

EV COUNCIL

Washington Transportation Electrification Strategy

Developed by the Interagency Electric Vehicle Coordinating Council

SUMMARY AND ACTION PLAN | JANUARY 2, 2024

Letter of Introduction

January 2, 2024

To: The Honorable Jay Inslee, Governor of Washington

To: Sarah Bannister, Secretary of the Senate

To: Bernard Dean, Chief Clerk of the House

Dear Governor Inslee and Members of the Washington State Legislature:

Washington's Interagency Electric Vehicle Coordinating Council (EV Council) is pleased to deliver to you, and to the families and communities of our state, a summary of the **Transportation Electrification Strategy** (TES) for Washington State adopted at a public meeting on Nov. 30, 2023.

The TES, its appendices and the attachments to this letter meet the requirements in **RCW 43.392.040** to:

- Develop a statewide transportation electrification strategy to ensure market and infrastructure readiness for all new vehicle sales.
- Develop a robust public and private outreach plan that includes engaging with community organizers and the environmental justice council to develop community-driven programs to address zero-emissions transportation needs and priorities in overburdened communities (see attached Engagement Plan and Education Plan).
- Provide an annual report to the appropriate committees of the Legislature summarizing electric vehicle implementation progress, gaps and resource needs (see attached Annual Report).

Further, per **RCW 43.392.020**, the TES adopted by the EV Council provides a scoping plan for achieving the 2030 target that all publicly owned and privately owned passenger and light-duty vehicles of model year 2030 or later that are sold, purchased or registered in Washington state be electric vehicles.

Developing the statewide TES and implementing recommendations to equitably accelerate the transition to electric vehicles required early and meaningful input from a wide variety of stakeholders, especially in overburdened communities. The EV Council, co-chaired by the Departments of Commerce and Transportation, sought input over the past year from the Washington Environmental Justice Council and many other organizations listed in the TES. The EV Council also consulted with its 25-member Advisory Committee — required in **RCW 43.392.040(1)(e)** — throughout the TES development process.

The EV Council developed the TES from the initial work in the **2021 State Energy Strategy**, working closely with the many agencies involved in aspects of electrification of transportation, and used the Joint Transportation Committee's June 2023 Report "**Encouraging High-Consumption Fuel Users to Use Electric Vehicles**" to inform options considered in the TES. The EV Council ensured that the TES aligns with and references several other related reports developed by WSDOT and Commerce, including:

- **Washington State Transportation Carbon Reduction Strategy** (2023).
- **Green Electrolytic Hydrogen and Renewable Fuels Report** (2023).
- **Vehicle Miles Traveled (VMT) Targets – Final Report** (2023).

The TES recommends adaptive management, encouraging the incorporation of new information during implementation. Specific reports still in development on Nov. 30, 2023, that will be incorporated include the Joint Transportation Committee's expected report on medium- and heavy-duty vehicle incentive strategies and the EV battery management report that the Department of Ecology will prepare by June of 2024.

The EV Council greatly appreciates the opportunity to assess and advance Washington's progress on transportation electrification. The TES provides a clear path forward, aligned with our climate and environmental justice laws, to make our electric vehicle transition as fast and as equitable as possible. We look forward to working with policymakers across state government to implement this comprehensive strategy.

Respectfully,

Deborah Reynolds

Co-Chair, EV Council
Managing Director of Clean Transportation
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Tonia Buell

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Alternative Fuels Program Manager
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Overview



Washington has adopted impressive and scientifically necessary requirements for reducing greenhouse gases (GHGs) over the coming years, including limiting emissions to 45% below 1990 levels by 2030 and achieving net-zero emissions by 2050.¹ Representing 39% of Washington’s economy-wide emissions, the transportation sector must play a critical role in the state’s decarbonization efforts.² Electrifying on-road transportation, which represents 24% of the state’s emissions, and for which electric vehicle (EV) technology is most advanced, is a critical opportunity for the state to reduce GHG emissions.³

As a national leader on climate action, Washington is already taking actionable steps toward achieving these goals. For example, the Washington State Legislature (Legislature) adopted, and the Department of Ecology is implementing, California’s motor vehicle emissions standards rather than the federal government’s standards.

- For new light-duty (i.e., passenger) vehicles (LDVs), the **Advanced Clean Cars I and II (ACC I and ACC II)** regulations, which require a progressively stringent zero-emissions vehicle (ZEV) sales share, culminate in a 100% sales requirement by 2035.
- For medium- and heavy-duty vehicles (MHDVs), the **Advanced Clean Trucks (ACT)** regulation requires increasing new sales shares for larger vehicles, with 40%–75% ZEV sales required by 2035 depending on weight class. These regulations are the driving force behind the recent acceleration in EV adoption across the country and in Washington.

1 State of Washington Department of Ecology, “[The Climate Commitment Act: Washington’s Path to Carbon Neutrality by 2050](#),” (n.d.).

2 State of Washington Department of Ecology, “[Washington’s greenhouse gas inventory](#),” (n.d.).

3 State of Washington Department of Ecology, “[Washington’s greenhouse gas inventory](#),” (n.d.).

The Legislature passed [Move Ahead Washington \(Chapter 182, Laws of 2022\)](#)⁴ in March 2022. This monumental 16-year transportation package is known for its historic investments in transit, active transportation, ferries, alternative fuels and rail, all intended to support mode shift, electrification of these modes and reductions in vehicle miles traveled (VMT) along with their associated emissions. It also established the Interagency Electric Vehicle Coordinating Council (EV Council) and a nonbinding statewide target of reaching 100% new electric passenger vehicle sales by 2030 (2030 EV target) — five years earlier than the 100% new ZEV sales requirement under ACC II.

The EV Council was tasked with aligning existing transportation electrification efforts across 10 state agencies and offices and developing an equitable and inclusive statewide Transportation Electrification Strategy (TES) pegged to the nonbinding 2030 EV target and aligned with the state’s 2030 emissions limit. An annual report summarizing the transportation electrification–related activities and accomplishments of the 10 agencies that make up the EV Council from July 1, 2022, through June 30, 2023, is available on the [TES website](#) as Appendix E.

The TES addresses three critical questions:

- First, how can Washington meet the 2030 EV target established in Move Ahead Washington?
- Second, how can Washington ensure market and infrastructure readiness for all new LDV sales being electric?
- And third, how can Washington decarbonize the majority of the transportation system, covering all on-road vehicles (cars, trucks and buses) and non-road vehicles (planes, boats, trains and off-road mobile equipment), while directly and equitably benefiting vulnerable populations and overburdened communities?

⁴ [Chapter 182, Laws of 2022](#).

Key Takeaways



Emissions Reductions

The **2021 State Energy Strategy (SES)** is aligned with the state's emissions limits and shows transportation producing only 20 million metric tons (MMT) carbon dioxide equivalent (CO₂e) in 2030. Although Washington's on-road vehicles accounted for roughly 58% of state transportation sector GHG emissions in 2019, they are likely to contribute a smaller percentage of GHG emissions over time within the transportation sector — roughly half by 2030 — because EV technology is more advanced in on-road transportation modes than in non-road modes. Therefore, to meet the state's 2030 limit, GHG emissions from on-road vehicles likely need to decrease to fewer than 10 MMT CO₂e annually. The TES is the state's implementation roadmap for how to get there in 2030 by maximizing transportation electrification in a way that supports other clean transportation strategies, setting Washington up for the most equitable and cost-effective zero-emissions future possible.

1. Washington's recent transportation electrification policies will cut the state's on-road emissions by more than 70% in 11 years, from 23.5 MMT in 2019 to 14.1 MMT in 2030, if successfully implemented.

State policymakers in both the executive and legislative branches should now focus efforts on supporting implementation of existing policies (e.g., ACC II, ACT) by (1) lowering up-front EV costs, (2) making charging easy and accessible and (3) increasing consumer and fleet manager education and awareness.

2. The **Advanced Clean Fleets (ACF) regulation, which has not been adopted in Washington, is the most powerful tool available for accelerating medium- and heavy-duty (MHD) truck electrification, and achieving its required adoption rates would further reduce on-road 2030 emissions to 13.9 MMT.**

Analysis shows ACF adoption rates would increase the number of zero-emissions MHD trucks on Washington's roads in 2035 by approximately 14,000 vehicles (36%), creating significant demand for the vehicle supply produced under ACT and covering approximately 40% of total MHD trucks in Washington today.

3. Reaching the 2030 EV target would further reduce 2030 on-road emissions to 13.6 MMT, but will be incredibly challenging and should not be counted on to get under the 2030 emissions limit. The state’s recent adoption of ACC II is a critical component of transitioning to an EV future. Without ACC II, sales of new electric passenger vehicles in Washington might account for only 59% of total new passenger vehicle sales annually by 2030, compared with the 68% the state now expects to see with ACC II. Both broad-based and additional targeted incentives are already necessary to achieve ACC II. Therefore, to further reach 100% new electric LDV sales, the state would need to bring down EV costs substantially for all residents, likely at the expense of more effective short-term emissions reduction strategies.

4. In addition to being essential — though insufficient — for short-term emissions reduction, electrification remains the most effective long-term strategy for transportation decarbonization. The climate benefits of electrification will accelerate in significance through 2050 as more gasoline and diesel vehicles are retired and replaced by EVs powered by non-emitting electricity (due to the [Clean Energy Transformation Act \[CETA\]](#)).

5. The state must also urgently pursue non-electrification policies to close the remaining gap in expected 2030 on-road emissions. Such actions include (1) a strategic VMT-reduction policy (especially more compact land use), (2) energy efficiency standards, (3) stronger clean fuels development and deployment and (4) early retirement of the dirtiest MHDVs. Significant progress on each of these strategies will likely be necessary to get under 10 MMT in on-road emissions by 2030.

Equity and Environmental Justice

Pursuant to the Move Ahead Washington legislation, the TES must ensure that “activities associated with advancing transportation electrification benefit vulnerable populations and overburdened communities.”⁵ Public engagement work and consumer research during TES development confirmed that without state action, significant inequities in the existing transportation system could continue, and in some cases worsen, during electrification of the transportation system.

1. Survey research conducted as part of the TES shows clear adoption disparities by income and home ownership for passenger EVs. The state must continue to measure adoption by socioeconomic factors to ensure equitable access and awareness. The EV Council proposes the development of a Transportation Equity Baseline across a variety of metrics, including equitable investments consistent with the [Healthy Environment for All Act of 2021 \(HEAL Act\)](#). Refer to the [Washington Transportation Electrification Strategy EV Education Plan \(Education Plan\)](#) for more information on the survey findings and Chapter 2 of the TES for details on equity definitions and metrics.

2. Targeted incentives are more effective than broad-based incentives, because they provide EV adoption opportunities to vulnerable populations and consumers, organizations and businesses operating in overburdened communities. Although broad-based LDV incentives will be important in 2024–27 for growing new EV sales before ACC II requirements ramp up, EV supply in Washington will soon be constrained by limitations on “pooling” compliance credits among states. In other words, automakers will need to prioritize sales in other ACC II states that trail Washington’s progress. This means incentives starting in the late 2020s will have more of an effect on *who* has access to new EVs than on growing the number of new EVs sold and increasing overall adoption.

⁵ [Chapter 182, Laws of 2022.](#)

Since new battery electric trucks are increasingly economical on a total cost of ownership (TCO) basis due to current generous federal incentives, vehicle availability and charging are the more significant adoption obstacles. To address these obstacles, incentives should be directed toward agencies, organizations and businesses operating MHDVs in overburdened communities or toward those without the financial capital to take on higher up-front cost to access the post-sale fuel savings.

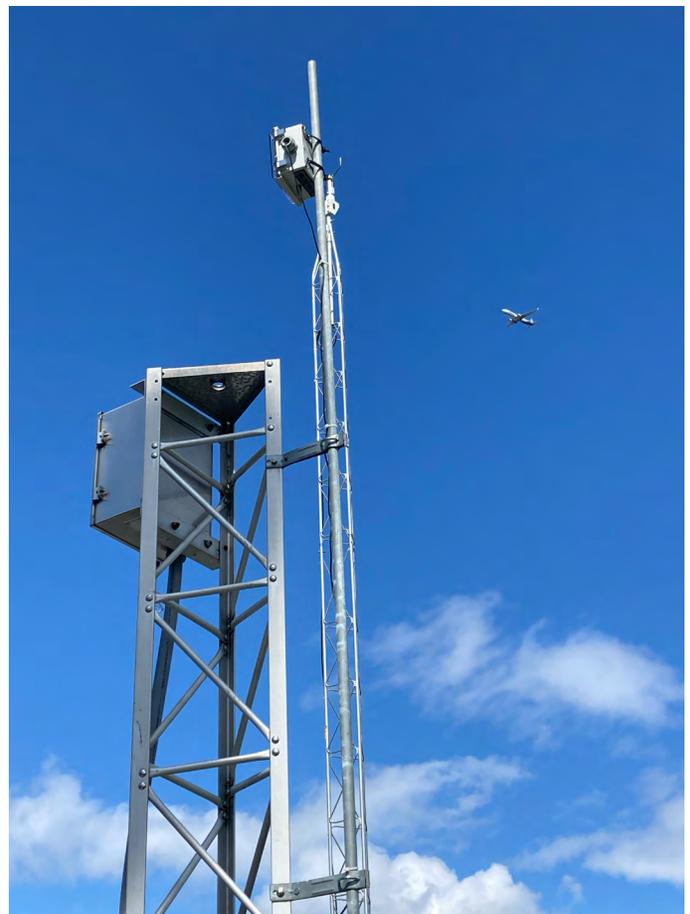
3. The new car market was inaccessible for the vast majority of drivers before EV adoption started to accelerate. The state cannot change that reality through consumer subsidies alone, and must pursue additional policies and programs to reduce prices through greater availability in the used vehicle market. Between January 2022 and June 2023, about 80% of light- and medium-duty vehicle sales were for used cars and trucks. That dynamic is flipped for battery electric vehicles (BEVs) due to the small number of used EVs available. Without structural reforms to regulations outside Washington’s authority (e.g., ACC II and federal motor vehicle emissions standards), new cars will remain out of reach for most, regardless of fuel type. The state must prioritize strategies to grow the number of used BEVs on the market, in turn driving down prices, or the transition to EVs will remain inequitable.

4. Maximizing access to charging for residents of multifamily and low-income single-family homes — especially renters — will be essential to eliminating disparities already developing in the EV transition.

Charging at home is by far the most affordable and convenient way to power an EV, but is predominantly available only to single-family homeowners. The state must grow its charging investments and carefully target programs toward maximizing residential charging for those who face financial or legal barriers. This will also reduce overall system costs, which are disproportionately borne by lower-income taxpayers and ratepayers, because residential charging installation is much more affordable than public chargers.

5. Strong transportation electrification actions, if successfully implemented, will cut current-day air pollution caused by on-road vehicles by more than half in 2035, leading to health benefits in overburdened communities.

The decline in air pollution from MHDVs, which disproportionately operate in overburdened communities near airports, marine ports and highways, is especially important. The state should increase its air quality monitoring along transportation corridors and hubs, especially in neighborhoods most at risk of cumulative adverse effects, and direct additional electrification resources to areas near ports and highways until air quality and health benefits are equitable.



In light of these findings, the EV Council developed 86 policy recommendations to enable the regulatory and market environment needed for the strongest possible EV adoption through 2035. A companion implementation roadmap lays out those suggested policies by priority year of action, as well as delineating between those for legislative consideration and those for administrative action. The TES also highlights additional strategies beyond the transportation electrification recommendations to achieve the 2030 emissions limit. The state must continue its clean transportation leadership and act urgently on all fronts to build a cleaner, safer and more affordable transportation system for all Washington residents and businesses.

TES Implementation — 2024 Priorities

Washington has made tremendous strides in recent years to advance its climate leadership position. It passed a landmark 100% clean electricity law, the nation's first clean buildings standard and the nation's second cap-and-invest program. It also joined California, Oregon and British Columbia in the West Coast clean fuel standard market and adopted California's motor vehicle emissions standards. All of these policies were built on a foundation of environmental justice through the HEAL Act and with strong labor standards. And yet, as the TES modeling has made clear, Washington must do even more. Given the high stakes and short time frame for closing the gap between current policy and the strongest feasible electrification pathway, Washington must be highly focused on and organized in establishing priorities. With this in mind, the following 2024 prioritization plan lays out a clear roadmap for 2024 legislative session recommendations and how agencies can work toward policy and program development for the longer 2025 legislative session. Each policy includes a clearly identified agency lead and notes expected transportation equity benefits and expected improvement in air quality in overburdened communities.

The 2024 priorities are presented in Tables 1 and 2.

Table 1 lists new actions and emissions reductions, broken out by electrification and non-electrification strategies, needed to close the 2030 on-road emissions gap left by current electrification and travel efficiency policies. The table also shows estimated incremental GHG emissions reduction by strategy and expected equity outcomes.

Achieving the additional 2030 emissions reductions in Table 1 is dependent on existing policies achieving their full expected effect. The state should not take this for granted without further action. The EV Council is prioritizing the recommendations in Table 1 for 2024 because urgent progress is essential to keep Washington on pace to achieve existing policies.

Table 2 lists new and continued actions needed to successfully and equitably implement existing transportation electrification policies, namely ACC I, ACC II and ACT.

It is challenging to isolate the effect on emissions of individual enabling actions that support existing regulatory policies. Each of the priorities in Table 2 will be essential to achieving the modeled 9.4 MMT CO₂e reduction in 2030 on-road emissions from 2019 levels.

Readers can review **Appendix D** for an explanation of the emissions and equity determinations in Table 1 and Table 2.

Table 1 2024 Priorities: New Actions and Emissions Reductions Needed to Close 2030 Emissions Gap

Recommendations*	Legislative actions	Agency actions	Lead Agency	GHG**	Equity***
Transportation Electrification					
Requirements and incentives for zero-emissions MHDVs:	Fund staffing needed to pursue ACF adoptions rates through stakeholder engagement and possible rulemaking.	Work with stakeholders to consider rulemaking and other policy development needed to achieve ACF adoption rates.	Ecology and WSDOT	230,000	Significant air quality improvement
4.1 Pursue ACF adoption rates.					Lower costs
4.4 Fund and implement an MHDV incentive and infrastructure program.	Release appropriated funding to the Washington State Department of Transportation (WSDOT) to implement Joint Transportation Committee–recommended program design.	Implement MHDV incentives and programs.			Increased EV access
Grow broad consumer demand for passenger BEVs:	Fund public information campaign to increase awareness of incentives and charging options.	Implement public information campaign.	Commerce	20,000	Air quality improvement
3.8 Increase consumer awareness of incentives.					Lower costs
3.7 Extend and expand the state sales and use tax exemptions for BEVs.	Pass legislation to extend and expand sales tax exemption for all BEVs.				Increased EV access
4.5 Accelerate and fund school bus electrification to meet needed adoption rates.	Pass legislation and budget provisions developed with stakeholders.	Develop practical implementation timelines and needed funding.	Ecology (with support from the office of Superintendent of Public Instruction [OSPI])	10,000	Air quality improvement
					Lower costs
					Increased EV access

* Numbered items in the recommendations column correspond to the policy items detailed in Chapter 5, How Washington Can Get There, in Part I and Part II.

** The GHG column reflects estimated incremental GHG emissions reduction in 2030 (metric tons CO₂e).

*** The equity column reflects equity benefits, including air quality improvements in overburdened communities, and lower costs, increased EV access and more non-driving options for vulnerable populations.



Table 1 2024 Priorities: New Actions and Emissions Reductions Needed to Close 2030 Emissions Gap, continued

Recommendations*	Legislative actions	Agency actions	Lead Agency	GHG**	Equity***
Clean Fuels, Vehicle Efficiency and Voluntary Early Retirement					
Reduce carbon intensity of gasoline and diesel with clean drop-in fuels: C.1.1 Add flexibility to the Clean Fuel Standard’s carbon intensity schedule. C.1.2 Increase stringency of Clean Fuel Standard program.	None anticipated for 2024	Assess needed program changes to increase emissions reductions and consider agency-requested legislation for 2025.	Ecology	Expected to be substantial, but more analysis is needed.	Air quality improvement
Diesel vehicle efficiency standards C.3 Enforce diesel vehicle compliance. C.4 Explore an anti-idling law for ICE MHDVs.	None anticipated for 2024	Develop diesel vehicle enforcement and anti-idling policy and consider introducing agency-requested legislation.	Ecology	≈300,000–700,000****	Significant air quality improvement Lower costs
C.2 Improve vehicle efficiency with lower-resistance replacement tires.	Pass legislation to provide Commerce rulemaking authority.	Begin rulemaking.	Commerce	≈600,000–700,000****	Air quality improvement Lower costs
C.5 Focus on high-consumption gasoline and diesel users.	None anticipated for 2024	Pursue state and federal funding opportunities.	Ecology	≈110,000–130,000****	Significant air quality improvement

* Numbered items in the recommendations column correspond to the policy items detailed in Chapter 5, How Washington Can Get There, in Part I and Part II.

** The GHG column reflects estimated incremental GHG emissions reduction in 2030 (metric tons CO₂e).

*** The equity column reflects equity benefits, including air quality improvements in overburdened communities, and lower costs, increased EV access and more non-driving options for vulnerable populations.

