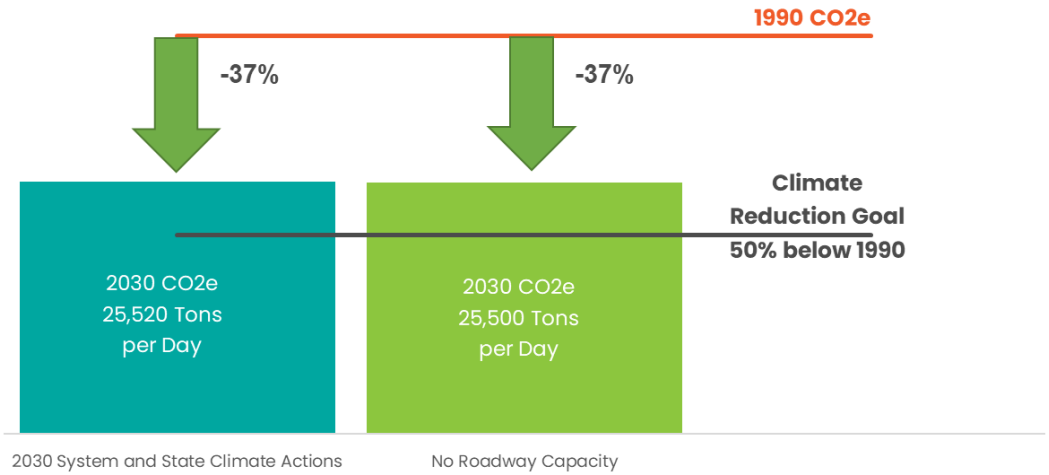
Work from Home

- 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

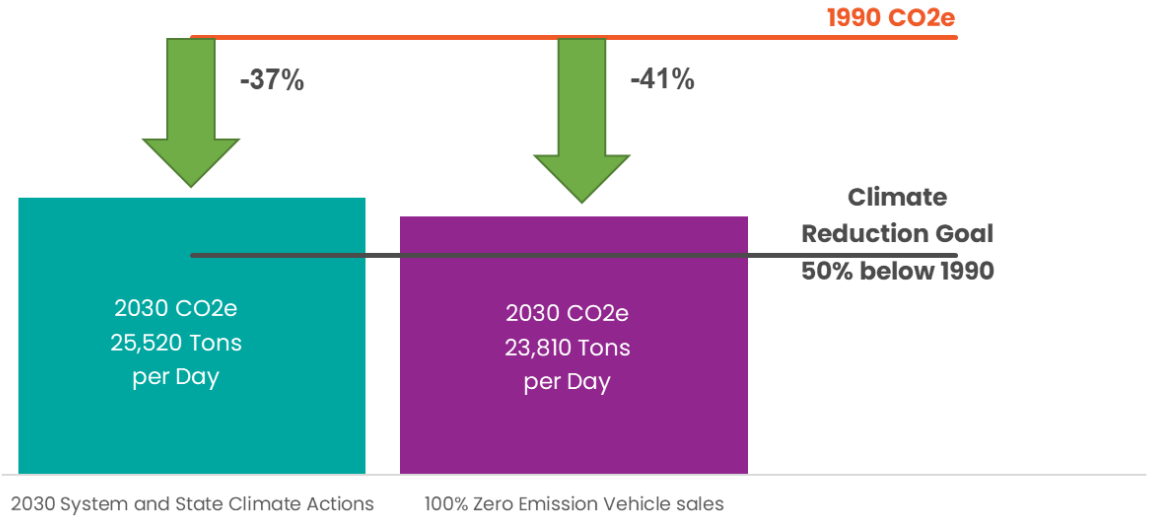
- Removal of roadway projects reduces VMT slightly but increases delay
- Emissions are not reduced due to the increased delay and amount of time vehicles are in congestion
- Several roadway projects impact transit performance and result in slightly lower transit usage



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.



Next Steps

Full set of transportation impacts for sensitivity tests

Possible “Hybrid” Scenario Combinations -

- Road Usage Charge rates
- ZEV sales
- Work from Home levels

Discussion of Implementation Strategy in January 2023

Thank you

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