

Reducing the Carbon Intensity of Transportation



Washington State Department of Transportation developed the **Washington State Transportation Carbon Reduction Strategy (TCRS)** as part of the federal **Carbon Reduction Program** to reduce transportation-related greenhouse gas (GHG) emissions. The TCRS describes the policies and strategies that are being invested in across the state and builds upon the State Energy Strategy, which identifies two overarching approaches to reducing transportation GHG emissions:



Move people and goods more efficiently and equitably



Electrify vehicles and switch to low-carbon fuels



I-405 Totem Lake Freeway Station, WSDOT

Move people and goods more efficiently and equitably

Moving people and goods more efficiently and equitably includes advancing the state’s climate goals while addressing historic inequities that impact overburdened communities and vulnerable populations. Efficiency and equitable access can be achieved by:

- Reducing the need for travel by shortening travel distances or avoiding the need for trips altogether.
- Shifting travel to more efficient modes such as active transportation, public transit, or maritime freight transport, and moving more passengers or goods per trip.

While eliminating the need for trips directly cuts the emissions produced by transportation, improving trip efficiency reduces the amount of energy needed for each trip. Reducing the amount of travel also reduces infrastructure needs, which, in turn, eliminates emissions associated with construction.

Improving efficiency takes several forms, each supporting decarbonization in different ways:

- Land use
- Active transportation
- The internet
- Transit and rideshare
- Efficient system operations and user fee
- Fleet operations management

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Land use strategies include transit-oriented development, green building design, multi-modal roadways, open space planning, providing a variety of housing, and promoting mixed land use. These strategies improve multimodal accessibility and safety, reduce the distance single occupancy vehicles must travel, and enhance freight efficiency. Focusing growth in diverse, compact communities creates more walkable, bikeable, and accessible neighborhoods.

Active transportation strategies, such as improving sidewalks and bike infrastructure make walking and cycling attractive, practical, and safe to use. Creating more opportunities for active transportation can help reduce overall personal vehicle use.

The internet and the corresponding availability of broadband services reduce the need for some trips by providing access directly from home or nearby locations. Examples include telemedicine and education.

Transit and rideshare incentives and strategies, including providing transit services and supportive infrastructure, such as bus lanes, bus shelters, and park and ride facilities, make transit trips more feasible for more people. Rail service is an alternative to driving a personal vehicle for longer trips.

Efficient system operations and user fee strategies reduce congestion and manage traffic flow in high-volume areas. Investments such as dedicated bus lanes and bus priority signals help cities better manage congestion and get people to their destinations faster.

Fleet operations management by freight and other partners optimize travel efficiency. Planning routes, ensuring routine maintenance is completed, and right-sizing fleets and vehicles to the work all improve vehicle efficiency.

What you can do

Everyone plays a role in transitioning Washington to a clean and equitable transportation system. All partners must work together, including state agencies, the state legislature, tribes, MPOs and RTPOs, local jurisdictions and agencies, industry partners, community-based organizations, and highly impacted communities.

TCRS Chapter 2: Statewide Transportation

Decarbonization Policy Framework identifies relevant state policies and programs that support improving transportation efficiency, including:

- Setting clear and ambitious statewide targets
- Improving land use transportation system planning and coordination to prioritize VMT reduction
- Expanding and aligning transportation funding with emissions and equity goals
- Removing barriers to transit, walking, and cycling
- Supporting measures to optimize freight VMT
- Reducing embodied emissions from transportation infrastructure

Chapter 3 provides more detail on each of the strategy categories along with examples from around the state of what can be done to make progress toward state GHG emissions limits. This chapter also provides information on current projects using federal **Carbon Reduction Program** funds.

Strategy Benefits

Moving people and goods more efficiently means fewer vehicles on the road and for shorter lengths of time. Not only does this result in reduced costs for building and maintaining transportation infrastructure, it also provides health benefits from reduced pollutants and safety benefits for pedestrians, people with limited mobility, and cyclists. In addition, reducing the amount of travel also supports the state's transition to electric vehicles; trip efficiency requires less energy and charging infrastructure.

For access to resources and to learn about the TCRS, check out the **full TCRS report**.

For more information

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