**** The emissions level or reduction is a preliminary estimate, not a model output, and requires additional analysis.



Table 2 2024 Priorities: Actions Needed to Successfully and Equitably Implement Current EV Policies

Recommendations*	Legislative actions	Agency actions	Lead Agency	Equity**
<p>Continue funding WSDOT zero-emission vehicle and infrastructure programs:</p> <p>2.24 Continue funding WSDOT’s ZEVIP grant program to provide support for charging along state routes.</p> <p>3.6 Continue funding WSDOT’s Zero-emissions Access Program (ZAP).</p> <p>4.8 Continue funding the WSDOT Green Transportation Capital grant program.</p> <p>5.1 Support and expand the e-bike rebate and lending library programs.</p> <p>D.3 Continue to invest in early-stage development of electric and hydrogen planes.</p> <p>E.1.1 Vessel decarbonization (ferry vessel and terminal electrification).</p> <p>E.1 Port decarbonization (electrification).</p>	None in 2024	Assess programs and develop funding request for 2025-27 biennium.	WSDOT	<p>Significant air quality improvement</p> <p>Lower costs</p> <p>Increased EV access</p> <p>More non-driving options</p>
<p>Expand and accelerate funding Commerce community charging and EV incentive programs for low-to-moderate income (LMI) consumers:</p> <p>2.9 Expand community charging programs through formula funding.</p> <p>3.4 Expedite funding for Commerce’s EV incentive program.</p> <p>3.2 Create a state-supported low-cost leasing program with an EV equity objective.</p>	None in 2024	Assess programs and develop funding request for 2025-27 biennium.	Commerce	<p>Air quality improvement</p> <p>Lower costs</p> <p>Increased EV access</p>
<p>1.6 Provide block grants to increase CBO staff capacity.</p>	Fund program to help CBOs design transportation electrification projects.	Implement program.	Commerce	<p>Significant air quality improvement</p> <p>Lower costs</p> <p>Increased EV access</p> <p>More non-driving options</p>

* Numbered items in the recommendations column correspond to the policy items detailed in Chapter 5, How Washington Can Get There, in Part I and Part II.

** The equity column reflects equity benefits, including air quality improvements in overburdened communities, and lower costs, increased EV access and more non-driving options for vulnerable populations.



Table 2 2024 Priorities: Actions Needed to Successfully and Equitably Implement Current EV Policies, continued

Recommendations*	Legislative actions	Agency actions	Lead Agency	Equity**
2.5 Support planning and building necessary utility-side charging infrastructure.	None in 2024	Finish cost assessment and develop program as funding request or legislation.	Utilities and Transportation Commission (UTC) and Commerce	No effect
3.14 Fund and support state agency efforts to implement EO 21-04.	Fund state agency fleets to successfully implement EO 21-04.	Implement EO 21-04.	All state cabinet agency fleets	No effect
Make charging access more equitable and speed up project timelines: Section 2: Charging and Utility Infrastructure	None in 2024	Develop suite of policy proposals to improve consumer experience and equitable access, and speed up implementation timelines.	Commerce (with support from UTC)	Air quality improvement Lower costs Increased EV access
1.7 Monitor equity indicators and measure outcomes.	None in 2024	Examine air-monitoring needs near highways, estimate health benefits of the TES and implement a transportation equity assessment.	Ecology, Health and WSDOT	Significant air quality improvement Lower costs Increased EV access More non-driving options

* Numbered items in the recommendations column correspond to the policy items detailed in Chapter 5, How Washington Can Get There, in Part I and Part II.

** The equity column reflects equity benefits, including air quality improvements in overburdened communities, and lower costs, increased EV access and more non-driving options for vulnerable populations.



Priorities for 2025 and Onward

The EV Council will implement the TES by immediately prioritizing these 14 sets of recommendations. Based on progress made, it will determine 2025 priorities in fall 2024. The EV Council will then repeat the same annual prioritization process by identifying key actions for the year ahead. TES recommendations not included in the 2024 list are important to the transition and will be considered for prioritization in the EV Council's work in 2025 and the years following.

TES Development Process

The EV Council oversaw development of the TES. The EV Council is an interagency effort co-led by the Department of Commerce and the Washington State Department of Transportation (WSDOT), with representation from the State Efficiency and Environmental Performance (SEEP) Office, the Office of Financial Management, the Office of Superintendent of Public Instruction (OSPI), the Utilities and Transportation Commission (UTC) and the Departments of Agriculture, Ecology, Enterprise Services and Health.

Through an open and competitive proposal process in the fall of 2022, the EV Council hired a consulting team led by RMI and supported by Cascadia Consulting Group, NW Energy Coalition, Front and Centered and Strategic Research Associates.

The EV Council drafted the TES with significant stakeholder engagement and recommendations, including:

- The EV Infrastructure and EV Adoption Working Group, an informal committee made up of state agency staff with experience implementing transportation electrification policies and programs.
- The Advisory Committee,⁶ a formal stakeholder group with 25 members representing a diversity of perspectives, in-state geographies and industries, and informed by issue-specific subcommittees.
- Wide-reaching and diverse stakeholder engagement in the form of 40 one-on-one interviews, eight focus groups and a survey of 3,026 residents across the state, statistically representative by gender, age and region, to explore opinions and perspectives on EVs. The survey consisted of 30 questions, including quota and demographic questions, and aimed to understand Washington residents' desires for their personal vehicles and how they think about EVs, including information gaps and myths, perceived barriers, trusted information sources and readiness to purchase an EV.
- In-depth modeling and analysis of different policy and economic scenarios influencing the potential rate of transportation electrification in Washington.
- Eight targeted policy workshops and three equity-focused workshops.
- The application of an equity lens to all elements of the TES, developed in partnership with community-based organizations (CBOs) representing low-income and Black, Indigenous and People of Color (BIPOC) communities across Washington.

⁶ Washington State Department of Commerce, "[Engrossed Substitute Senate Bill 5974](#)," [Pub. L. No. Laws of 2022, 182](#) Chapter (n.d.).



Addressing Transportation Electrification Inequities

The TES fits within a broader statewide commitment to reduce carbon emissions and ensure equitable benefits flow to vulnerable populations and overburdened communities, as established through the [Climate Commitment Act \(CCA\)](#), HEAL Act and other legislation. Historically, the harmful effects of transportation and energy policies have been concentrated on lower-income communities and communities of color.^{7,8} Washington’s low-income and BIPOC communities, which have contributed the least to climate change, experience the effects first and worst. These effects are compounded by a transportation system that disproportionately exposes low-income and BIPOC communities to pollution, vehicle crashes and the physical barriers created by roads, train tracks and airports.⁹

Although addressing these effects will require efforts beyond transportation electrification alone, a forward-looking TES can be a significant step toward redressing the effects of these past and current inequities by advancing meaningful security, safety and sustainability within the electrified transportation system for overburdened communities and vulnerable populations. This system should unite communities rather than divide them; provide individuals the tools to own, govern and benefit from the energy and transportation assets in their community; and aim to deliver jobs, community wealth and public health to overburdened communities throughout Washington.

The relationship between transportation electrification and overburdened communities is complex. At the surface, transportation electrification will reduce adverse health effects caused by vehicle exhaust in these communities. However, without state action, it is possible that overburdened communities and vulnerable populations could be further marginalized by the siting of infrastructure and requirements for technologies that do not directly benefit them. Additionally, BIPOC communities have traditionally experienced

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- 7 Thomas W. Sanchez, Rich Stolz and Jacinta Ma, [“Inequitable Effects of Transportation Policies on Minorities,”](#) *Transportation Research Record: Journal of the Transportation Research Board* 1885, no. 1 (January 2004).
 - 8 Thomas W. Sanchez, [“Poverty, Policy, and Public Transportation,”](#) *Transportation Research Part A: Policy and Practice* 42, no. 5 (June 2008): 833–41.
 - 9 Peter Huether et al., [“2023 Transportation Electrification Scorecard,”](#) ACEEE, (June 28, 2023).

higher energy burdens. Transportation electrification could risk worsening these inequities through loss of financial equity from devalued gasoline-fueled vehicles and the higher cost of charging EVs at public chargers versus at home.

The state bears an important responsibility to ensure that the imperative of achieving equitable outcomes does not fall through the cracks. The TES's recommendations include ways in which the state should use its policy and regulatory authority to shape the market and put structures in place to ensure benefits for overburdened communities and vulnerable populations. This means:

- Directly addressing the effects of higher costs of public charging on lower-income households that lack access to EV charging at home. Options could include providing subsidies for lower-income EV owners, extending rate protections to consumers at privately owned chargers and creating a system of public or community-owned chargers.
- Codifying and enforcing consumer protections related to prices and price transparency, information and signage, language access and alternative ways to pay (other than credit cards) to ensure that EV charging is available to everyone. Ensuring that an equitable share of EV charging infrastructure and its benefits is sited in overburdened communities. Options could include creating a system of public or community-owned chargers or subsidies for companies to locate charging infrastructure in these neighborhoods. Communities must be a part of this development to ensure solutions meet local needs.
- Requiring that chargers are regularly maintained and repaired in a timely manner, irrespective of location, and that the siting of high-speed chargers takes into consideration the cascading effects of lack of transportation on lower-income families and workers whose livelihoods depend on being able to get to work on time.
- Designing and implementing robust community-based capacity building, education and outreach to ensure equitable EV adoption.
- Prioritizing electrification of MHDVs that operate in overburdened communities, so that agencies target the benefits of reduced air pollution from EVs to areas most at risk from current tailpipe emissions.

The TES also includes recommendations for (1) a transportation equity baseline, (2) an equitable distribution process and (3) a clear model for adaptive management to help reach these goals.

Where Washington Is Today

Washington's transportation system — composed of roads, ports, railways, sidewalks, bike lanes, transit lines, vehicles small and large, and the people who operate and maintain the vehicles and infrastructure — supports the movements of more than 7.7 million people and a \$725 billion economy.¹⁰ Washington's transportation system is also the largest source of climate pollution in the state at 39% of total emissions, according to Washington's most recent official GHG inventory. Washington's leadership in decarbonizing transportation through electrification is critical for reducing overall emissions and driving market demand and innovation.

10 Clifford Woodruff and Matthew von Kerczek, "[Gross Domestic Product by State and Personal Income by State, 1st Quarter 2023](#)," *Bureau of Economic Analysis, U.S. Department of Commerce*, (June 30, 2023).

In addition to GHGs, gasoline- and diesel-fueled transportation produces air pollution that can worsen people’s health, including nitrogen oxides (NOx), particle pollution and other hazardous air pollutants (HAPs). Air pollution can affect everyone, though some groups are especially sensitive, including children, older adults, pregnant people and people with health conditions.¹¹ Other groups, including people with low income, people of color and tribal populations, have historically encountered increased and prolonged exposures to air pollution. Traditional internal combustion engine (ICE) vehicles also create noise pollution, which, although invisible, can cause increases in cardiovascular disease and mortality.¹² Although EVs are required by law to make a minimum amount of sound under certain speeds for pedestrian safety reasons, they still result in a net reduction in noise pollution (especially at the MHD scale).

Table 3 Washington’s Current Clean Transportation Requirements and Targets

Year	Goal(s)
By 2030	2030 EV Target — 100% of new passenger vehicles sales are electric, per Revised Code of Washington (RCW) 43.392.020* (non-binding target).
	Emissions Limit — Economy-wide GHG emissions down to 50 MMT/year, 45% below 1990 levels, per RCW 70A.45.020.**
	30% to 50% of new MHDVs must be zero emissions depending on vehicle class, per ACT rule.
	Carbon-neutral electricity, with a maximum of 20% offsets, per RCW 19.405.040.***
By 2034	20% reduction in carbon intensity of on-road transportation fuels over 2017 levels, per Chapter 173-424 Washington Administrative Code (WAC).****
By 2035	100% of new passenger vehicles must be electric, per ACC II rule.
By 2040	Economy-wide GHG emissions down to 27 MMT/year, 70% below 1990 levels, per RCW 70A.45.020.
By 2045	Zero emissions electricity, per RCW 19.405.040.
By 2050	Economy-wide GHG emissions down to 5 MMT/year, 95% below 1990 levels, per RCW 70A.45.020.

* [RCW 43.392.020 – Interagency Electric Vehicle Coordinating Council – Target Established – Scoping Plan.](#)

** [RCW 70A.45.020 – Limiting Greenhouse Gas Emissions – Greenhouse gas emissions reductions – Reporting Requirement.](#)

*** [RCW 19.405.040 – Washington Clean Energy Transformation Act – Greenhouse gas neutrality – Responsibilities for electric utilities – Energy transformation project criteria – Penalties.](#)

**** [Chapter 173-424 WAC – Clean Fuels Program Rule](#)

11 U.S. Environmental Protection Agency, “[Research on Health Effects from Air Pollution](#),” (n.d.).

12 Thomas Münzel, Mette Sørensen and Andreas Daiber, “[Transportation Noise Pollution and Cardiovascular Disease](#),” *Nature Reviews Cardiology* 18 (March 31, 2021): 619–36.





Governor Jay Inslee attends the opening of new fast chargers.

Modeling for the TES suggests that the state’s current transportation policies and programs (Table 3) — ambitious and critical as they are — will need additional scaling and an increased implementation pace to meet the state’s electrification, climate, health and equity targets under today’s political and market conditions. To understand how Washington’s transportation system will change, it helps to contextualize what vehicle adoption, driving habits and on-road GHG emissions look like today.

By the Numbers

LDVs — cars, crossovers, vans, SUVs and pickup trucks — make up the vast majority of the more than 6.5 million on-road vehicles in Washington today. Notably, although gasoline-fueled vehicles are the vast majority of vehicles in Washington, according to the U.S. Energy Information Administration (EIA), in 2021, 27% of on-road fuel consumption in Washington was by diesel vehicles, indicating proportionally greater fuel consumption per vehicle among MHDVs.¹³

Passenger EV adoption is on the rise. Gasoline-fueled vehicles accounted for roughly 88% of new LDV sales in Washington in 2022, but sales data from the first five months of 2023 suggest that approximately 16% of new LDVs sold in Washington were either BEVs or plug-in hybrid electric vehicles (PHEVs).¹⁴ However, negligible numbers of electric MHDVs were sold (not including buses). Approximately 1% and 3% of motorcycle and bus sales were electric, respectively. According to the U.S. Department of Energy’s Alternative Fuel Data Center, Washington has 910 direct current fast chargers (DCFCs) at 240 locations, and 3,493 publicly accessible Level 2 (L2) EV chargers at 1,605 locations.¹⁵

Washington’s VMT has grown along with the state’s population, although at a much slower pace. Between 1996 and 2021, Washington’s VMT per capita has declined more than that of any other U.S. state.¹⁶ As

¹³ U.S. Energy Information Administration, “Washington State Profile and Energy Estimates,” (n.d.).

¹⁴ John Ryan, “Electric Vehicle Sales Accelerate in Washington State,” KUOW — NPR Network, (July 28, 2023).

¹⁵ U.S. Department of Energy — Energy Efficiency & Renewable Energy, “Electric Vehicle Charging Station Locations,” (n.d.).

¹⁶ Elizabeth Ridling, “Less Driving Is Possible,” *Frontier Group*, (May 19, 2023).

incredible as this progress has been, even larger reductions in per capita VMT, in alignment with WSDOT's 2023 report recommending policy options at the state level and funding guidance for local jurisdictions, will support Washington's climate limits.¹⁷

The 2021 SES found that emissions from Washington's transportation sector must decline from an estimated 38 MMT CO₂e in 2022 to 20 MMT CO₂e or lower by 2030. On-road GHG emissions make up approximately 58% of the state's transportation sector emissions, suggesting that this subsector would contribute 11.6 MMT CO₂e in 2030 if this percentage stays the same. However, it is highly likely that annual on-road emissions in 2030 must be less than 10 MMT CO₂e to make up for harder-to-decarbonize transportation subsectors, such as aviation and marine.

Washington Residents' Perceptions about Transportation Electrification

For Washington to successfully meet its goals, it is essential to understand not only the current transportation sector but also the barriers state residents face (or perceive they face) in the transition to an electric transportation system. As part of the TES public engagement process, the consulting team collected testimonials from a diverse group of Washingtonians on the kinds of barriers that exist for transportation electrification, with a focus on overburdened communities and vulnerable populations. Such discussions covered topics including:

- Public charger availability and accessibility
- The cost to purchase and charge EVs
- Supporting policies and funding at the local, state and national level
- Public understanding and excitement about EVs
- Demand on the power grid
- Inequities for overburdened communities in the electrification transition

Discussions with these diverse groups, covering the topics noted above and other aspects of transportation electrification, have directly influenced policy development and implementation plan creation.

Where Washington Needs to Go

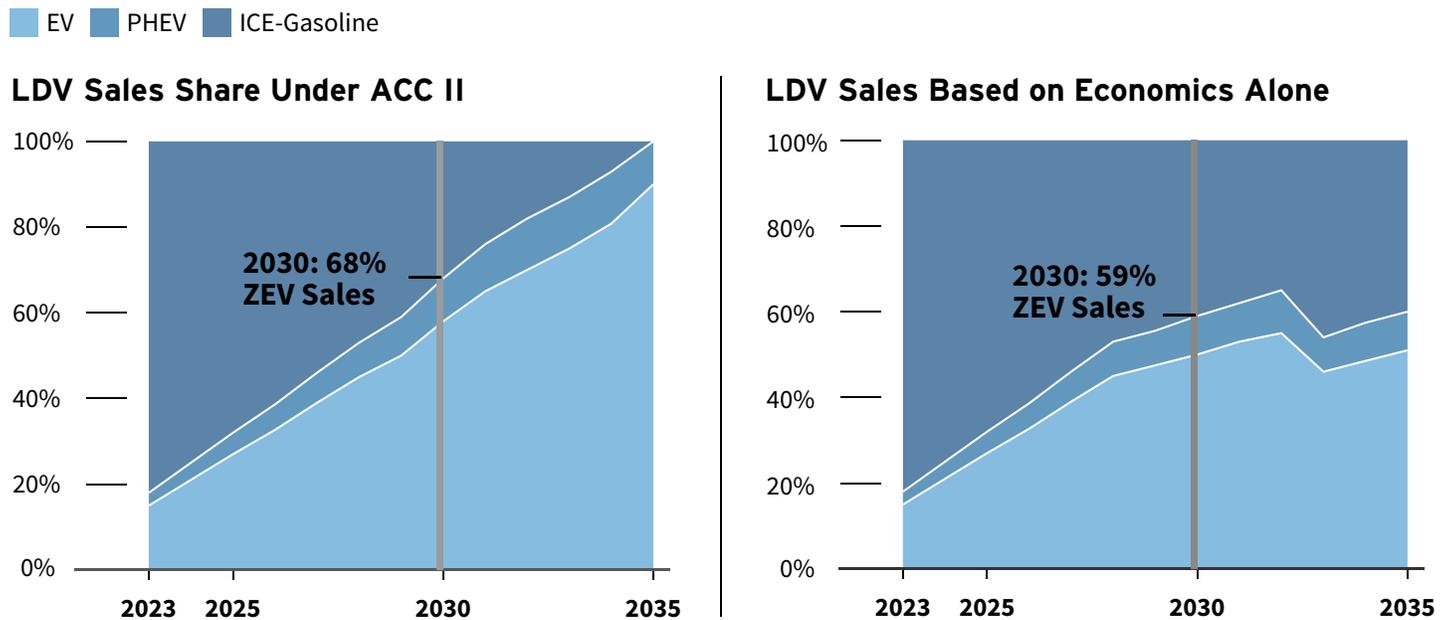
RMI conducted extensive modeling to explore how on-road EV adoption and charging needs in Washington may progress over time. The analysis to support the TES included two stages: (1) an EV adoption model, which estimates EV sales and overall vehicle population from 2023 through 2035 using a combination of bottom-up economic analysis and top-down policy requirements such as the ACC II and ACT regulations and (2) an assessment of anticipated EV charging needs, using the number of EVs estimated through the adoption model combined with local trip data.

¹⁷ Roger Millar and Norene Pen, "Vehicle Miles Traveled (VMT) Targets - Final Report," Washington State Department of Transportation, (June 2023).

The modeling demonstrates the wide variety of potential outcomes that might be expected based on different assumptions about future economic, policy and customer preferences. Several clear themes emerged, ordered below by priority and potential impact:

1. The state’s adoption of **ACC II is a critical component of transitioning to an EV future**. However, achieving the regulation’s sales requirements will happen only with additional actions to undergird the policy, such as infrastructure build-out, consumer education and reduced purchase price. ACC II requires light-duty ZEV sales in the state to account for 68% of new LDV sales in 2030 and 100% of new LDV sales by 2035, while the separate 2030 EV target sets an accelerated goal of reaching 100% by 2030. Without ACC II, the state would otherwise expect sales of electric and plug-in hybrid electric LDVs to represent only approximately 59% of new LDV sales in 2030 — far short of the 68% requirement and 100% goal (Figure 1). This finding underscores the need for supplementary investments to ensure ACC II is successfully and equitably implemented.

Figure 1 Estimated Light-duty Vehicle Sales, ACC II and Economics Alone

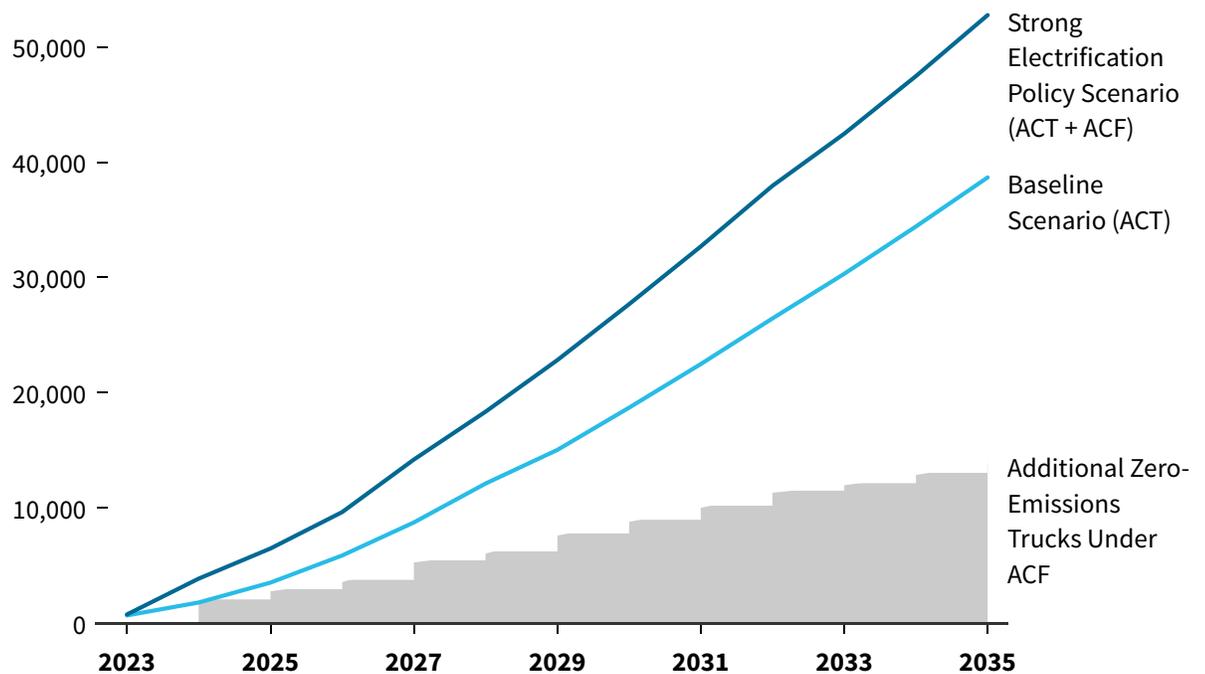


Note: The dip in EV sales share in the right-hand chart beginning in 2033 is due to anticipated expiration of federal tax credits extended and modified by the Inflation Reduction Act.

2. The **ACF regulation is one of the most powerful levers available to the state for accelerating MHD truck electrification** (Figure 2). By limiting usable lifetimes and setting purchase requirements for specific market segments, ACF ensures that high-impact, electrifiable fleets replace their vehicles. This purchase requirement creates significant demand for the vehicle supply produced under ACT. Further, given that drayage trucks, state and local vehicles, and high-priority fleets — targeted under ACF — comprise a significant number of vehicles (estimated at approximately 40% of total MHD trucks in Washington in 2023), this regulation is uniquely positioned to encourage MHD electrification broadly if adopted.

Figure 2

Zero-Emissions Medium- and Heavy-Duty Truck Population Under ACT and ACF

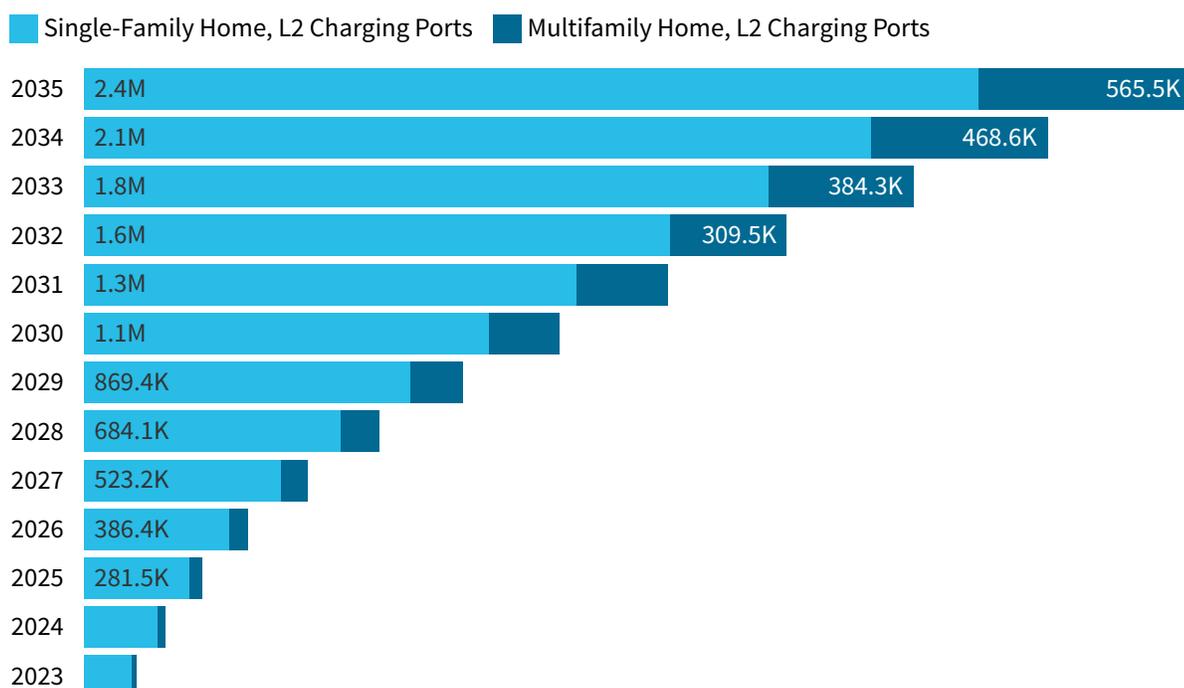


Note: The Strong Electrification Policy scenario (upper sales share line in chart) includes incentives for MHD truck electrification in addition to those in the ACF regulation.

3. **Ensuring EV purchase prices are affordable is a key strategy** for getting closer to sales and emissions goals, especially for lower-income residents. Focusing on reducing costs in the near term drives higher adoption before the 2035 ACC II requirements and 2030 EV target have clear effects. This supports faster electrification and thereby larger retirements of polluting gasoline-fueled vehicles.
4. **Supporting transportation options for people with lower incomes will be essential for attaining state goals for electrification, climate and equity.** The state will need to ensure that sufficient incentives, charging infrastructure, education and outreach are provided to those least able to afford to lease or purchase an EV and help make desirable EV adoption levels a reality.
5. **Truck electrification is increasingly economical on a TCO basis,** due in large part to the incentives provided through the federal **Inflation Reduction Act (IRA)**. Although up-front costs can still represent a barrier, lifetime cost savings present opportunities to scale up electrification of these vehicles, beyond the levels required in the ACT regulation. To ensure truck electrification can drive maximum impact and scale up rapidly, Washington should focus on vehicles with strong potential to reduce local air pollution, removing bottlenecks such as vehicle availability constraints and delays in deploying EV supply equipment (EVSE – generally, charging stations) and providing education and technical assistance to fleet managers.
6. **The pace of installing charging infrastructure for LDVs and MHDVs needs to accelerate significantly, indicating a clear role for supportive policies.** In 2035 Washington will require more than 20 times more EV charging plugs than the TES model suggests is needed today.

7. Ensuring availability of home (or neighborhood) charging for multifamily homes meaningfully reduces total public charging network requirements, providing both cost savings and equity benefits. Figure 3 depicts the estimated number of residential charging ports for both single-family and multifamily dwellings required to support LDVs in the Strong Electrification Policy scenario, totaling more than 2.9 million by 2035. Supplementing direct on-site charging with neighborhood charging options in close proximity to multifamily homes will be an important strategy for providing this level of access for residents of multiunit dwellings.

Figure 3. Cumulative Residential Charging Ports Required, Strong Electrification Policy Scenario



8. Reducing VMT and total vehicle stock, while shifting new sales to lighter-weight vehicles, has significant potential for reducing GHG and local air pollutant emissions, as well as total costs.

9. Bus electrification, especially school bus electrification, requires continued policy support to increase market share. This support is needed from the state and local level, as well as through flexible federal funding and continued dedicated federal funding such as the Low or No Emissions grant and the Clean School Bus program.

10. Hydrogen fuel cell electric vehicles (FCEVs) are likely to eventually play a role in heavy-duty (HD) truck and transit bus electrification. The market share these vehicles will obtain remains unclear, but at present battery electric alternatives appear likely to be the primary technology for many applications and duty cycles — especially for LDVs — based on TCO analysis. As both the state’s hydrogen economy and FCEV technology mature through 2035, the role played by these vehicles will become increasingly clear. The state should continue to monitor and track the development of

FCEV technology and costs, and over time consider how these vehicles can contribute to meeting transportation sector emissions reduction targets. Per [RCW 43.330.570](#),¹⁸ the Department of Commerce’s Office of Hydrogen and Renewable Fuels delivered a Hydrogen and Renewable Fuels 2023 Legislative Report to the Legislature in December 2023, which should inform this assessment. Additional analysis on FCEV cost outlooks is included in Appendix D.

- 11. Washington will need to take other actions for non-road vehicles**, such as planes, boats and trains, which represent approximately 42% of the state’s transportation-related emissions. Accelerating electrification and emissions reduction policy measures addressing non-road vehicles will be vital for meeting emissions targets.



Recommendation: Focus Efforts on Achieving the Strong Electrification Policy Scenario

The state will need to focus on the levers it most readily has available to promote transportation electrification, equity and alignment with climate goals. Accordingly, focusing on the Strong Electrification Policy scenario (also referred to as Scenario 3 or S3, which is described in further detail in Chapter 4) is likely to provide the best combination of attainable policy options and feasible programs to implement.

18 [RCW 43.330.570](#) – Office of renewable fuels – Duties.

For the state to align EV sales trajectories with the Strong Electrification Policy scenario, several key actions will be required.

- 1. Providing enhanced state incentives for ZEVs and EV charging infrastructure.** Examples include extending and simplifying the EV sales tax exemption; providing a larger incentive value (e.g., \$5,000) in the Alternative Fuel Vehicle Incentive administered by the Department of Commerce, with a particular focus on overburdened communities and vulnerable populations; increasing the charging and clean fuels subsidies provided through the Department of Ecology’s Clean Fuel Standard through 2035; and working with electric utilities to provide higher EVSE incentives for residential and commercial customers (e.g., \$800/residential EVSE through 2035 versus \$400 through 2028 in the baseline scenario).
- 2. Ensuring that federal incentives are used to the greatest extent possible.** Examples include promoting the availability of the Clean Vehicle Credit and Qualified Commercial Clean Vehicle Credit so that more EV sales in the state are subsidized primarily by the federal government, and promoting adherence to the requirements for full rather than partial compliance with the Alternative Fuel Refueling Property Credit, such as meeting prevailing wage requirements. The state should continue to monitor and track applicable federal programs and share information with local government, industry and residents to support effective utilization of federal incentives.
- 3. Achieving ACF adoption rates to complement the existing ACT regulation.** Having adopted California’s motor vehicle emissions standards under Section 177 of the Clean Air Act, Washington may have the ability to adopt and implement the ACF rule or a policy that creates ACF-like adoption rates, in addition to ACT. The Department of Ecology is currently monitoring California’s actions to finalize ACF given its existing mandate from the Legislature. The accelerated purchase requirements for MHD vehicles in ACF have a meaningful effect on electric and FCEV truck adoption in the state because these requirements are applicable to an estimated 40% of the state’s MHD vehicles. The EV Council anticipates ACF to provide commensurate levels of incremental GHG and local air pollutant emissions reductions, beyond those associated with ACT.
- 4. Conducting education and awareness campaigns** to promote the benefits of EVs, available EV programs and increasing affordability of EVs. The Strong Electrification Policy scenario assumes stronger consumer interest in EVs as a proxy for effective messaging and education about the benefits of these vehicles. To make this assumption a reality, the state can invest in meaningful education and engagement activities, beginning with the Education Plan and the [Washington State Transportation Electrification Engagement Plan \(Engagement Plan\)](#) developed for the TES.

In addition to these key policies, the state should consider the strategies embedded within several of the “exploratory” scenarios modeled, which rely heavily on VMT reduction and vehicle stock change assumptions to achieve lower emissions rates than will be attainable through vehicle electrification alone.

How Washington Can Get There

In recognition of the challenge to meeting state goals identified within the modeling, the TES outlines critical technological, financial and institutional barriers that the state will need to address to meet its transportation electrification targets, briefly summarized in Table 4.

Table 4 Technological, Financial and Institutional Barriers

Technological	Financial	Institutional
<p>Product supply chain limitations have led to both EV production challenges and reduced availability of fast-charging infrastructure. This has led to a mismatch between available EV stock and consumer preferences (e.g., affordable models like the Chevrolet Bolt, all-electric three-row SUVs, trucks, and vans) and a lack of available material for fast-charging hardware, lithium, and other components (particularly switchgear and transformers) critical to EVs and EVSE.</p> <p>Current charging infrastructure is generally decentralized, can be unreliable, lacks interoperability and, due to slow speeds, can result in queues for open chargers.</p> <p>Grid infrastructure is insufficient to meet anticipated charging needs in later years in many locations, and likely in the near term for areas with concentrations of MHDVs which will require higher-power charging. Additionally, Washington will need to increase investments in energy efficiency and demand management, and generate or import sufficient renewable energy to ensure transportation electrification is powered by zero-carbon electricity.</p> <p>Trip range can be limited by negative weather impacts on battery capacity and can be worsened by lack of EVSE infrastructure. Specific vehicle types, such as electric buses, fleet vehicles and used EVs are likely to face higher barriers.</p>	<p>Lack of cost parity between EVs and ICE vehicles can make it difficult or impossible for some consumers to transition. This barrier is worsened by the existence of a limited market for used EVs. Additionally, not all EV models qualify for federal tax credits, and historically, incentives have been provided in the form of tax credits rather than “on the hood” point-of-sale rebates.</p> <p>Installation of EVSE can have high up-front capital costs, including costs to upgrade grid infrastructure, and challenging business models. Furthermore, many individuals find it challenging to access federal, state, private and utility funding to defray the costs of charging infrastructure.</p> <p>Operating costs for public EV charging lack transparency, and significant price variability between at-home and public charging disproportionately affects renters and residents of multifamily homes. Additionally, fleet operators and businesses are unaccustomed to negotiating charging agreements and see it as complex and full of risk.</p> <p>Absent effective regulation, managed charging and other strategies to better use grid capacity, energy burdens could increase for low-income households if utility rates increase to support charging infrastructure.</p> <p>On average, existing passenger cars often stay on the road for approximately 15 years, given the cost of replacing vehicles and because older cars often move into the used car market rather than being taken off the road.</p>	<p>Charging infrastructure development can face delays due to challenges caused by local permitting processes, timelines, regulatory procedures for grid-side utility upgrades and supply chain constraints for electrical equipment, among other institutional barriers.</p> <p>Lack of clear and consistent EV signage creates difficulty locating and subsequently using chargers.</p> <p>There is a lack of community support and buy-in due to perceived or real safety concerns; insufficient data for personal and business decision-making; questions about range, weather and towing capacity; and real or perceived concerns regarding the ethical and environmental impacts of material extraction and recycling. These are worsened by a confusing policy and incentive landscape and information gaps for consumers shopping for a new vehicle.</p> <p>A limited workforce means a lack of technicians to service EVs, and of engineers, electricians and technicians to install and maintain EVSE and related grid infrastructure. Additionally, increasing this limited workforce needs to be balanced with job security for the existing workforce, including those who currently work with ICE vehicles.</p> <p>Charging infrastructure, especially for MHDVs, will require significantly more real estate than diesel fueling.</p> <p>Slow turnover of existing vehicle stock can limit implementation timelines. Many cities limit the number of electric buses they can procure based on their current stock of buses that are still in operation.</p>



To overcome these barriers, to enable a regulatory and market environment to facilitate EV adoption rates at the pace envisioned in the Strong Electrification Policy scenario and to achieve Washington’s climate and equity goals, the state will need to enact a collection of supplemental policies across six categories: consumer education and capacity building, charging and utility infrastructure, LDVs, MHDVs, electrified micromobility and workforce. This approach not only accounts for the need to transition vehicles, but importantly, continues to develop the ecosystem needed to effectively and equitably transition to an electrified transportation system.

A total of 86 policies are included across these six categories. Detailed descriptions can be found in Chapter 5, Part I – Achieving the Strong Electrification Scenario.

Additionally, to achieve the state’s 2030 GHG emissions limit, it is likely that on-road emissions must be less than 10 MMT CO₂e to make up for harder-to-decarbonize sectors and subsectors, including non-road transportation.

RMI modeling shows that maximum feasible EV adoption still leaves an approximate 4 MMT CO₂e gap in emissions reductions in 2030 relative to the 10 MMT CO₂e threshold. Given the state’s commitment to reaching its 2030 emissions limit, it must consider significant new investments beyond the transportation electrification recommendations laid out in this strategy (Table 5). Although EVs are part of a holistic transportation landscape, they cannot be separated from land use, safety, transit, active transportation, fuel economy and clean fuels. For this reason, the EV Council lays out additional policies in Chapter 5, Part II – Closing the 2030 Transportation Greenhouse Gas Emissions Gap, because the state will need to consider developing and implementing strategies to achieve the following objectives:

- Speed up retirement of the highest-emitting ICE vehicles
- Increase vehicle energy efficiency
- Decarbonize non-road vehicles (e.g., aviation, maritime)
- Reduce VMT by supplementing existing state efforts

Table 5

Strategies to Achieve 10 MMT CO₂e in 2030 On-Road Emissions

Strategy	2030 emissions	Incremental reduction
Successfully implement current EV and VMT policies	14.1 MMT	9.4 MMT (from 2019 levels)
Take stronger electrification actions	13.9 MMT	0.2 MMT
Reduce VMT per capita by 17% instead of 6%	≈13.2 MMT*	≈0.7 MMT*
Require vehicle efficiencies and fund early ICE vehicle retirement	≈12.0 MMT*	≈1.2 MMT*
Reduce carbon intensity of gasoline and diesel	≈10.0 MMT*	≈2.0 MMT*

* The emissions level or reduction is a preliminary estimate, not a model output, and requires additional analysis.



2030 EV Target Is an Aspirational Stretch Goal, but Likely Infeasible

[Revised Code of Washington \(RCW\) 43.392.020](#)¹⁹ requires the EV Council complete a scoping plan for achieving the 2030 EV target. The EV Council decided to complete this analysis within the TES, and it is embedded throughout this report. The actions needed to achieve 100% new light-duty EV sales by 2030 are also needed to achieve the 68% sales share projected by 2030 in the Strong Electrification Policy scenario (S3). Therefore, the policy recommendations in Chapter 4 should be considered key elements of the required scoping plan.

This divide raises the question: How could the state go from reaching 68% to 100% EV market share in 2030? The TES model uses a sensitivity analysis to assess the difference between these versions of the future. For the preferred Strong Electrification Policy scenario (S3), that sensitivity analysis is labeled S3b throughout the TES.

In addition to the recommended Strong Electrification Policy approach detailed throughout the rest of this report, such a scenario (S3b) would require:

- Rebates amounting to \$9,000 per sedan and \$11,000 per light truck or SUV or more in 2030 *above* the incentives required to reach the ACC II's 2030 sales goal
- Approximately 185,000 additional charging ports by 2030 at an additional expense ranging from \$200 million to \$520 million
- Voluntary discontinuation of non-electric LDV production and sales by all automakers and dealers

Because S3b would likely be infeasibly expensive, would depend on factors largely outside the state's control (e.g., fossil fuel prices, automaker and dealership voluntary decision-making) and would result in a relatively modest 0.3 MMT decline in 2030 emissions compared with Scenario 3, the EV Council selected the more feasible and still very strong electrification pathway in Scenario 3 as the preferred scenario to use as the TES foundation.

Recognizing the importance of bold targets to drive urgency in climate action, the EV Council and its member agencies will continue to pursue the 2030 EV target set by the Legislature as an aspirational stretch goal. It will also urge state policymakers to consider the cost per metric ton CO₂e avoided when evaluating different program investments to stay under the 2030 emissions limit.

Monitoring, Evaluation and Continuous Improvement

Successful implementation of Washington's transition to an electric transportation system will be measured in EVs on the road, EV chargers installed, air quality improvements and real and direct equitable outcomes for overburdened communities and vulnerable populations. To that end, the state will publicly track the key performance indicators listed below and publish an annual report.

In addition, the EV Council is committed to an adaptive management process to ensure that policies and programs are having their intended effects and that policies and programs remain flexible and iterative

19 [RCW 43.392.020 – Interagency Electric Vehicle Coordinating Council – Target Established – Scoping Plan.](#)

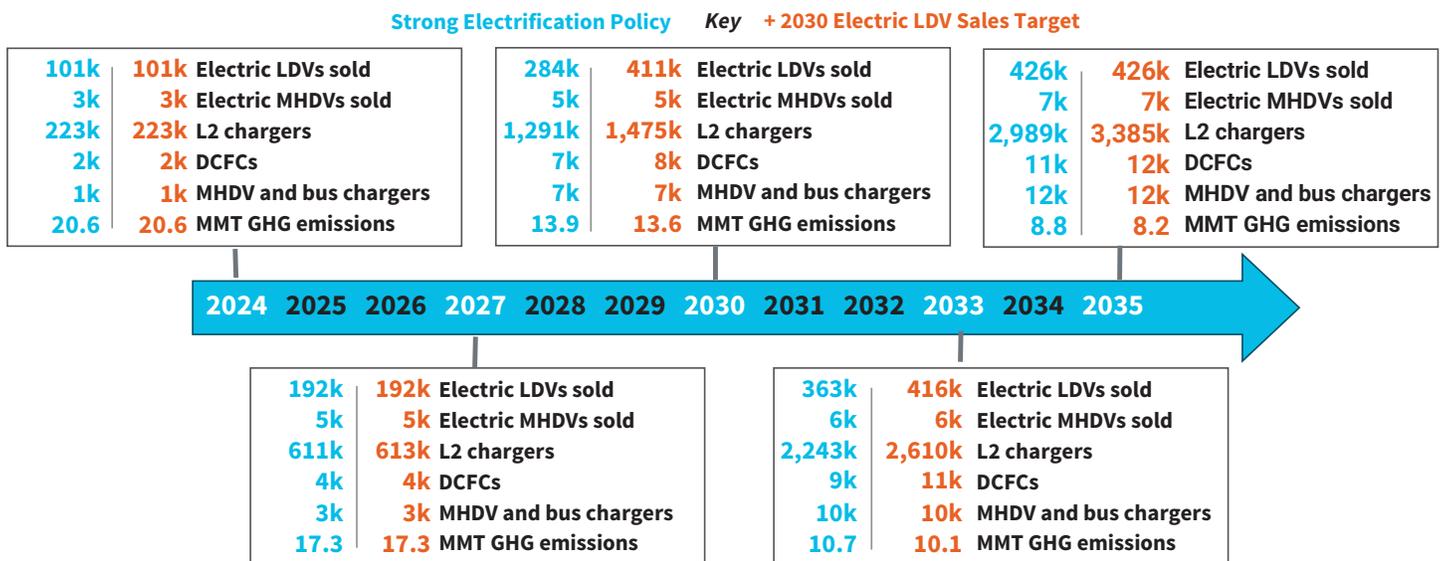
in the face of a changing market and policy landscape. The annual report will assess progress, identify roadblocks and recommend course corrections as necessary to achieve desired outcomes. Metrics will include several indicators to assess changes to charging infrastructure, LDV and MHDV adoption, EV miles traveled, GHG emissions and air pollutants, and equity and environmental justice indicators. As a first step in successfully tracking relevant metrics, the EV Council, through the lead of each designated agency, must:

- Establish methods of data collection and tracking for any new key performance indicators and set baselines for any new information.
- Develop thresholds or goals by date for each indicator, if possible and if not already established.
- If too much uncertainty exists to establish a reliable threshold or goal, establish directional indicators (positive, negative) for guidance.

As a reference, the Strong Electrification Policy scenario (S3) establishes guiding metrics that the state can use to benchmark its progress (Figure 4). These metrics, as well as those from all modeled outcomes of different scenarios and sensitivities tested as part of developing the TES, can be explored on the Washington TES User-Interactive Dashboard, found on the [TES website](#).²⁰

Importantly, the metrics from the modeling should be considered directional and indicative, rather than precise. State staff and interested stakeholders can use the metrics as general guidance when considering Washington’s success in reaching state goals.

Figure 4 Washington EV Adoption and Infrastructure Milestones



²⁰ Washington TES User-Interactive Dashboard, found on the [TES website](#).



Building Awareness and Capacity

Although the state has existing programs and policies to bring down EV costs and build out charging infrastructure, it has not yet taken action to provide good-quality public information so both consumers and fleet managers can navigate a new, complex and quickly changing EV industry. If up-front cost and charging are the first two legs of the EV transition stool, education and awareness is the third. Declining prices and expanded charging infrastructure only drive adoption as far as people know about them. Recognizing this gap, the EV Council hired Cascadia Consulting to develop an EV Education Plan to increase awareness and a TES Engagement Plan to improve state-level decision-making with on-the-ground information and input.

EV Education Plan

A crucial element for Washington’s success in meeting its goals is to ensure that Washington residents have information and awareness regarding EVs. The EV Education Plan’s goal is to accelerate the adoption of personal EVs in Washington. To that end, the EV Education Plan aims to serve as an evidence-based guide for a short-term (one- to two-year) marketing campaign to provide Washingtonians with the information they need to buy or lease EVs. This involves raising awareness of EVs, providing information and pointing consumers to places where they can determine which EV is best for them and their lifestyle. The EV Education Plan is a guide to overcoming Washingtonians’ barriers to and concerns about switching to EVs to facilitate EV purchasing and leasing.

The plan draws from a literature review of existing EV Education Plans, a statewide EV market research survey administered in the spring of 2023 and one-on-one interviews and focus groups conducted as part of the TES’s formative engagement.

According to the market research survey, the top three barriers to EV adoption — whether perceived or real — are universal across target audiences (Figure 5).

Figure 5 Top Three Barriers to EV Adoption

	COST The up-front cost of buying an EV
	RANGE AND CHARGING EVs do not have enough range and there are not enough charging stations
	TECHNOLOGY WILL BECOME OUTDATED Concern about EV technology changing fast and not wanting a vehicle that will be outdated

The statements in Figure 6 are perceptions (again, accurate or misconceptions) that survey respondents reported with the most frequency as making them less enthusiastic about EVs. Although not explicitly barriers, these statements can factor into individual decisions not to purchase or lease EVs or to delay doing so, and therefore should be addressed through educational messaging and strategies.

Figure 6

Survey Respondents' Perceptions

	<p>FUNCTIONALITY EVs may not work during power outages or if people need to evacuate for wildfires, floods or earthquakes. Additionally, EVs do not work well in cold weather, rural areas or the mountains.</p>
	<p>ENVIRONMENTAL IMPACT EV batteries wear out quickly, cannot be recycled and use rare earth minerals that are mined in harmful ways.</p>

The EV Education Plan includes messaging opportunities, trusted information channels, equity considerations, strategies and monitoring and evaluation criteria.

TES Engagement Plan

The TES Engagement Plan’s goal is to provide a roadmap for engaging key audiences and Washington communities on policies and programs that will be implemented under the umbrella of the TES. It is complementary to the TES implementation plan and focuses on providing guidance regarding which audiences need to be engaged on specific policy recommendations in the TES, and how to inform them, seek their input, involve them in planning and implementation, and collaborate with them.

This engagement plan incorporates Washington audiences’ and community members’ input, priorities and recommendations, and builds on extensive community feedback from several months of engagement and a literature review.

The plan is divided into three parts (Table 6).

Table 6

TES Engagement Plan

Part One	Part Two	Part Three
<p>Engagement Principles and Methods</p> <p>This section notes the guiding principles for engagement, including stages of engagement and equity considerations.</p>	<p>TES Engagement Strategies, Actions and Activities</p> <p>This section outlines the recommended ongoing engagement strategies, actions and associated activities. It also offers recommendations on messaging to audiences whose input is sought.</p>	<p>A Guide to TES Implementation Engagement</p> <p>This section lists key audiences identified in formative engagement, provides specific guidance on which audiences and communities to engage, and offers a matrix of engagement and activities for each policy</p>



The TES Engagement Plan identifies four key strategies for ongoing statewide engagement for the implementation of TES programs and policies. These strategies are supported by actions, specific activities and key performance indicators, and are as follows:

- Strategy 1: Cultivate an audience network
- Strategy 2: Establish an audience engagement framework
- Strategy 3: Engage key audiences and Washington communities
- Strategy 4: Conduct monitoring and evaluation

This document also serves as a guide to TES implementation engagement and serves as a complement to other TES documents. The TES Engagement Plan identifies lead agencies and programs for specific policies and programs in the TES, recommends integration into existing state infrastructure and funding streams, and provides next steps for implementing those programs and policies. The TES Engagement Plan outlines the ingredients for facilitating partnerships and engaging audiences that will support the advancement of TES programs and policies.

Call to Action



Washington's TES builds on years of state leadership and recent historic federal investment in transportation decarbonization. Against this backdrop, the state's focus is to ensure that the transition to an electrified transportation system is as efficient, equitable and effective as possible. Due to the slow nature of vehicle stock turnover, analysis and modeling from this report highlights that the next five years, and even the next two years, are critical for the state to meet its important climate requirements.

The EV Council designed the policy recommendations and implementation plan in this report to meet Washington's emissions limits through setting up the supportive infrastructure necessary for rapid scaling, intentionally and proactively directing benefits to overburdened communities and vulnerable populations, and ensuring that the electrification transition supports the state's wider decarbonization targets in 2030, 2040 and beyond.

Washington is among the first states to develop a truly holistic plan for equitably transitioning to a predominantly electric transportation system. With this report, Washington commits to following up its nation-leading policy obligations with actionable plans and impactful programs to achieve its climate and equity goals.

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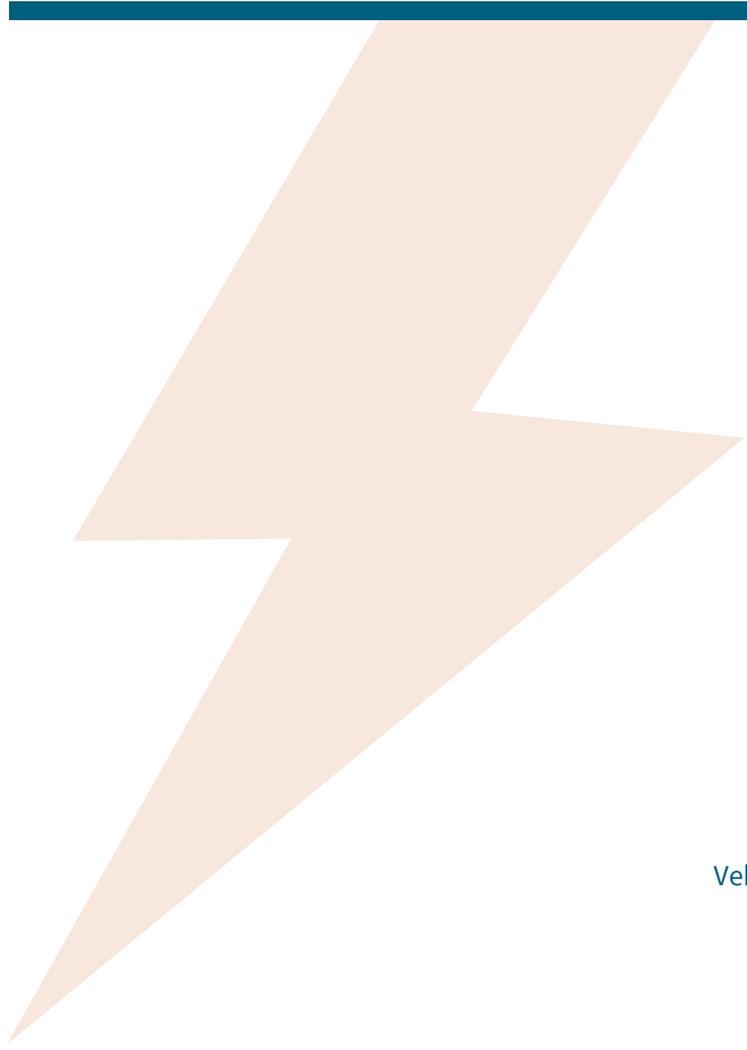
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Washington State Transportation Electrification Strategy Engagement Plan



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Overview and Introduction



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The Washington State Department of Commerce and the Interagency Electric Vehicle Coordinating Council (EV Council) have developed a Transportation Electrification Strategy (TES), which recommends policy and funding strategies to advance electric vehicle (EV) adoption and transportation electrification throughout the state. The TES also includes an implementation roadmap to guide Washington's transition to EVs.



Continued engagement of a broad spectrum of audiences is critical to generate buy-in and facilitate successful implementation of TES programs and policies. To ensure the TES equitably reflects the needs and desires of communities across Washington, the planning process featured engagement with the public at multiple touchpoints during policy development. This Engagement Plan (Plan) provides evidenced-based recommendations about how and when to engage audiences through engagement infrastructure and communities through direct to community engagement around the recommended policies and programs, complementing the TES Implementation Plan. Successful engagement on recommended policies will necessitate that the EV Council work with regional entities, community organizations, and key industry partners. Successful implementation requires many ingredients, encompassing a lead entity for each action, policies and programs integrated into existing agencies, partnerships that move implementation forward, funding, and identification of program or policy-specific next steps.

Engagement Goal

To gather community and key audience perspectives and input to inform TES implementation-related decision-making.



Desired Outcome

Equitable transportation electrification statewide, with ongoing input on policies and programs from key audiences and priority communities throughout Washington.

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How to Read This Document

This document is a roadmap to engage key audiences and Washington communities around policies and programs that will be implemented under the umbrella of the TES. It provides guidance regarding audiences to engage around specific policy recommendations in the TES and how to interact with them at a variety of levels, whether the goal is to inform, seek input from, involve, or collaborate with audiences. In this Plan, key audiences and Washington communities are separate engagement groups to distinguish broad stakeholder engagement from direct community engagement actions.

This plan is divided into three parts:

Part One	Part Two	Part Three
Engagement Principles and Methods	TES Engagement Strategies, Actions, and Activities	A Guide to TES Implementation Engagement
Guiding principles for engagement, including levels of engagement and equity considerations.	Recommended ongoing engagement strategies, actions, associated activities, and messaging.	Guidance on audiences and communities to engage, and a matrix of engagement levels, activities and performance measures for priority, near term policy recommendations.

How We Developed the Engagement Plan

This Engagement Plan incorporates Washington audiences' and community members' input, priorities, and recommendations by drawing on extensive community feedback from several months of engagement, as well as a literature review. More robust methods and results are described in Appendix A: How we developed this Plan.

Community Highlights / What We Heard

Audiences and community members emphasized the importance of **ongoing, intentional engagement** during implementation of the TES. The more frequently they are involved in implementing a policy or program, the more confident they feel that it will be equitable and effective. Community members and audiences expressed desire to feel heard and represented in this process, since electrification presents both exciting opportunities for change and major challenges. This Plan aims to ensure that community members have clear, tangible, and frequent opportunities to influence policy refinement and implementation.

Part One: Engagement Principles



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Engagement is a fluid process that will require adaptive strategies to evolve as audiences voice priorities and concerns about both the TES and the process of engagement itself. This section outlines principles to guide TES engagement as it evolves, notes the goals that underpin the levels of engagement (Table 2: Levels of Engagement, below), and highlights equity considerations.

The guiding principles for TES engagement form the foundation for the strategies, actions, and activities identified in Part 3 and for the Implementation Engagement Matrix in this Plan. The guiding principles are as follows:

Table 1: Guiding Principles for TES Engagement

Active Learning	Learn communities and audiences’ perceptions about EVs and their transportation priorities before and during implementing TES engagement strategies.
Capacity Building	Invest in individuals, organizations, and partnerships for greater effectiveness, creativity, and longevity of engagement—crucial over the 12-year timeline of TES implementation.
Building Implementation Partnerships	Utilize a bottom-up approach where ideas and visions related to transportation electrification and EVs are developed in partnership with communities and audiences and in response to needs and priorities.
Equitable Engagement Innovations	Develop new tools, models, and infrastructure to realize partnerships and effectively engage audiences for TES implementation.
Critical Connections	Work across sectors, geographies, and silos to build statewide synergies that bridge TES programs and policies and link to transportation electrification efforts led by other entities.

Levels of Engagement

This Engagement Plan relies on a framework called the Spectrum of Community Engagement to Ownership, developed by Facilitating Power¹ The EV Council will need to conduct engagement at all levels, as described in Table 2: Levels of Engagement, to consistently receive relevant feedback from diverse audiences and authentically involve Washington communities. The Plan’s strategies and actions identified in Part Three: A Guide to TES Implementation Engagement incorporate a mix of

¹ Facilitating Power: [The Spectrum of Community Engagement to Ownership](#)

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activities across the levels of engagement to support TES implementation, as TES policies will require varied approaches to engagement, and diverse corresponding activities.

Table 2: Levels of Engagement

Engagement Stage:	1 Inform	2 Consult	3 Involve	4 Collaborate
Engagement Stage Goals:	<i>Provide key audiences with relevant information</i>	<i>Gather input from key audiences</i>	<i>Ensure key audience needs and assets are integrated into process & inform planning</i>	<i>Ensure audiences' capacity to play a leadership role in implementation of decisions</i>
Sample Activities:	<ul style="list-style-type: none"> • TES website • Social media • Email listservs/newsletters • Presentations • EV Resource Library • Factsheets • Open houses • Billboards 	<ul style="list-style-type: none"> • Surveys • Public comment periods • Focus groups • Online panels • Community meetings 	<ul style="list-style-type: none"> • Interactive workshops • EV Council meetings • Ride and drive events • Community organizing & advocacy 	<ul style="list-style-type: none"> • Community advisory committees • Audience advisory committees • MOUs with community-based organizations

Equity Considerations

Equity must be foundational to planning and conducting engagement activities. Specifically, actions need to reduce barriers to engagement for audiences that have experienced long-standing demographic, regional, and socio-economic obstacles to participating in government planning and policymaking. Washington State must customize outreach and engagement to proactively meet community where they are and be responsive to community needs. The implementation of the TES will have significant impacts on public health and climate justice; transportation is the largest contributor to greenhouse gas emissions in Washington state,² as well as a significant contributor to criteria air pollutants and air toxics emissions.³ At the same time, communities most affected by air

² Washington State Department of Ecology, Washington State Greenhouse Gas Emissions Inventory: 1990 – 2019, <https://apps.ecology.wa.gov/publications/summarypages/2202054.html>.

³ RCW 70A.30.010; Department of ecology to adopt rules to implement California motor vehicle emission standards.

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pollution from ports and freeways often have low capacity to transition to EVs due to myriad factors, including the high cost of EVs and limited charging access. Additionally, engagement for the TES must be statewide in scope, with particular focus on rural communities and regions outside of the Puget Sound, where there is relatively less infrastructure to support EVs (charging stations) and more limited access to that charging infrastructure.

Barriers to Equitable Engagement

Each of the following barriers can limit community participation and have historically contributed to exclusionary policies and programs.



Actions and activities to address these barriers are noted in the strategies section with an icon. It is critical that the EV Council recognizes these barriers from the beginning and builds solution-oriented engagement activities.

Lack of Trust

Communities who have been historically underrepresented in planning and decision-making often distrust institutional processes due to long-standing social, political, economic, and environmental injustice. These communities include but are not limited to Black, Indigenous, and People of Color (BIPOC) communities, people with disabilities, low-income households, LGBTQIA+ individuals, seniors and youth, immigrant and refugee communities, people who live in rural communities, and people with limited English proficiency.

Competing Demands

People have many life demands, and simultaneously there are many engagement efforts asking for community members' participation. The timing or frequency of engagement activities may make it difficult for communities to engage when facing many other demands for time. Ensure coordination of engagement efforts through communication with other state agencies.

Overwhelm

The transportation electrification transition, especially on a statewide scale, may feel overwhelming to community groups and residents. Some overburdened communities are concerned with the speed of TES policy development and implementation. It is important to continually host dialogues to understand community concerns and shape measures to alleviate those concerns while highlighting the benefits of transportation electrification.

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Technology and Accessibility

Lack of technology and limited availability of materials in-language create accessibility and participation barriers.

Part Two: TES Engagement Strategies, Actions, and Activities



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This plan identifies three key strategies for ongoing statewide engagement for the implementation of TES programs and policies. These strategies are supported by actions and specific activities. The project team developed the strategies, actions, and activities based on the formative engagement process during TES development (see Part One) and the engagement principles and equity considerations (see Part Two). We recommend that EV Council staff and agency staff coordinating TES engagement work in collaboration with an advisory committee (see Action 2.1) to implementing the following strategies, actions, and activities.



Strategy #1: Cultivate an audience network

This strategy centers around building and maintaining an equitable audience network. Implementing this strategy involves identifying audiences whose perspectives and input will be valuable to decision-making throughout TES implementation, noting any gaps in perspectives in engaged audiences, identifying priority communities, and continually engaging priority communities and audiences. The TES team will need to hire an agency staff person to manage this strategy.

Action 1.1: Identify audiences

This action identifies who, specifically, should participate in ongoing engagement activities, set the context, build rapport, and clarify desires and expectations of all parties. Identification should build off the preliminary audiences list (Table 1) and be iteratively refined to ensure an evolving equitable audience network in alignment with the shifting policy landscape and congruent with the equity chapter of the TES.

SPECIFIC ACTIVITIES

- Develop definitions for audience types (i.e., implementation, infrastructure, policy, municipal, organization)
- Create an audience database to collect contact information and notes for engagement
- Develop an audience map separated out by region and TES plan phase, noting which perspectives it is critical to engage at what phase
- Hire an agency staff person to manage the audience database

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- Revisit the audience database bi-annually to update contacts and collect information for new audiences

Action 1.2: Identify priority communities and populations

This action identifies gaps in audience perspectives and maps the audiences, communities, and populations to be engaged through decentralized strategies and actions. This is critical to ensure that as demographics change, priority communities continue to be identified and engaged.

We define **priority communities**⁴ as geographic areas where vulnerable populations face combined, multiple environmental harms and health impacts. Priority communities are inclusive of overburdened communities, as defined in the TES. **Vulnerable populations** are defined as population groups with greater sensitivity to, and risks of exposures to, environmental health harms including ethnic minorities, low-income populations, and workers experiencing environmental harms.

SPECIFIC ACTIVITIES

- Use the Washington Environmental Health Disparities Map to identify critical areas where priority communities reside and current context
- Add priority communities and key contacts to the audience database from Action 1.1, specifically noting cultural considerations such as religious holidays
- Solicit input from community partners to identify their policy priorities to find opportunities for synergies for collaboration to meet multiple priorities
- Engage priority community individuals or organizations during design and planning phases to co-create engagement strategies to reach priority communities and for cross-cutting opportunities during implementation
- Revisit the priority community element of the audience database annually to ensure that new groups and demographics are captured and integrated into ongoing outreach

Key Performance Indicators for Strategy #1

- Number of audiences in network
- Number of priority communities represented
- Number of private and public sector audiences represented

⁴ Priority communities includes “overburdened communities” as defined in the TES.

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Outreach to Tribes

Outreach to and coordination with federally recognized tribes regarding the TES utilized different strategies than stakeholder engagement with audiences due to the nature of government-to-government relations. In this approach, the Departments of Commerce and Transportation (Departments), as representatives of the EV Council, first reached out to Washington’s twenty-nine federally recognized tribes on April 10, 2023. In this initial outreach, the Departments informed tribes of their intent to develop the TES, under directives from the Washington State Legislature, and invited tribes to provide input that would inform future policy recommendations. Subsequent outreach notified tribes of a statewide survey opportunity and communicated ongoing opportunities to coordinate or engage in government-to-government consultation regarding the development of the TES.

While the Departments, on behalf of the EV Council, have taken steps to inform federally recognized tribes of the TES process, additional measures helped broaden input from tribes, tribal affiliated organizations, and tribal communities. For example, the Department of Commerce presented an update on the TES process at the Affiliated Tribes of Northwest Indians’ NW Tribal Clean Energy Summit. This conference offered an additional opportunity to notify tribes and stakeholders of the TES process and seek input. One of the main takeaways from this presentation was that there are still questions and concerns about the impact certain tools and definitions resulting from the HEAL Act may have on tribes. It will be important for the EV Council to work with tribes to address outstanding questions and concerns in the implementation of the TES.

Preliminary Audiences

We have identified the following groups of key engagement audiences through 1:1 interviews and focus groups. This should be an ever-evolving list as we continue through the engagement process.

Building relationships—especially with key implementation partners and impacted communities—will be critical for long-term TES success. **We believe the EV Council staff and agency staff coordinating implementation of TES engagement should be the lead in developing these relationships.**

Building rapport with communities and grounding relationships with a clear picture of long-term expectations will give reassurance to audiences early in the process that the engagement is genuine, meaningful, and not just “checking a box.”

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Table 3: Preliminary audience categories

Audience	Description	Example Groups
Governmental audiences		
Tribal Nations:	The perspectives of Tribal nations are critical to TES implementation, but were not included in formative engagement due to the nature of government-to-government relations. The government-to-government relationship between the state of Washington and Tribal nations as sovereign governments means that outreach to and consultation with tribes must occur separately from public engagement processes (see RCW 70A.02.100).	
Policy Partners:	This group includes Washington State legislators and legislative staff, as well as Federal partners, who are also developing and implementing electrification policies.	

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Industry audiences

Private Sector:

This group consists of vehicle manufacturers and dealers and EV infrastructure manufacturers and distributors.

- EV charging infrastructure manufacturers and network operators
- EV manufacturer (OEMs)
- Franchise and independent dealerships
- Commercial fleet owners/managers
- Labor unions
- Property owners/managers
- Property developers
- Third-party administrators
- EVSE Contractors

Implementation Partners: Public Service Agencies

This group includes entities whose partnership is essential for transportation electrification, such as utilities and ports.

- Clean air agencies
- Local governments
- Public school districts, colleges, and universities
- Transit agencies
- Ports
- Electric utilities
- Public fleets

Non-Profit Organizations and Advocates:

This group includes organizations operating at the regional and national level that are invested in environmental sustainability and transportation.

- Advocacy organizations and coalitions focused on climate, transportation, energy, environmental justice, and equity
- Trade associations
- Regional or national climate action collaboratives
- Non-profit service providers
- Non-profit fleets
- Multi-modal transit users

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General audiences

Critical perspectives: This group includes community leaders; representatives of specific state regions; demographics with specific transportation needs; overburdened communities; and businesses that work in those communities.

- Community leaders
- Community based organizations, including those serving vulnerable populations
- Housing authorities, tenant associations
- Low-income service providers

Strategy #2: Establish an audience engagement framework

This strategy develops a communication framework to facilitate collaboration and audience ownership in decision making related to program and policy development as part of TES implementation. This framework should include establishing an ongoing advisory committee for collaboration and feedback, as well as pathways for asynchronous one- and two-way communication channels. Establishing ongoing capacity, compensation strategies, and key messages, and relying on translation and transcreation into languages spoken by priority communities and audiences will streamline implementation.

Action 2.1: Create an ongoing advisory committee

This action establishes an ongoing advisory committee representing audiences and priority communities. The advisory committee builds off of existing infrastructure formed during TES development, and will adapt to meet shifting engagement needs. Its aim is to serve as a reliable and consistent pathway to engage with audiences on TES implementation, in addition to the direct to community relationships recommended in Actions 3.1 and 3.2. Creating predictable communications systems ensures engagement is transparent and accessible, with audiences knowing where and how to access information for updates and how to provide feedback.

We recommend that the EV Council formalize an ongoing version of the Electric Vehicle Advisory Committee (EVAC)⁵ as a permanent community advisory committee during TES implementation. We recommend that the EV Council and agency staff implementing the TES expand the EVAC membership to ensure audiences from Action 1.1 are represented on the EVAC. Subcommittees or technical committees could convene around particular issue areas, where applicable. A permanent advisory committee will also create a “feedback loop,” where audiences can provide input, and then see how their input was implemented via reports and updates to the committee.

⁵ During TES development, the EV Council created the Electric Vehicle Advisory Committee (EVAC), an advisory council made up of audiences with professional or personal experience with EVs. Washington State Department of Commerce, Advisory Committee and Subcommittee Contacts May 2023, <https://deptofcommerce.app.box.com/s/823h2j6tynfbsbp5fb88tftar40o959n>

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SPECIFIC ACTIVITIES

Identify what committee structure makes the most sense for TES implementation.

Indicate which state agencies will staff and support the advisory committee and identify funding to support ongoing staffing

Thoughtfully determine the number of seats and representation within the committee

Recommendations:

- Include seats for disparate geographic regions of Washington, priority audiences, and vulnerable communities (based on Washington Health Disparities Map). Consider engaging with the Environmental Justice Council on representation within advisory committee membership.



Establish a process for identifying industry representatives, priority communities, and other key audiences

Identify key community groups and partners throughout the state to invite that represent a diversity of interests, regions, and backgrounds

Identify which industry and government audiences to invite to the group that represent a variety of interests

Once the group has been established, co-create committee by-laws and group agreements, including decision-making structure, term limits, and subcommittee protocols. Set up a consistent meeting schedule that includes at least one annual joint meeting with the EV Council

Identify key community groups and partners throughout the state to invite that represent a diversity of interests, regions, and backgrounds

Recommendations:

- Advisory committee members serve 2-year terms
- Subcommittees are established on an ad hoc basis, depending on stage of TES implementation and as determined by the Advisory Committee

Action 2.2 State staff capacity and community compensation

This action defines the staffing and volunteer needs to implement ongoing engagement related to TES policies and programs. Trustworthy community engagement over the coming decade of TES implementation will require significant time and staff resources from all participating entities. The project team recommends considering capacity in staffing and compensation for TES engagement activities. Coordinating with audiences, developing and maintaining engagement infrastructure, and supporting engagement activities for TES policies and programs requires availability, flexibility, and continuous institutional knowledge. This could take the form of community engagement liaisons for specific audiences and communities. Paid, full-time staff to serve in these roles benefit the engagement portion of the project and its outcomes. Community engagement training and resources for staff in these roles will also benefit the goals of this Plan.

In Second Substitute Senate Bill (2SSB) 5793, the legislature “finds that asking community members with lower financial means to volunteer their time and expertise while state employees and representatives of advocacy organizations receive compensation from their respective agency or organization for their time and experience ultimately hinders full and open public participation. As a result, the legislature finds that **removing financial barriers for those individuals fosters increased access to government and enriches public policy discussions and decisions**, ultimately leading to more equitable and sustainable policy outcomes.” Office of Equity, Community Compensation Guidelines. [Community Compensation Guidelines](#).

When community members provide feedback in engagement events or forums, they are providing expertise based on their lived experience and dedicating time beyond their normal responsibilities. The Washington Legislature and Office of Equity recommend that community members be compensated for their participation on boards, committees, and task forces. We recommend that, in engagement for TES Implementation, Washington State build a compensation model that helps implementers have a consistent compensation framework for community engagement moving forward.

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SPECIFIC ACTIVITIES

<input type="checkbox"/>	Establish ongoing staff positions dedicated to support engagement throughout TES implementation	
<input type="checkbox"/>	Provide compensation to priority communities and audiences for both ad hoc and ongoing participation and feedback. Ensure alignment with compensation guidelines from the Office of Equity ⁶	
<input type="checkbox"/>	Establish paid community engagement liaison positions within the priority communities to engage in community-level outreach and engagement efforts relating to TES implementation	

Action 2.3: Establish formal information and communication channels

This action encompasses communications such as email, newsletters, social media, and websites to keep audiences and priority communities informed and up to date with TES implementation, and to notify Washington residents of opportunities to provide input. Regular coordinated communication actions are necessary for transparency about TES implementation and form critical building blocks for audience and direct-to-community engagement.

We recommend that the EV Council consolidate and simplify existing EV information streams in one central source, particularly for funding sources, grants, and incentive. The EV Council and agency staff should develop a statewide website that collects, organizes, and presents up-to-date information about electrification and electric vehicles in Washington. The EV Council and agency staff should also establish communication channels managed by paid staff identified in Action 2.2 such as a newsletter, an EV helpline, and social media accounts to enable two-way, asynchronous communication between the EV Council and Washington residents.

SPECIFIC ACTIVITIES

<input type="checkbox"/>	Develop a statewide electrification website that collects electrification and EV resources, as well as updates about TES-related policies and programs, in line with the TES' recommendation for an EV resource center. Ensure the website URL is predictable and easy to access (for example: www.EVstate.wa.gov , www.EVresources.wa.gov , or others)	
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Recommendations:

⁶ Office of Equity, Community Compensation Guidelines. [Community Compensation Guidelines](#).

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- Website should consolidate funding and grant information, to address the common barrier of confusing, patchwork, and difficult-to-apply funding sources
- Translate all website materials into multiple languages to ensure language accessibility
- Organize geographic-specific information by region and assign community engagement liaison to each region as a key contact for questions
- Develop an engagement or implementation activities calendar that's regularly updated. Calendar should be located on statewide electrification website to ensure people can easily see upcoming opportunities to be involved
- Demonstrate accountability on the website by publishing ongoing yearly progress reports on the EV Council's progress towards electrification, implementation updates, challenges, and what's next for TES

Create a newsletter that shares out upcoming engagement opportunities and updates on the progress of the TES. Create a listserv that allows people to sign up to receive newsletters, and link to it on statewide electrification website (see above)

Establish an EV helpline or email inbox to provide one-on-one assistance for questions related to electrification

Develop statewide electrification social media accounts and post social media content that advertise upcoming engagement opportunities

Establish accessibility & transparency guidelines – Consistently ensure communities know when and how they can participate in TES implementation

- Recommendation: Provide understandable, engaging, and in-language messaging about electrification policies and programs



Action 2.4 Develop key messaging to use with audiences

This action supports Actions 2.1, 2.2, and 2.3 by developing key messages that will support communication with priority communities and key audiences. We recommend that the EV Council continue to refine existing messages, develop new messages as needed, and tailor key messages to various audiences and priority communities identified in Action 1.1 and 1.2. Messaging is provided in Appendix B.

SPECIFIC ACTIVITIES

Continually evaluate the effectiveness of key messages with audiences

Update and expand key messages as TES implementation progresses to ensure the key messages reflect the latest updates and opportunities for feedback

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Action 2.5 Translation, transcreation and interpretation

This action recommends creating clear, accessible, and visually appealing materials. This is critical to centering equity in implementation of TES policies and programs, to providing all communities the same information, and giving each community the same opportunity to provide input on the TES. The process of transcreation ensures that EV outreach and educational materials are revised and developed in a way that is accessible, logical, and appropriate for each priority community. Transcreation for TES is an opportunity for collaboration with regional community members who are participating in **Activity 2.1**. Additionally, translation, transcreation and interpretation are critical components of equitable engagement.

Translation	Transcreation	Interpretation
Translation is the process of translating a document, including a website or survey, into another language, typically word for word, that captures the intent of the original language.	Transcreation is the process of adapting content into another language that still captures the original content and uses culturally relevant messaging and language.	Interpretation is the process of translating spoken or signed words into another language to facilitate communication over the phone, in person, or through remote video, such as in focus groups, interactive workshops, or advisory council meetings.

SPECIFIC ACTIVITIES

<input type="checkbox"/>	Translate and transcreate the key messages into the languages spoken by priority communities and audiences and involve them in creating message campaigns for the communities they serve; Community liaisons recommended in Action 2.2 could support message development.	
<input type="checkbox"/>	Provide interpretation services at engagement events such as community workshops and advisory committee meetings	

Action 2.6: Create a brand for marketing the TES

This action describes the process of developing branding and style guidelines for promoting TES policies and programs. Because TES is sponsored by multiple agency partners with a number of transportation-focused programs and initiatives, TES needs to have a clear and consistent brand identity of its own. This will help audiences feel anchored as participants in a conversation with defined goals and objectives, clear points of engagement, and reliable feedback loops.

We recommend that the EV Council and agency staff implementing the TES cocreate a brand identity that includes a singular logo, color palate and typeface, tailored iconography, and brand messaging

guidance. After a brand identity has been established, we recommend the brand be shared and strengthened with a brand toolkit, a concise set of tools and templates available to partners and co-marketers on the program website.

SPECIFIC ACTIVITIES

Formalize the TES brand identity and disseminate for all partners to use. The identity should incorporate:

- A singular logo that is supported and used by all partners when communicating about or on behalf of the TES
- • A color palette and preferred typeface that complements existing partner brands
- Guidance on inclusion of partner logos (co-branding) alongside the TES logo
- Sample iconography for specific TES components that will be featured in messaging throughout implementation
- Messaging guidance that clarifies preferred terminology, taglines, and descriptive text that should be used when referring to TES or its activities

Develop a brand toolkit for all statewide electrification partners to use. The brand toolkit should include:

- Style guide that compiles guidelines for TES visuals and messaging
- Logo files in JPEG, PNG, and EPS formats
- • Font files (if not universally available system fonts)
- Photos, icons, and other graphics licensed by TES and available for partners to use
- Templates that combine brand elements in ready-to-use layouts for Word, InDesign, PowerPoint, and any other platforms that TES partners will use, such as posters and flyers, postcards, doorhangers, mailers, social media posts, and advertisements

Key Performance Indicators for Strategy #2

- Number of members in advisory committee – number of representatives of priority communities; number of representatives of community partners, organizations, and businesses; number of representatives of implementation partners; number of representatives of national organizations; of the private sector; of policy partners; of tribes
- Number of visitors on statewide electrification website
- Number of people receiving the newsletter
- Number of social media posts
- Number of outreach materials transcreated or translated
- Number of languages outreach materials are transcreated/translated
- Completed logo and style guide that is supported by TES partners
- Style guide laying out best practices for communicating on behalf of TES

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- Completed brand toolkit that is available in a central location for TES and partners to use on an ongoing basis

Strategy #3: Engage key audiences and Washington communities

Strategy #3 implements engagement strategies, actions, and activities related to TES policy and program development with the key audiences and communities identified in Strategy #1 and rely on the communication infrastructure built through Strategy #2

Engagement approaches vary depending on the intended engagement goal and audience (see *Table 2: Levels of Engagement*.) For the TES, this will depend on the TES programs and policies for which the EV Council is seeking input. This Plan includes a Policy Engagement Matrix at the end (page X) to illustrate policy specific engagement recommendations. Across TES implementation, we recommend that the EV Council pursue engagement through direct engagement with community, engaging with key audiences, and by relying on equity-centered activities.

Action 3.1: Directly engage with communities

This action engages directly with Washington residents on policy and program development through research methods and community organizing activities. When possible, the EV Council should implement direct-to-community engagement on TES programs and policies to deepen relationships and trust between implementing entities and communities, facilitate equity-centered decision-making, and achieve the desired outcomes. Informing communities about TES programs and policies—and involving and collaborating with them in planning and implementation—is more likely to achieve buy-in and desired outcomes.

SPECIFIC ACTIVITIES

<input type="checkbox"/>	Partner with community-based organizations (CBOs) and trusted local community leaders and liaisons to reach priority communities	
<input type="checkbox"/>	Follow community liaisons' lead when planning activities to foster a sense of belonging for participants and provide support and resources to overcome barriers to participation	
<input type="checkbox"/>	Create Education & Awareness materials to explain how electrification relates to and supports the interests and values of community members and explain why Washington is prioritizing electrification	
<input type="checkbox"/>	Create and launch annual statistically valid surveys to gather community feedback related to various elements of TES implementation	

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Organize online panels and community workshops to share out information and garner feedback about TES implementation

Host in-person focus groups with priority communities and audiences as needed throughout TES implementation to address barriers

Lean on best practices for community organizing tactics, whenever necessary to engage priority communities and audiences. Tactics include:

- SMS
 - Digital organizing
 - Canvassing
 - Attending existing community events (farmers' markets, fairs, celebrations, etc.) or tabling at community centers (places of worship, libraries, parks, etc.)

Action 3.2: Engage with key audiences

This action leverages the relationships built during formative engagement on the TES, existing forums, and engagement infrastructure to regularly involve and collaborate with audiences affected by transportation electrification and TES policies and programs. Such audiences include but are not limited to industries, regulatory bodies, policy makers, and state and local agencies. Audiences were clear during formative engagement that being brought into the process early, and having regular opportunities to provide feedback and collaborate on program execution is critical to ensuring TES implementation is coordinated, informed by existing efforts, and feasible for industry partners.

SPECIFIC ACTIVITIES

Provide regular updates on TES implementation progress and changes in policy, regulation, or funding through industry associations or other trusted conveners; Utilize existing networks or events to meet audiences and communities where they are – for example, attending regular meetings, or drafting content to be shared through industry communication channels

Create audience-specific newsletters (for example, multifamily housing) that are published biannually and distributed to that specific audience

Convene a roundtable of Washington cities, as key implementation partners for TES-related policies and programs. Depending on the capacity of attendees, the roundtable could convene at key points during TES implementation to vet and inform policy/regulation design

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- Involve priority communities and audiences in the EV Advisory Committee through subcommittees or technical committees as applicable (see **Action 2.1**)

Action 3.3 Engage with Tribes

Our intention was to conduct outreach to tribes during the early stages of the TES. However, further consultation will be necessary to implement policy recommendations that constitute a significant agency action as defined in RCW 70A.02.010. As a next step, the EV Council should identify which policy recommendations are significant agency actions that affect federally recognized tribes' rights and interests in their tribal lands and offer further consultation regarding the potential implementation of these policies, consistent with RCW 70A.02.100

SPECIFIC ACTIVITIES

- All EV Strategy staff completes Government-to-Government training
- Present the final TES at an event hosted by tribes or a tribal affiliated organization to share the final policy recommendations and the implementation process
- Co-develop an interagency standing consultation process for all state transportation electrification programs and policies

Action 3.4 Equity-centered Activities

This action captures essential equity centered activities that TES engagement should consider. Engagement will not look the same for all communities and regions, and we recommend that the EV Council consider for each region and community: what information flow looks like; what is contributing to and hindering information flow; how can the community get equitable access to information about the issues that impact them; when and how impacted communities should be consulted; how impacted communities can have a voice in TES decision-making; and how policy and implementation partners can buy into TES implementation. Additionally, the specific activities offered here are grouped by theme to better align with any anticipated barriers to engagement.

SPECIFIC ACTIVITIES

- Build relationships with CBOs and trusted community liaisons to help engage priority communities and underserved populations to foster equity and inclusion; Follow these liaisons' lead when it comes to planning activities to foster a sense of belonging for participants; Understand the barriers these communities face to participation and implement support and resources that help overcome these barriers



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<input type="checkbox"/>	Provide understandable, engaging, and in-language messaging about electrification policies and programs, to consistently ensure the community knows when and how they can participate in TES implementation and facilitate accessibility and transparency	
<input type="checkbox"/>	Provide understandable, culturally sensitive messaging to educate communities and raise awareness of how electrification relates to and supports the interests and values of community members, explain why Washington is prioritizing electrification, and convey how electrification connects to other community priorities such as transportation emissions and pollution	
<input type="checkbox"/>	Promote physical accessibility and reduce barriers to participation by meeting community members in spaces they already convene— such as community events—and plan engagement events with feedback from community liaisons to ensure that meetings are at times and places that feel accessible to specific communities	
<input type="checkbox"/>	Provide a range of engagement options to suit different lifestyles, availability, and ways of processing information to be adaptable	
<input type="checkbox"/>	Provide incentives for all engagement where community is providing feedback and help alleviate associated costs (e.g., taking time from work, finding childcare, food, and arranging for transportation) borne by community members	
<input type="checkbox"/>	Build and strengthen new and existing relationships with communities and audiences that can continue beyond TES implementation and can bolster ongoing or future programs or projects to promote sustainability	

Action 3.4 Tribal engagement

As noted earlier in the Engagement Plan, the perspectives of Tribal nations are critical to TES implementation. The government-to-government relationship between the state of Washington and Tribal nations as sovereign governments means that outreach to and consultation with tribes must occur separately from public engagement processes (see RCW 70A.02.100).

We recommend that EV Council staff and agency staff implementing the TES identify the tribes impacted by or benefiting from TES implementation, and host a series of Tribal community forums as opportunities for engagement.

This action offers recommendations for engagement of Tribal community members, and should not be misconstrued as Tribal consultation between Washington state leadership and Tribal leadership.

Key Performance Indicators for Strategy #4

- Number of CBO partners
- Number of communities in which surveys were distributed
- Number of surveys administered to communities
- Number of focus groups conducted
- Number of community organizing tactics used
 - Number of community events attended
 - Number of SMS's sent
 - Number of houses canvassed
 - Number of updates sent
- Number of audience specific newsletters that are published and distributed
- Number of roundtables convened
- Number of priority communities and audiences on EVAC subcommittees or technical committees

Strategy #4: Funding

Implementation of ongoing engagement for TES policies and programs will require dedicated funding, either through a distinct operating budget proviso that becomes ongoing funding for each fiscal year, or a determined percentage of every program with clarity for legislators that engagement is included.

Action 4.1: Provide sustainable funding for staff to implement the TES Engagement Plan

For implementation of the TES Engagement to be successful, the EV Council needs to hire staff specifically to manage the strategies in the Plan. The project team estimates staffing needs as follows:

- One staff can manage Strategy #1 and support Strategy #2
- Two staff are necessary to manage the Audience Engagement Framework in Strategy #2, one staff member needs to lead each subcommittee, but that can include the 3 staff already mentioned
- Four staff will need to manage Strategy #3—one person to manage engagement with government partners, one person to manage engagement with industry partners, and one person to do direct-to-community engagement with general audiences (please see Strategy #1 for the audience definitions).
- Two staff are necessary to lead and support monitoring and evaluation.

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SPECIFIC ACTIVITIES

- Request funding for staff to manage and support the Engagement Plan strategies

Action 4.2 Provide sustainable funding for TES engagement framework

This action dedicates funding for staff to manage audience network and the advisory council, in whatever capacity it manifests as the TES segues from the development to implementation phases.

SPECIFIC ACTIVITIES

- Request that the governor and Legislature create a sustainable, durable funding source to make the TES engagement framework sustainable for the duration of implementation
- Include funding to state agencies for stipends for members who are not State Agency staff and ongoing management needed to initiate and implement task force recommendations outlined in Strategy #2

Action 4.3: Provide sustainable funding for TES engagement actions and activities

This action dedicates funding for implementing engagement activities outlined in the earlier strategies and actions of this plan, and also those more clearly defined in the Roadmap to TES implementation matrix on page 30.

SPECIFIC ACTIVITIES

- Request that the governor and Legislature establish resources in the budget for TES engagement activities
- Include funding to state agencies for actions and activities described in actions associated with Strategy #3

Key Performance Indicators for Strategy #4

- Number of staff hired to manage and support ongoing TES Engagement
- Funding for Advisory Committee members who are not State agency staff
- Funding for Strategy #3 activities
- Resources in the state budget for TES Engagement activities

Strategy #5: Monitoring and evaluation

Tracking and reporting progress on engagement for TES implementation is critical to identify best practices, understand the effectiveness of engagement activities, who is being reached, and gaps in audience input. This Plan is a living document that will evolve between now and the next planned engagement update. The **TES project team** will monitor engagement activities across strategies and actions and prepare annual TES Engagement progress reports. If these reports indicate the TES is not on track to meet the KPIs for each strategy, the TES project team may choose to strengthen or add actions as necessary.

Action 5.1: Equity-centered monitoring and evaluation

This action involves utilizing engagement tracking tools to develop progress reports after key milestones to understand who has already been reached and where additional engagement efforts are needed. We recommend establishing an engagement tracking mechanism in alignment with the audiences and priority communities' database outlined in Action 1.1 and 1.2 to track when and how engagement with various audiences has occurred. Additionally, we recommend developing an accountability framework to share TES implementation and engagement results through the website and communication systems established in Strategy #2.

SPECIFIC ACTIVITIES

- Share annual and as needed progress updates through the website and communication systems developed in Action 2.3
- Provide updates and annual implementation progress reports to the community advisory committee(s) established in Action 2.1
- Connect community priorities to goals and measurable metrics so the broad and more overwhelming aspects of electrification feel tangible

Key Performance Indicators for Strategy #5

- Number of annual engagement reports: We recommend that these reports contain a regular assessment of progress towards achieving performance metrics
- Summarize high-level themes heard from each region
- Share number of engagement activities conducted
- Report out number of audiences engaged and how engagement informed agency decisions, program design, or policies
- Identify lessons learned for the next year

Part Three: A Guide to TES Implementation Engagement



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TES is a strategic and coordinated plan that relies on all of Washington for success. The TES project team must work with regional entities, community organizations, and key industry partners to achieve implementation. Many ingredients are necessary for successful implementation, including assigning a lead entity for each action, integrating policies and programs into existing agencies, facilitating partnerships to move implementation forward, securing funding, and then beginning program or policy-specific next steps. This document serves as a complement to other TES documents that identify lead agencies and programs for specific policies and programs in the TES, recommends integration into existing State infrastructure, and funding streams, and next steps for implementing those programs and policies. The Engagement Plan outlines the ingredients for facilitating partnerships and engaging audiences that will support the advancement of TES programs and policies. The figure below shows the step in TES implementation that this section describes.

Figure 1: Implementation Steps-this plan's role



Performance Metrics

To complement this Plan's key performance indicators (KPIs) for each action, the Policy Recommendations Engagement Matrix includes performance metrics specific to each policy recommendation. These indicators will help the EV Council and its contractors gauge their progress on engagement strategies and actions and assess the success of specific activities.

Timeline

The TES is divided into near-term and long-term policy recommendations; therefore, engagement activities are divided into a parallel timeline, with near-term policies chosen by the EV Council represented in the Policy Engagement Matrix on the next page.

Timeline	Years	Goal
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Near-term	2024 - 2028	Actions set the foundation and build infrastructure for sustainable TES implementation engagement (consistent funding source, staffing, committees/workgroups/owned communication channels, etc.)
Long-term	2029 - 2035	Actions require substantial infrastructure and resources or build upon foundational short-term actions

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Engagement on Policy Recommendations: A Guide

How to Use This Matrix

This Policy Engagement Matrix serves as a guide for conducting engagement on near-term policy recommendations and is meant to complement a distinct TES implementation plan, which will provide a robust description for the implementation of policy recommendations. It is a roadmap guiding which audiences to engage on which policies, how to engage them, and how to measure that engagement. This matrix is meant to be flexible and is based on the information in the policy recommendations at the time the Engagement Plan’s writing. It will need updating to meet shifting needs and priorities and an evolving transportation electrification landscape.

Policy Recommendations Engagement Matrix

ADVANCED CLEAN FLEETS (ACF)

Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For all policies <ul style="list-style-type: none"> ○ Government partners ○ OEMs ○ Dealers ○ Private Sector ○ Priority Communities 	<ul style="list-style-type: none"> • Inform private sector audiences, including dealers, industry using medium- and heavy- duty vehicles (MHDVs), and utilities of proposed policies and timelines • Consult with government partners, including the EPA, California Air Resources Board (CARB,) and implementing 	<ul style="list-style-type: none"> • Inform all audiences via a website where it is easy to find information about rules and engagement activities • Inform using a Gov Delivery list that audiences can subscribe to • Inform via fact sheets disseminated in multiple languages • Consult with audiences on ACF rules via a series of interactive public meetings related to each standard • Consult via public comment on rules as they are developed and publicized 	<ul style="list-style-type: none"> • Website • Number of visits • Number of people on Gov Delivery list • Number of email notices sent • Percentage of fact sheets transcreated or translated <ul style="list-style-type: none"> ○ Number of languages ○ Number of fact sheets disseminated/ downloaded • Number of public meetings hosted • Number of people attended (total and each meeting) • Number of public comments received

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Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
	<p>agencies about lessons learned from CA’s rule</p> <ul style="list-style-type: none"> • Consult with priority communities on priority implementation areas • Involve and collaborate with OEMs, private sector, government partners such as utilities on where to run pilots, lessons learned, and how to scale seamlessly 	<ul style="list-style-type: none"> • Involve OEMs on establishing years that adoption will be required to ensure sufficient inventory • Involve private sector partners and medium and heavy-duty vehicle (MHDV) consumers to get buy-in on point-of sale voucher program. • Involve overburdened communities in establishing extra incentives for electrification of MHDVs operating in those communities • Collaborate with private sector audiences, government partners (such as transit agencies, ports, and school districts) to establish operational priorities for electric MHDVs • Collaborate with government partners to explore bulk purchasing of electric MHDVs 	<ul style="list-style-type: none"> • Number of OEMs involved in establishing production timeline • Number of OEMs agreeing to electric MHDV production scale timeline • Number of private sector entities participating in development of point-of-sale voucher program • Number of overburdened communities involved in establishing rules for extra incentives for companies operating in their neighborhoods • Number of private sector audiences and government partners collaborating on development of operational priorities for Electric MHDVs • Number of government partners collaborating to explore bulk purchasing

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SUITE OF CHARGING INFRASTRUCTURE POLICIES (DEMAND-USE RATES)

Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For all policies: <ul style="list-style-type: none"> ○ Consumer-owned utilities (COUs) ○ Investor-owned utilities (IOUs) ○ Utilities and Transportation Commission (UTC) ○ Legislators ○ City and county governments ○ State agencies ○ Utility consumers ○ EVSPs ○ WSDOT • For residential charging: <ul style="list-style-type: none"> ○ Property owners, managers, and developers ○ Affordable housing developers • For community benefits agreements and community-informed EVSE siting: <ul style="list-style-type: none"> ○ Community-based organizations (CBOs) and groups • For community informed EVSE siting: <ul style="list-style-type: none"> ○ State agency HEAL staff 	<ul style="list-style-type: none"> • Inform and consult utility consumers • Inform and consult property owners, managers, and developers via industry associations • Inform, involve, and collaborate with utilities (COUs and IOUs) and the UTC • Collaborate with community-based organizations and community groups on siting and community benefit agreements • Collaborate with state agencies, city and county governments, and ports • Inform local or regional contractors • Involve industry and accessibility experts and local planners in model site designs 	<ul style="list-style-type: none"> • UTC and Commerce conduct a rate structures survey (for utilities) and directly engage utilities on alternative rate structures via workshops and newsletters • Host interactive workshops for utility consumers to help identify areas for increased grid investment • Convene a COU workgroup to discuss opportunities for implementing EVSE projects • Include Community Benefits Agreement information in the statewide electrification website • With agencies with charging funding programs, conduct an EVSE siting focus group with CBOs to develop best practices and guidance for future collaboration • Convene a short-term work group of EVSE industry experts, accessibility experts, and local planners to develop statewide model site designs • Consult jurisdictions on barriers to siting EVSE at light poles 	<ul style="list-style-type: none"> • Number of survey responses on rate structures survey for utilities • Number of attendees in workshops on grid investments • Number of recommendations from COU workgroup implemented • % of EVSE contracts that adopted community-centered siting guidance • Number of attendees for model site design workgroup • Number of ports with electrified truck parking • Website engagement with Community Benefits Agreements and Maintenance Agreements (for local/regional contractors)

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Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For ongoing Maintenance Agreements: <ul style="list-style-type: none"> ○ Local or regional contractors • For truck parking: <ul style="list-style-type: none"> ○ Ports • For model site designs: <ul style="list-style-type: none"> ○ EVSE industry experts ○ Accessibility experts ○ Local planners • For accessibility standards: <ul style="list-style-type: none"> ○ Accessibility experts ○ Disability rights advocacy organizations (e.g., Disability Rights WA) ○ CBOs (e.g., BIPOC Mobility Action Coalition) 	<ul style="list-style-type: none"> • Collaborate with accessibility experts and disability rights advocacy organizations 	<ul style="list-style-type: none"> • Inform contractors of Maintenance Agreements for publicly funded projects via statewide electrification website, newsletters, and communication with unions • Collaborate with jurisdictions and ports to develop electrified truck parking at ports • Convene a short-term work group or advisory committee of accessibility experts to co-develop statewide accessibility standards for public EV charging 	<ul style="list-style-type: none"> • Number of attendees for workgroup on accessibility standards

SUITE OF LIGHT DUTY VEHICLE COSTS- (BUILDING OFF OF WORK BEGUN IN FALL 2023)

Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For all policies: <ul style="list-style-type: none"> ○ EV consumers (general public) 	<ul style="list-style-type: none"> • Inform the public and EV consumers to raise awareness of incentives 	<ul style="list-style-type: none"> • Raise awareness, educate, and equip Washington residents to utilize EV incentives through the statewide electrification website 	<ul style="list-style-type: none"> • Number of visits to statewide

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Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> ○ Low- and moderate-income residents ○ Legislators ○ Governor ○ City and county governments ○ State agencies ● For EV rebate program: <ul style="list-style-type: none"> ○ Low-income service providers (organizations that provide assistive services to low- or moderate-income households in WA) ● For used EV workgroup: <ul style="list-style-type: none"> ○ Automakers ○ Dealerships ● For Advanced Clean Cars II: <ul style="list-style-type: none"> ○ CARB ○ Other ACC II states ● For equitable and lower cost access to ZEVs: <ul style="list-style-type: none"> ○ CARB ○ Section 177 states ● For Clean Miles Standards: <ul style="list-style-type: none"> ○ Commute Trip Reduction Board 	<ul style="list-style-type: none"> ● Inform and collaborate with state agencies, city and county governments ● Inform legislators and the Governor, particularly during gubernatorial transition ● Collaborate with low-income service providers to ensure providers can access EV rebates ● Consult automakers and dealerships ● Involve CARB and other ACC II states to update ACC II ● Involve CARB and Section 177 states to plan regional approaches to support equitable access to ZEVs ● Consult TNCs, taxis, and rideshare drivers about reducing emissions from 	<p>and associated online resources, regular newsletters, ad campaigns in traditional media and social media, billboards, and open houses</p> <ul style="list-style-type: none"> ● Translate or transcreate educational materials about EV incentives, including ad campaigns and website resources ● Share information on EV rebate program with low-income service providers through existing coalitions such as the Washington State Community Action Partnership ● Share information on EV rebate program with low- and moderate-income Washington residents through communication channels of existing state-qualified low-income programs (for example: LIHEAP or SNAP) ● Host information booths about EV rebates and charging incentives at community centers such as libraries, farmers markets, festivals, fairs, etc. ● Host ride and drive events and share written information about incentives and rebates (fact sheets, flyers, FAQs) ● Facilitate a used EV workgroup or focus group with automakers and dealerships 	<p>electrification website</p> <ul style="list-style-type: none"> ● Number of low-income service providers receiving information on EV rebates ● Number of information booths/tables at community centers ● Number of people engaged through information booths/tables at community centers ● Number of people signed up for listserv ● Number of ride and drive events hosted ● Number of attendees for used electric vehicle workgroup ● Number of attendees for taxi

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Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> ○ TNC companies ○ Taxi and cab companies ○ Rideshare drivers 	<p>rideshare and cab companies</p> <ul style="list-style-type: none"> ● Involve the Commute Trip Reduction Board and state agencies on Clean Miles Standards 	<ul style="list-style-type: none"> ● Organize an interstate workgroup with CARB and other ACC II states to update Advanced Clean Cars II ● Organize an interstate workgroup with CARB and other Section 177 states to discuss regional approaches to support equitable and lower cost access to ZEVs ● Host one or more focus groups with taxi and rideshare drivers, and TNCs to develop a recommended policy for reducing rideshare and cab emissions; send final recommendations out for attendee comment ● Collaborate with WSDOT, Ecology, and the Commute Trip Reduction Board to strengthen RCW 70A.15.4060 and create a Clean Miles Standard 	<p>and rideshare focus group</p> <ul style="list-style-type: none"> ● Number of materials translated or transcreated in other languages

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WORKFORCE- MANUFACTURING, MECHANICS/TECHNICIANS

Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For early career development, workforce training, and building strong labor standards: <ul style="list-style-type: none"> ○ Private sector: EV manufacturers (OEMs) and EV charging infrastructure manufacturers and network operators ○ Critical perspectives to include to expand workforce: Commercial fleet owners and managers, Community leaders, and Community based organizations, labor unions • For supporting existing workforce and certifications: <ul style="list-style-type: none"> ○ Private sector: EV manufacturers (OEMs) and EV charging infrastructure manufacturers and network operators ○ Critical perspectives to include to support the existing workforce: Commercial fleet owners and managers, Community leaders, and Community based organizations, labor unions 	<ul style="list-style-type: none"> • Inform audiences and the public about the workforce development opportunities and trainings • Involve audiences and partners in certification development to streamline processes and reduce barriers to access while maintaining program rigor • Collaborate with key audiences to ensure robust and coordinated apprenticeship program development • Collaborate with key audiences to develop and implement workforce training modules to ensure training effectiveness • Collaborate with key audiences and partners to develop policies that 	<ul style="list-style-type: none"> • Invest in targeted workforce trainings and apprenticeship programs to provide education on zero-emission vehicles as well as on charging and alternative fuel stations. • Provide trainings for existing workforce for zero-emission vehicle topics when needed. • Provide certification program for electrical components of the EV charger installs to ensure safety and effectiveness • Provide technician training for fleets • Provide training and certification for EV technicians and mechanics • Create a grant program to support local training for first responders in addressing EV battery fires • Host workshops with audiences and partners to enhance understanding of labor 	<ul style="list-style-type: none"> • Number of completed apprenticeships • Number of participants from existing workforce who receive or complete training • Number of trainings provided and total number of participants • Amount of funding appropriated for grant program and number of grants administered

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<ul style="list-style-type: none"> • For first responder training: <ul style="list-style-type: none"> ○ Implementation partners, including public services agencies and fire departments • For growing Washington’s clean industrial economy: <ul style="list-style-type: none"> ○ Policy partners ○ Private sector: EV manufacturer (OEMs), EV charging infrastructure, and property owners, managers, and developers ○ Implementation partners, including public services agencies 	<p>support Washington’s clean industrial economy (manufacturing and recycling)</p>	<p>standards within the electrification workforce</p>	

TIRE EFFICIENCY STANDARDS ⁷

Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<ul style="list-style-type: none"> • For all policies <ul style="list-style-type: none"> ○ Policy Partners, including the National Highway Traffic Safety Administration, California Energy Commission (which has developed a Tire 	<ul style="list-style-type: none"> • Inform audiences and the public of the intention to develop new tire efficiency standards, of timelines, opportunities to provide input, and how to receive information 	<ul style="list-style-type: none"> • Inform private sector and community audiences of the proposed tire efficiency standards and channels to provide input via the Ecology website and online resources, such as newsletters, 	<ul style="list-style-type: none"> • Number of website hits • Number of online resources developed and disseminated

⁷ This is outside the scope of the EV Council but is a big driver of emissions reduction and environmental health benefits, and needs its own, specific, engagement.

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Audiences	Engagement Levels / Channels	Engagement Activities	Performance Metrics
<p>Efficiency Program); WA State Legislature</p> <ul style="list-style-type: none"> ○ Implementation Partners, including Washington Department of Motor Vehicles, WSDOT, DOH ○ Tribal Nations, especially those that rely on salmon as a cultural food and symbol. ○ Private sector, including tire manufacturers and dealers ○ Non-profits, including environmental and health advocacy organizations ○ Critical community organizations, especially communities overburdened by air pollution. 	<p>Consult private sector audiences including vehicle and tire manufacturers on timeline, feasibility, and cost variables</p> <ul style="list-style-type: none"> ● Consult Tribal Nations and advocacy organizations, and critical community audiences on standards, timelines, and projected impacts (air quality improvements, impacts on water quality and salmon, etc.) ● Involve the tire industry in developing standards that are feasible to meet and OEMs to make sure the vehicles they manufacture are compatible, on a coordinated timeline ● Collaborate with key audiences to formalize standards that tire companies, OEMs, and industries will voluntarily adhere to 	<p>billboards, and targeted social media advertising</p> <ul style="list-style-type: none"> ● Inform tribal audiences of upcoming standard development and establish specific channels for tribes to weigh in via formal tribal liaisons ● Organize a series of interstate meetings with the EPA, National Highway Traffic Safety Administration, CA Energy Commission and other agencies in CA and WA that are developing tire efficiency standards for sharing of best practices ● Hold a series of virtual public workshops for OEMs, tire manufacturers, transportation industries and provide public comment opportunities for tire efficiency rules ● Host workshops for the community to weigh in on specific standards and timelines 	<ul style="list-style-type: none"> ● Number of social media ad views ● Number of tribal nations providing input on tire standards ● Number of meetings held; number of best practices identified ● Number of private sector comments received ● Number of commitments to adherence obtained ● Number community meeting attendees ● Number of community comments received

Appendix A: How We Developed This Plan



How We Developed This Plan

Literature Review

Cascadia conducted a literature review of other long-term engagement plans to ground the Plan's strategies in engagement best practices. Cascadia reviewed five long-term (10 or more years) engagement plans, two of which addressed transportation. The engagement plans encompassed a variety of geographic scales, ranging from city to national plans. Through the literature review, Cascadia synthesized common engagement goals, strategies and actions, mechanisms to track progress and effectiveness, and methods for reaching vulnerable populations across plans. The synthesized best practices serve as the foundation for the strategies, actions, and tactics in this Engagement Plan.

Formative Engagement Process

Between March and September 2023, the project team (Cascadia, Northwest Energy Coalition, and Front and Centered) conducted a community engagement process to ensure that the TES reflected the experiences, needs, and preferences of Washington residents and businesses, with particular attention to vulnerable populations and overburdened communities. Engagement opportunities included focus groups, interviews, and a statewide survey.

Beyond shaping the TES directly, the community feedback from the TES development engagement process informed this Engagement Plan by identifying priority audiences for future engagement, common knowledge gaps and electrification myths among Washington residents, and community-recommended engagement methods. The engagement process took place over two phases:

- **Phase 1 (April 2023):** Phase 1 focused on developing a baseline understanding of community attitudes towards electrification and utilized three engagement methods targeted to unique audiences, including five focus groups with a total of 29 participants, 27 one-on-one interviews, representing 54 organizations and groups. Phase 1 also included a statewide survey that received 3026 representative responses.
- **Phase 2 (June-August 2023):** Phase 2 targeted audiences not yet engaged and dove deeper into topics and audiences through three focus groups with 19 participants and 14 one-on-one interviews.

Appendix B: Key Messages



Key Messages

What is the TES and why is Washington State developing and implementing it?

Transportation is the state's number one source of greenhouse gas emissions and a major source of local air pollution that disproportionately impacts the health of people living near roadways, port facilities, industrial activities, and railways – places where vulnerable populations often reside. Vulnerable populations are particularly sensitive to transportation-related pollution due to health, economic, and environmental factors. In 2022, the Washington Legislature tasked the Interagency Electric Vehicle Coordinating Council (EVCC) with developing a statewide transportation electrification strategy to ensure market and infrastructure readiness for all new vehicle sales (RCW 43.392.040).

How was the TES developed/where did the TES policies come from?

The TES builds on current policies and programs supporting transportation electrification in Washington, and takes into account the state's emissions reduction targets. It involved modeling analysis to show how different electrification scenarios result in different outcomes, best practices from other states and regions, and input from key audiences, including regional and federal policy makers, implementation partners, EV manufacturers, and community representatives.

How will the TES impact me?

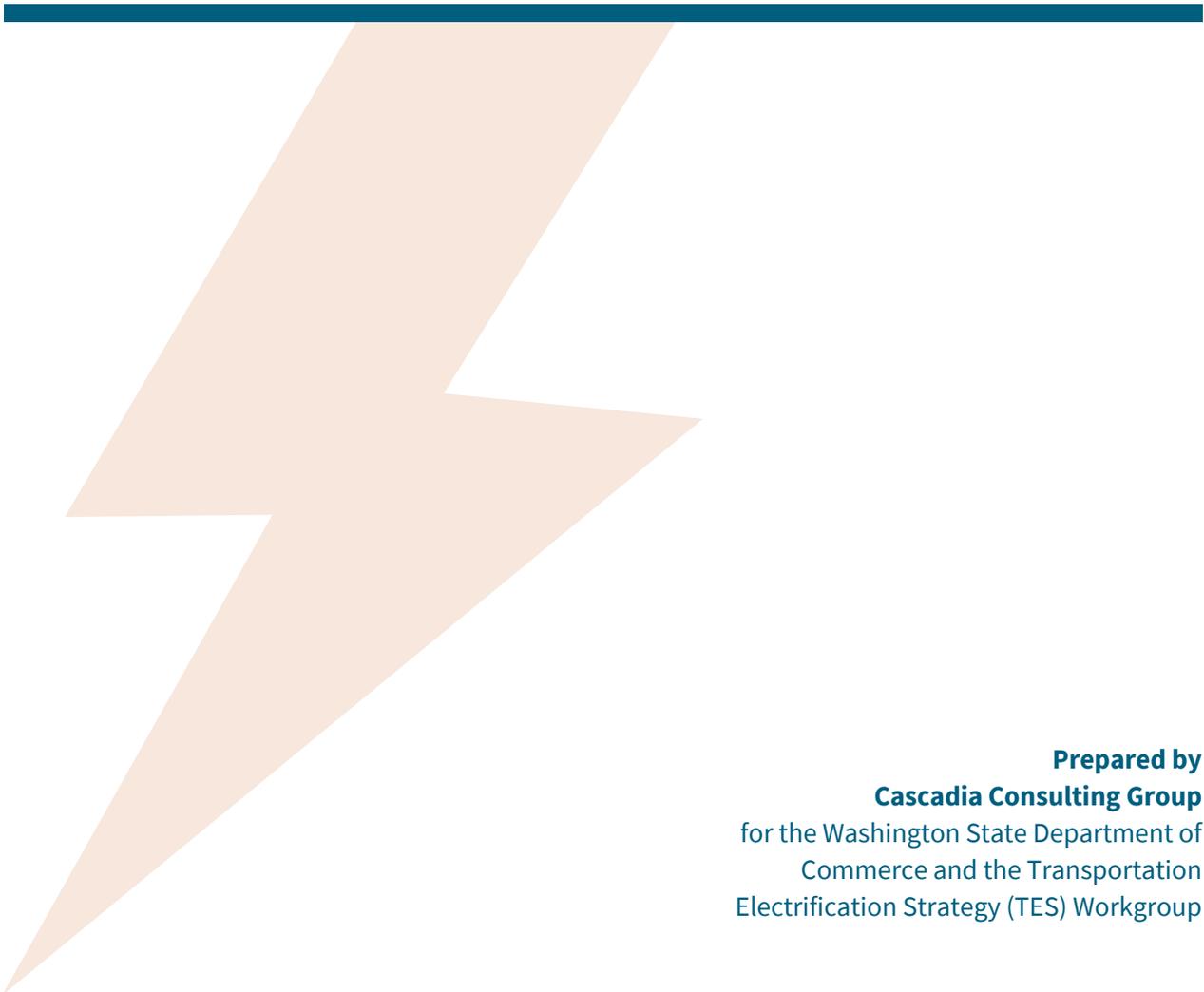
The transition to electric transportation will be a significant change for Washington's transportation system, communities, and industries. It is also an opportunity for Washington to create a more just environment—including cleaner air and reduced greenhouse gas emissions. While transportation electrification is feasible and has the potential for cost savings (due to cheap, clean, and reliable electricity), it is critical to engage community members, private and public sector audiences, and implementation partners to ensure that TES implementation is equitable, intentional, and informed by the expertise of Washingtonians. The EV Council is committed to notifying and involving Washington communities in electrification-related programs, policies, and opportunities, and regularly receiving input on these programs, to make them more effective for community members and audiences.

Why should I provide input on transportation electrification?

Your involvement can help ensure the needs of your community and sector are met in the transition to electric vehicles, lower emissions, and cleaner air.



Washington State Transportation Electrification Strategy EV Education Plan



Prepared by
Cascadia Consulting Group
for the Washington State Department of
Commerce and the Transportation
Electrification Strategy (TES) Workgroup

Plan Navigation

INFORMATION		
Overview and Introduction Purpose, methods, and priority audiences for this Plan.	Target Audiences Audience characteristics and behaviors related to EV purchasing.	Barriers and Concerns Critical barriers and concerns that this Plan aims to address.
3	6	8

TOOLS			
Messages Key messages to move priority audiences toward action.	Trusted Information Channels Information channels that are used and trusted by priority audiences.	Equity Considerations Equity considerations to ensure messaging is accessible and effective across communities.	Monitoring and Evaluation Metrics and benchmarks for monitoring and measuring success.
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Strategies and Tactics			
Strategy 1 Build awareness of the benefits of EVs	Strategy 2 Facilitate consideration of EVs by potential buyers	Strategy 3 Promote evaluation of EVs vs gas-powered vehicles	Strategy 4 Describe broad funding needs to staff Education Plan implementation
24	25	26	28

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Overview and Introduction



Overview and Introduction

Purpose

For Washington to meet its greenhouse gas reduction goals, there needs to be a significant market shift towards individuals purchasing and driving personal, light-duty EVs. New products in a market often follow a natural adoption curve, which can be slow (decades) and sometimes fail to become widely adopted at all. The EV Education Plan’s goal is to accelerate the adoption of personal EVs in Washington (for figure and description, see Market segments—EV adoption segments in Appendix A). To that end, the Plan aims to serve as an evidence-based guide for a short-term (1-2 year) marketing campaign to provide Washingtonians with the information they need to buy or lease EVs, which can then be updated based on evaluation results. This campaign will involve raising awareness of EVs, providing information for consideration, and pointing consumers to places where they can determine which EV is best for them and their lifestyle.

Methods

This Plan draws from a literature review of existing EV Education Plans, a statewide EV market research survey administered in the spring of 2023, and one-on-one interviews and focus groups conducted as part of the TES project’s formative engagement. Together, these methods informed the framework for EV adoption, audience segmentation, outreach and education strategies and tactics, and metrics as outlined in this Plan. For the complete survey report, please see Appendix A.

Market Segments

The Plan identifies audiences by light-duty EV market segment—consumer cohorts based on attitude, knowledge, and adoption of personal EVs. The Plan includes key findings, both across the market as a whole and within each market segment, that inform the strategies and messages to build awareness of EVs. Analysis revealed that barriers, perceptions, and messages were uniform across the market, so the Plan’s market segments are based on desired behavior. The market segments are described in more detail in the “Target Audiences” section.

Additionally, this plan will target high-consumption fuel users (HCFUs), for rapid EV adoption to maximize the GHG reduction impacts of EV adoption. Research shows that HCFUs are a diverse market: their reasons for driving high mileage are varied, and their perceptions of EVs and motivators to adopt do not meaningfully differ from those of consumers with similar readiness levels.¹ However, HCFU information should be leveraged to prioritize tactics.

¹ Washington State Joint Transportation Committee, 2023. [Encouraging High Consumption Fuel Users to use Electric Vehicles.](#)

Strategies and Messages

The Education Plan includes strategies and actions to build nuanced awareness of EVs' benefits, equip Washingtonians with the information they need to consider switching to an EV, and present recommendations to move them along the behavior change spectrum to make the decision to purchase an EV and follow through with that choice. The strategies and actions provide educational guidance and messaging to shape consumers' perceptions of EVs and recommend communication channels through which to disseminate information to accelerate the widespread adoption of EVs across vehicle classes and users. These education strategies and actions include recommendations for equitable marketing, such as tailored regional messaging to reduce perceived barriers to EVs.

How to Use This Plan

This document is a guide to desired actions of specific market segments, consumers' barriers to desired actions, messaging to reduce barriers and motivate actions, and strategies and tactics to shift the whole market's perceptions of EVs and catalyze action for consumers that are ready. The graphic below shows the organization of this plan.

Figure 1. Education roadmap



Target Audiences



Target Audiences by Desired Behaviors

This section introduces target audiences and their desired behavior as a result of successful EV adoption messaging. See Appendix A for complete audience profiles, which provide demographic information and a detailed analysis of survey responses by market segment.



Primary Targets Ready to adopt and Open to adopt	Secondary Targets Current EV Drivers	Tertiary Targets Second Wave and On Hold
<p>The Ready to Adopt and Open to Adopt market segments are the primary target audience for EV education and messaging. This segment includes those who plan to buy a car in the next 5 years and are ready or open to purchasing an EV.</p>	<p>Current EV drivers are the secondary target of this Education Plan. The rationale behind this is that this segment can help grow the used EV market, making EVs more accessible, quantity and cost-wise, to a broader market. Current EV users are the primary ambassadors for EVs, referring friends and serving as trusted information sources</p>	<p>The people in this segment are either not ready to switch to an EV (neutral to unlikely) or not planning to change vehicles in the next 5 years, so they are not explicitly targeted.</p>
<p>Desired Action</p> <p>Purchase a new vehicle as soon as possible, with the assumption that, with access to high-quality public information, it will be an EV.</p>	<p>Desired Action</p> <p>Sell their current EV and purchase/lease a new EV. In the survey conducted in spring 2023, most current EV drivers have said they would buy another EV.</p>	<p>Desired Action</p> <p>No immediate action is expected, but the next time they decide to change vehicles, they move into the ready to adopt or open to adopt segments.</p>

Barriers and Concerns



Barriers and Concerns

Barriers and concerns are challenges to consumers taking their desired behavior. Barriers and concerns were identified by distinct survey questions—one asking about reasons may not purchase an EV and another asking how respondents felt about different messages. In this case, both barriers and concerns are factors that hinder individuals purchasing EVs (or selling one EV and purchasing another) on the timeline necessary for Washington to meet its climate mitigation targets. Identifying these factors is the first step in developing a messaging campaign that can encourage behavior change by addressing them.

Barriers

According to the market research survey conducted in spring 2023, the top three perceived barriers to EV adoption are universal across target audiences. They are as follows:



COST

The upfront cost of buying an electric vehicle



RANGE AND CHARGING

EVs don't have enough range and there aren't enough charging stations



TECHNOLOGY WILL BECOME OUTDATED

Concern about EV technology changing fast, and not wanting a vehicle that will be outdated

Concerns

The statements below are perceptions that survey respondents said, with the most frequency, made them less enthusiastic about EVs. While not explicitly barriers, these statements can factor into individuals' decisions not to purchase EVs, and thus should be addressed in educational messaging. It is important to note that these perceptions may not represent the most up-to-date or accurate state of EV technology, further necessitating clear, accurate messaging around EVs.



LIFESTYLE

EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes. Additionally, EVs don't work well in cold weather, rural areas, or the mountains.



ENVIRONMENTAL IMPACT

EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.

Messages



Messages

The messages in this section are intended to help consumers overcome barriers and concerns related to EV adoption and encourage them to take action on the TES's desired behavior—i.e., buy an EV (or another EV)—in order to accelerate adoption. Based on survey responses showing that barriers and messages that improved positive EV perception were universal, this Plan recommends uniform messaging to the vehicle consumer market as a whole. This is because there was consensus across market segments on the main barriers to EV adoption, and a lot of similarity in resonant messaging among the market segments, especially among the primary and secondary target audiences.

Barrier: Cost



The market research findings show that all target audiences are very cost motivated; combined with the upfront cost of EVs being the highest-ranking barrier across all market segments, it is clear that opportunities for cost reductions on upfront purchases and long-term savings should be highlighted in messaging around EV benefits. The reduced costs of maintenance may resonate with HCFUs especially, since higher mileage vehicles require more repairs, and individuals who drive higher mileage typically spend more on maintenance.

Messages



EVs offer impressive cost savings, as the average EV driver will spend roughly \$380 on electricity to charge their vehicle compared to over \$2,000 for gasoline annually.



EVs require much less maintenance than traditional gas-powered vehicles, saving drivers time and money.



On average, EV drivers can expect to pay half the amount in maintenance that gas car drivers do—\$0.31 versus \$0.61 per vehicle mile.



EVs are becoming more affordable, with incentives like the Federal Clean Air Tax Credit, which can save EV drivers up to \$7,500 on their purchase/lease of a new EV. Costs associated with EVs are projected to continue decreasing as technology advances.



You can get a \$4,000 tax credit if you purchase a used EV for under \$25,000 from a qualified dealer.



Washington is rolling out a vehicle incentive program to reduce the upfront costs of EVs.

Barrier: Range and Charging



When it comes to EVs, concerns about range and charging are at the forefront of Washingtonians' minds, and must be addressed in messaging promoting them. First, survey respondents directly named range and insufficient charging stations as a barrier to EV adoption. Second, survey responses about which messages cause most concern show that Washingtonians do not trust batteries or electricity as a reliable fuel for their vehicles, nor that the electric grid can handle EV charging en masse. To counter this population-level barrier, the State should focus on how and when EV charging takes place, its convenience, the affordability of electricity, and its compatibility with most lifestyles. Messages highlighting fast chargers available at gas stations and free charging at Level 2 public charging stations are particularly resonant with HCFUs².

Messages



It is extremely easy and convenient to charge your EV at home. You can just plug it in overnight and it is fully charged the next morning—no trips to the gas station necessary.



Many EVs' range is 200-300 miles. Most people do not need to travel this far without a charge regularly, and most people usually stop for 15-20 minutes at gas stations on longer trips.



Superchargers can charge vehicles to 80% in 15-20 minutes, which is the amount of time people often spend at gas stations on longer drives.



Electricity is much cheaper than gas, especially in Washington!³ Charging is most affordable at home, and during off-peak hours, but even public charging stations are cheaper than gas.



The US grid is fully capable of handling more EVs charging, and utilities are building more grid capacity every day, by adding renewable energy sources and infrastructure. Most EVs are charged at night when power demand tends to be lowest.



The number of public charging stations is growing across the country, making it easier for EV drivers to access—and charge at—rural destinations. Washington is investing \$250 million over the next two years to build thousands of charging stations in areas lacking charging infrastructure.



Many workplaces offer free or discounted charging, providing another convenient place to charge EVs that takes no additional time out of your day.

² Joint Transportation Commission. 2023. Encouraging High Consumption Fuel Users to Use Electric Vehicles.

³ Clean and Prosperous Institute. 2023. State Rankings of Fuel Savings by Switching to Electric Vehicles.

Barrier: Technology will become Outdated



Survey respondents said that their third biggest barrier to buying an EV is concern that technology is changing so fast and could cause their vehicles to become outdated. Research shows that one way to combat this attitude is to promote messaging around current EV performance and emphasize breadth of models available that can fit different lifestyles (see Concern: Lifestyle).

Messaging Opportunities



EVs encompass a range of models that fit all lifestyles, including compact commuter vehicles, family-sized cars and SUVs, vehicles with AWD and high clearance for rural roads and mountains, and pickup trucks.



EVs currently offer nearly equivalent or better performance to gas-powered vehicles in categories such as acceleration, speed, energy efficiency, and noise.



EVs have advanced technology not accessible in gas-powered vehicles that improves the driving experience, including:

- Enhanced handling and performance from electric drivetrains
- Regenerative braking, which recharges the vehicle as you brake
- Remote updates that can improve performance and add new features



Leasing is a great way to take advantage of current EV technology for a shorter amount of time and at a lower cost than purchasing a vehicle.



When you are done with your EV, there is a thriving used EV market ready for its resale.

Concern: Lifestyle Needs



According to survey research, messages that correspond to lifestyle compatibility are the most effective messages to make Washingtonians more likely to switch to an EV. Interest in new vehicle models and concern about EV functionality in the mountains and rural areas (e.g., rough, slick, or other hazardous road conditions) reflect this priority. While HCFUs had similar concerns as non-HCFUs about EV lifestyle compatibility, the HCFU audience was most concerned about reliable long-distance travel, vehicle longevity, and interior comfort⁴. Lifestyle messaging also can help address people's concern about vehicles becoming outdated. People who have the choice tend to choose vehicles that fit their lifestyle regardless of the type of fuel, and most of the market then keeps their vehicles for at least 5 years, so it is essential that messaging convinces consumers that EVs will fit their lifestyle.

Messaging Opportunities



EVs come in a range of models and sizing, allowing drivers to find a vehicle that fits their needs. Moreover, their electric powertrain makes them easy and fun to drive.



With increasing numbers of public charging stations, EVs are more convenient than ever.



With federal tax incentives and many rebate programs available, EVs are becoming more affordable. EVs are also very reliable and have lower associated maintenance costs than traditional gasoline vehicles.



EVs are the perfect car for day-to-day activities such as commuting or running errands, as users can easily charge vehicles overnight.



EVs retain most of their full range even in winter cold and extreme heat. Preheating systems and heat pumps are also being used to accelerate charging and boost range in cold temperatures.



Many EV models—including a variety of pickup trucks and SUVs—offer high clearance and AWD, allowing them to perform well in the mountains.



Many EV models, including AWD and pickup EVs, have ranges of over 300 miles—plenty for even most rural travel distances.



Many EV models have the same towing capability as non-EVs.

⁴ Joint Transportation Commission. 2023. Encouraging High Consumption Fuel Users to Use Electric Vehicles.



EVs include models that meet the needs of HCFUs, including large cargo capacity, tow hitches, separate bed with tailgate, and above-average horsepower.



Electric pickups can power your campsite, campervan, worksite, or even home.

Concern: Environmental Impact



EV messaging research also shows that consumers are concerned about the environment. The top deterrent message was about the environmental harm of EV batteries, while some market segments listed improvement in air quality as a reason to switch to an EV. Messaging around current EV technology improving environmental outcomes such as reducing fossil fuel consumption and air pollution appeals to consumers' desire to protect the environment they live in. Appealing to consumers' environmentalist values can also potentially offset other barriers by framing as alignment with their ideals and thus worth it.

Messaging Opportunities



Studies show that EVs produce around half of the carbon pollution of gas-powered vehicles over their lifetime, even when accounting for manufacturing, and this is even less in Washington, where our grid is almost all powered by renewable energy.



In combination with their lower life cycle emissions, EVs have zero tailpipe emissions, reducing air pollution and improving the air we breathe.



EV batteries are required by law to maintain their health and performance for at least 100,000 miles or 7-8 years, and evidence is showing that many vehicles last much longer than that with the same batteries.



EV batteries can be recycled or refurbished, just like traditional gas-powered vehicle batteries, and many manufacturers reuse batteries.



EVs do not produce exhaust, so more EVs leads to cleaner air, which leads to fewer health problems like asthma, respiratory disease, heart disease, and lung cancer.

Trusted Information Channels



Trusted Information Channels

How information is disseminated is just as important as the messages being promoted. The sources that consumers use to learn about EVs informs the recommendations in the strategies and tactics. Using trusted information channels improve the probability that consumers will internalize messages promoting EVs, take action to purchase them, and narrow the EV adoption chasm in the framework. Survey respondents across all target audiences trusted the same top two information sources for information about cars. The third most trusted channel varied by audience.

Universal Trusted Information Channels

- Family and friends
- Car websites

Other Common Trusted Information Channels

- YouTube reviews
- Auto magazines
- Social media
- Regular mechanic

Equity Considerations



Equity Considerations



Race/Ethnicity

Reported **barriers to EV adoption** and **trusted information channels** were the same across racial and ethnic groups and aligned with the primary target audience by readiness. However, **messaging** that resonated most with each racial/ethnic group was more diverse and variable. **There were no messages that were in the top three most resonant for every race/ethnicity, in terms of making respondents more likely to consider getting an EV for their household.**

Messaging

The following table describes which messages resonated most with different race/ethnic groups. Respondents identifying as Asian or Hispanic/Latino found messaging around EVs' affordability to operate most resonant, while respondents identifying as Black or Native American, Alaska Native, Native Hawaiian or Pacific Islander found messaging around diverse EV models most resonant. In **Error! Reference source not found.**, messages are ranked first, second, and third according to how they resonated with each group. Blank cells indicate no or very low resonance.

Table 1. Resonant messages by racial/ethnic demographic

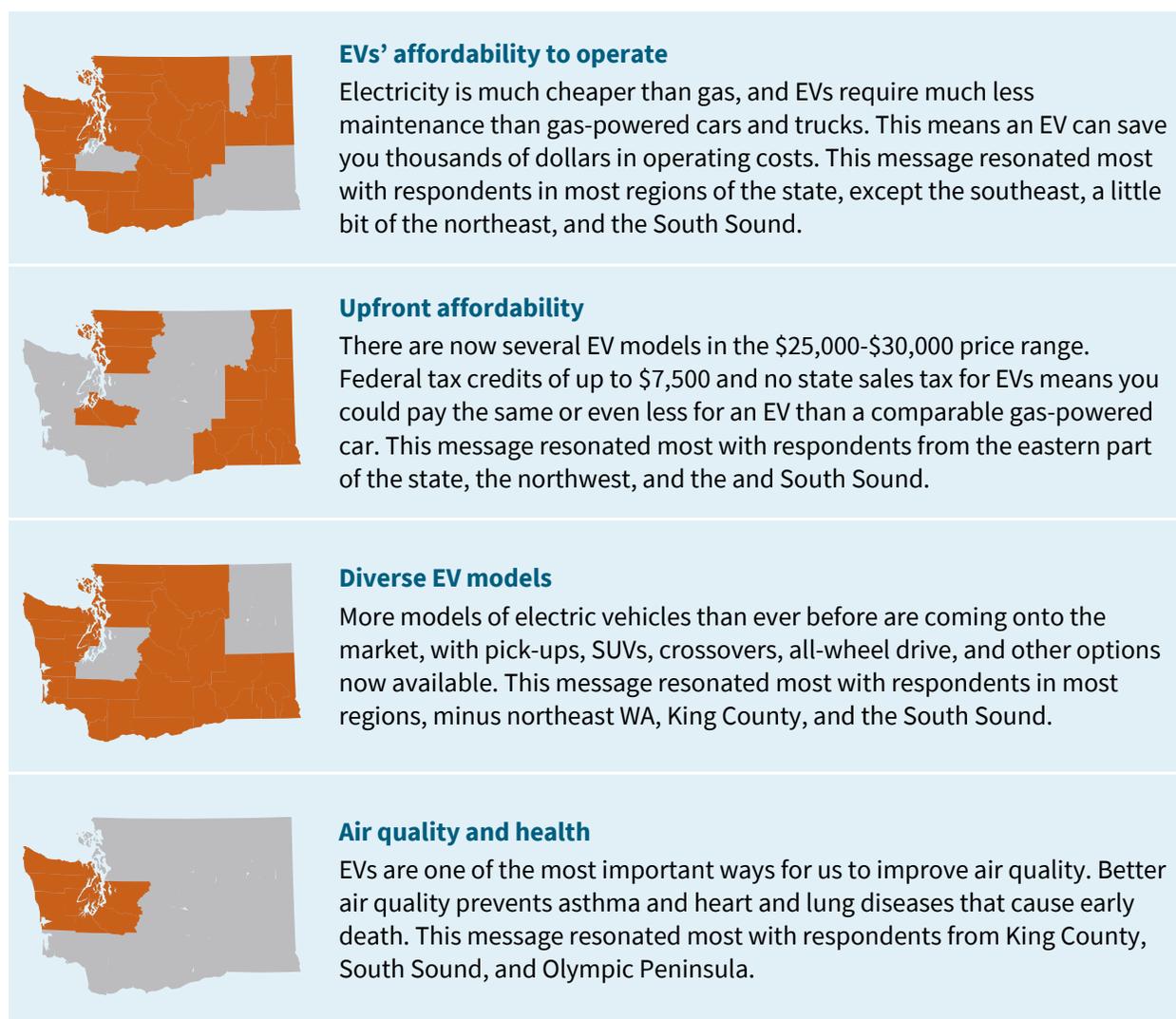
 High resonance ("I feel this")	 Medium resonance ("I get this")	 Some resonance ("I hear this")				
Message	Asian	Black	Hispanic/ Latino	Other ¹		
EVs' affordability to operate: Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.						
Diverse EV models: More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.						
Air quality and health: EVs are one of the best ways for us to improve air quality. Better air quality prevents asthma, heart disease, and lung disease that cause early death.						
Charging infrastructure: Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.						
Upfront affordability: There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.						
Home charging: 80% of charging happens at home and many EVs come with a portable charger.						

¹ Cascadia recognizes **Native Americans, Alaska Natives, Native Hawaiians, and Pacific Islanders** as distinct racial and ethnic groups, but grouped them in survey results to form a comparable sample size of respondents. We acknowledge that with a larger sample size, further disaggregation of data between these groups would provide more a more accurate understanding of survey responses by population.

Region

Messages that resonated with respondents also varied across **regions**. Three messages resonated (i.e., were selected in top 3 most effective messages) with more than half of the regions surveyed, suggesting that regionally targeted messaging could make a difference in EV adoption. The maps below describe which messages resonated most with specific regions. The highlighted regions are those where the messages (EV affordability to operate, upfront affordability, etc.) ranked in the top 3 messages for that region.

Figure 2. Messaging resonance across geographic regions



Strategies and Tactics



Strategies and Tactics

This section describes steps that the State can take to reduce Washingtonians’ stated barriers to switching to EVs and promote the desired behaviors of buying more EVs.

Since the barriers to EV adoption were the same across market segments, this Plan recommends uniform strategies to reduce the barriers to changing vehicles and promote purchasing an EV. Figure 6 outlines the EV purchase decision-making spectrum and the common path consumers take to go from EV awareness and consideration to actually purchasing an EV. The Plan also recommends a phased approach, to allow for more monitoring and application of best practices during implementation. This presents opportunities to time different messages at different stages of decision-making based on consumer readiness. Some target audiences may only fit into certain decision-making stages of this spectrum, such as current EV drivers who enter at the evaluation, purchase, or advocacy stages.

Figure 1. EV purchase decision-making spectrum (Adapted from the Colorado Department of Energy)



The strategies and tactics included in this section focus on the first three stages of this spectrum—Awareness, Consideration, and Evaluation—because those are the stages in which potential EV buyers gather information to choose their next vehicle. Overall, this progression begins with developing an awareness of how an EV could fit into a consumer’s life and then aims to address the specific needs and questions each consumer has before ultimately purchasing an EV. The tables below each strategy description list the tactics under each strategy; the messaging categories that pertain to each tactic (which also correspond to which barriers and concerns the tactic addresses); the recommended implementation year, and performance metrics.



Strategy 1: Build awareness of benefits of EVs

Consumers, even those that are ready to adopt, are concerned about the price of purchasing or leasing an EV. This strategy serves two purposes. First, it creates environmental triggers that regularly bring EVs to the front of consumers’ minds. Second, it advertises incentives that reduce upfront costs—addressing the number one barrier to EV adoption across the market.

Tactics

Tactic	Messaging	Timeline	Metrics
KEY = cost = technology = charging = lifestyle = environmental impact = grid resilience = myth busting			
Establish a website that serves as a central resource clearinghouse for EV information in Washington, with staff assigned to various regions.		Year 1	<ul style="list-style-type: none"> Website is launched by 2024 Visits to website Website visits by region
Educate car dealerships to discuss EV incentives and cost savings with buyers, and fleet owners on rebates and cost savings for their businesses		Year 1	<ul style="list-style-type: none"> Number or percentage of dealerships educated, by region Number of people buying EVs from dealers, by region
Work with utilities to promote EVs.		Year 1	<ul style="list-style-type: none"> Number of local utilities disseminating EV-positive messaging Number of tools utilities use to promote EVs
Develop case studies/testimonials with people from different communities, regions, languages, and lifestyles, emphasizing reliability and long-term cost savings. Disseminate on car websites and YouTube channels.		Year 1	<ul style="list-style-type: none"> Number of case studies developed Number of times played Number of inquiries
Work with an ad firm to identify locations for maximum reach and put up roadside billboards or digital display ads on highway advertising.		Year 2	<ul style="list-style-type: none"> Number of billboards put up Number of inquiries about incentives on website
Work with an ad firm to identify best placements for radio and television PSAs for maximum reach.		Year 2	<ul style="list-style-type: none"> Number of radio/television/internet ads played Number of website clicks

Washington State Transportation Electrification Strategy EV Education Plan

Strategies and Tactics

Tactic	Messaging	Timeline	Metrics
KEY = cost = technology = charging = lifestyle = environmental impact = grid resilience = myth busting			
Promote equity-centered incentives with community-based organizations and government agencies that serve target communities with multi-media content for physical locations, website, social platforms and ethnic media.		Year 2	<ul style="list-style-type: none"> • Number of materials transcreated • Number of materials disseminated • Number of languages translated into • Number of agencies/organizations disseminated to • Number of inquiries about equity-based incentives

Strategy 2: Facilitate consideration of EVs by potential buyers

EV range, and questions of how and when to charge, are some of the things that are most different about EVs compared to gas-powered vehicles. However, gas-powered vehicles have range (the distance traveled on a tank of gas) and need to be fueled, too. Additionally, gas is more expensive than electricity, and gas-powered vehicles typically cannot be refueled at home. This strategy focuses on drawing comparisons between internal combustion vehicles and EVs so that consumers can make choices with robust information.

Tactics

Tactic	Messaging	Timeline	Metrics
KEY = cost = technology = charging = lifestyle = environmental impact = grid resilience = myth busting			
Disseminate materials comparing the mpg and range equivalent of a gas tank with that of an EV to car websites, dealerships, fleet owners, mechanics.		Year 1	<ul style="list-style-type: none"> • Number of materials disseminated • Number of clicks on PSAs • Number of visits to website
Implement charging demonstrations in public places, especially places that people spend time—workplaces, parking lots of movie theaters, restaurants, etc.		Year 1	<ul style="list-style-type: none"> • Number of demonstrations • Number of visits to website

Washington State Transportation Electrification Strategy EV Education Plan

Strategies and Tactics

Tactic	Messaging	Timeline	Metrics
KEY = cost = technology = charging = lifestyle = environmental impact = grid resilience = myth busting			
Create video case stories and testimonials across communities, geographies, use cases, and language groups about the convenience of charging in daily life, and disseminate them on YouTube channels and car websites. Include a testimonial about charging at home—a concern for HCFUs.		Year 1	<ul style="list-style-type: none"> • Number of video case stories created • Number of times videos played • Number of platforms played on
Develop targeted campaigns for HCFUs, who are more open to purchasing new vehicles and show a higher willingness to lease new vehicles than non-HCFUs.		Year 1	<ul style="list-style-type: none"> • Number of ads targeting HCFUs • Number of clicks on ads
Advertise new charging locations and the charging network as a whole on the internet. Include organizing celebrations/events to announce new charging locations.		Years 1-2	<ul style="list-style-type: none"> • Number of Ads • Number of clicks/website visits
Advertise fast charging at existing gas stations, fast charging along key highway corridors, and free public Level 2 charging, especially for HCFUs.		Year 2	<ul style="list-style-type: none"> • Number of ads disseminated • Number of people who recall seeing them

Strategy 3: Promote evaluation of EVs vs gas-powered vehicles to shift readiness

Washingtonians identified concerns that their vehicle would become outdated as a primary barrier to switching to an EV; however, all vehicles become outdated after a few years and lack the latest features. According to market research beyond Washington, it is essential that consumers feel like an EV fits into their lifestyle, by highlighting the variety of models at all price points; functions like all wheel drive and clearance; or the ability to fit multiple car seats. Washingtonians’ most trusted sources of information on vehicles are friends and family, so leveraging networks is also key to promoting EVs.

Washington State Transportation Electrification Strategy EV Education Plan

Strategies and Tactics

Tactics

Tactic	Messaging	Timeline	Performance Metrics
KEY = cost = technology = charging = lifestyle = environmental impact = grid resilience = myth busting			
Hold community-based ride and drive events.		Year 1-2	<ul style="list-style-type: none"> Number of events held Number of communities events held in Number of attendees/participants Number of people who follow up with a dealer
Support network-based ride and drive events at locations such as workplaces, schools, churches, and vacation resorts.		Years 1-2	<ul style="list-style-type: none"> Number of events held Number of different settings Number of attendees Number of people who follow up on website
Encourage car rental companies to offer EVs to clients.		Year 1	<ul style="list-style-type: none"> Number of rental agencies offering EVs Number of rental agencies promoting EVs Number of unique EV rentals
Incentivize local EV advocacy groups to promote EVs to their communities.		Years 1-2	<ul style="list-style-type: none"> Number of advocacy groups recruited Number of promotional events done Number of people in attendance at events Number of communities served by local advocacy groups
Create a network of EV ambassadors.			<ul style="list-style-type: none"> Number of ambassadors in network Number of people ambassadors reach
Create video case stories and advertise them on social media/YouTube. Highlight the performance characteristics of different EV models, especially as they relate to HCFU priorities.		Years 1-2	<ul style="list-style-type: none"> Number of case story videos created Number of plays Number of platforms Number of clicks directing people to the website

Strategy 4: Identify and secure funding for implementation

Funding is a crucial part of any successful marketing campaign. Funding is required for staff to implement these recommendations, and many of the recommendations themselves are expensive. Funding sources should be identified and secured for the duration of the Plan’s implementation.

Tactics

Tactic	Timeline	Performance Metrics
Identify operating funds in the budget to hire 5 staff to implement the recommended tactics in the Plan: <ul style="list-style-type: none">• A project manager• A person to manage each of the previous three education strategies• A monitoring/evaluation lead	Years 1-2	<ul style="list-style-type: none">• Budget funding for EV Education Plan staff• Staff hired and managing the Plan’s implementation
Request funding to implement the outreach strategies and tactics in the Plan.	Year 1	<ul style="list-style-type: none">• Funding to implement ride and drive events• Funding to develop, transcreate, and translate case stories• Funding to advertise case stories on YouTube and car websites• Funding for internet advertising• Funding for ads• Funding for print materials• Funding for charging demonstrations• Funding for billboards



Monitoring and Evaluation



Process Monitoring

Throughout implementation, staff will follow a process monitoring plan to monitor fidelity and reach. Media tactics will be monitored through media reports to ensure all elements are running as intended and on the intended timeline. Designated staff will check physical media (e.g., roadside billboards, flyers) periodically to ensure they remain physically available and attractively presented. Earned media related to the program will be logged and stored in a central database to gauge the extent to which EV marketing is in the spotlight and general public reception. Program staff will conduct site visits at ride-and-drive events hosted by community-based organizations and “networks” (e.g., schools, churches) to assess level of commitment and sustained buy-in.

Impact Evaluation

The evaluation will assess the effect of the Education Plan on TES outcomes—specifically, the number of EVs purchased and registered in Washington. Direct impacts to be measured will include consumer awareness of EVs; consideration of EVs, including where potential consumers go to research an EV; and change in readiness to switch to an EV over time.

The baseline for consumer awareness, consideration, and readiness is the Washington Statewide EV Survey administered in spring 2023, the results of which are included in Appendix A: Washington EV Survey Report. A second survey should be administered in two to three years (late 2025 or early 2026), or after the implementation of the Education Plan tactics, and should ask all of the same questions, along with additional questions asking about recall of media tactics, demonstration tactics, and advocacy tactics. This will allow for a pre- and post-study comparison.

The section below provides recommended evaluation questions, metrics, methods, and data sources for awareness, consideration, and readiness to choose EVs. The evaluation questions aim to assess two things—first, if WA consumers are receiving the information they need to move along the EV purchase decision making spectrum, and second, if the education plan is having an impact on consumers’ receipt of that information. The evaluation questions are organized by strategy, and within each strategy, the first question is, has consumer knowledge, attitude, or belief changed; the second question is if the Education Plan tactics are successful.

Awareness

Evaluation Question: Are Washington vehicle consumers more aware of EVs?

Metrics	Evaluation Methods and Data Sources
Number of visits to State EV website	Track number between January 2024 and 2026 This monthly data can be obtained using Google Analytics or a similar website
Number of EV searches in WA (on the internet)	Track number between January 2024 and 2026 This can be measured using a social listening tool
Volume of EV mentions (on social media)	Track number between January 2024 and 2026 This can be measured using a social listening tool

Evaluation Question: Are Washington vehicle consumers aware of the Education Plan’s awareness tactics?

Metrics	Evaluation Methods and Data Sources
Estimate of number of people exposed to advertisements	Estimate based on social listening/analytics tools Number of people in physical spaces where flyers are available Number of people who drive on sections of road where billboards are located
Percent of people who say they remember seeing state EV advertisements	Spontaneous surveys of people in places where they would have seen advertising (e.g., a website, a location, etc.) Percentage of survey respondents who say they remember advertisements from post-implementation survey (recommended spring 2026).

Consideration

Evaluation Question: Are more people considering EVs?

Metric	Evaluation Method
Number of people researching EVs online	Web analytics data Track change between 2024 and 2026

Washington State Transportation Electrification Strategy EV Education Plan

Monitoring and Evaluation

Metric	Evaluation Method
Percentage of viewers who click on internet ads	Web analytics
Percentage of potential car buyers at dealerships asking about EVs	Data from dealerships Track percentage between 2024 and 2026

Evaluation Question: Are Education Plan tactics influencing more people to consider EVs?

Metric	Evaluation Method
Percentage of people who say they have attended a ride and drive or charging demonstration	Data from survey to be readministered every 2-3 years Track percent change between spring 2023 and post-implementation survey (recommended spring 2026).
Percentage of people who attended a ride and drive or charging demonstration who say they are very likely/likely to consider an EV for their next vehicle.	Data from survey to be readministered every 2-3 years (post-implementation survey recommended spring 2026).

Readiness to choose EVs

Evaluation Question: Is readiness to choose EVs growing?

Metric	Evaluation Method
Percentage of people who say they are very likely to choose an EV as their next vehicle	Data from survey to be readministered every 2-3 years Track percent change between spring 2023 and post-implementation survey (recommended spring 2026).
Percentage of people who say they are likely or somewhat likely to choose an EV as their next vehicle	Data from survey to be readministered every 2-3 years Track percent change between spring 2023 and post-implementation survey (recommended spring 2026).

Evaluation Question: Is the Education Plan pointing consumers to places where they can determine which EV is best for them?

Metric	Evaluation Method
Percentage of people who say they were influenced to further investigate EVs by Education Plan tactics (list)	Data from survey to be readministered every 2-3 years Track percent change between spring 2023 and post-implementation survey (recommended spring 2026). Pop up surveys on car websites and at dealerships

Demographic considerations

The results of the evaluation questions above should also be analyzed by demographic variables (Table 2: Demographic Variables). This information will help the State identify gaps in effective messaging or tactic implementation by age, gender, region, race/ethnicity, education level, and income. Understanding the effectiveness of the Education Plan’s tactics with a variety of specific groups will help the State understand if its messages and tactics are being received similarly across diverse groups, and inform modifications and targeting of future education campaigns if necessary.

Table 2: Demographic Variables

Demographic Variables
Age
Gender
Region
Race/Ethnicity
Education level
Income

Appendix A: Washington EV Survey Report



Introduction

This document reports the findings of the Washington State Transportation Electrification Strategy (TES) Survey (survey), which primarily centers personal electric vehicles (EVs). This survey is one component of the engagement strategy for the TES, and findings from the survey have been triangulated with data from interviews and focus groups conducted with key stakeholders to inform the policy recommendations in the TES.

The TES Survey aims to understand Washington State residents' perceptions of personal EVs and factors that may impact these perceptions. Findings describe respondents' intentions around vehicle purchasing in general and EV purchasing specifically; define market segments by readiness to purchase an EV; and identify perceptions around EVs, barriers to purchasing an EV, and messages that make respondents more or less likely to buy or lease one. The survey findings, in particular, inform this Education Plan, which is a three-year plan that supports the goal to accelerate personal EV adoption and driving among the public who own or lease vehicles, by increasing awareness of the benefits of EVs, and consideration of them as compatible with consumer values and lifestyle.

Survey Methodology

Strategic Research Associates (SRA) of Spokane, Washington, was subcontracted to support this survey work, including sample development and data collection for a statistically representative statewide survey of Washington State residents to provide a dataset statistically relevant to the population of the state at 95% confidence +/- 5%. This means that we can be 95% certain that the values listed for the total respondents fall within 1.78% on either side of the listed value.

SRA used 2022 American Community Survey estimates to establish quotas by age, gender, and region for data collection, then purchased and secured samples for mixed-mode online and telephone data collection among the targeted regions and collected at least 3,000 responses within the quota controls for analysis.

The survey took participants on average 17 minutes to complete over the phone and included 30 questions, a mix of open-ended, rating, scale, and single-choice questions. SRA collected a total of 3,026 responses from Washington State residents in a balanced manner for data analysis via random respondent selection.

Statistical confidence intervals of the dataset provided from these representative sources can be summarized in the following table.

Statistical confidence intervals by quota region

Quota region (Counties)	+/- % at 95% confidence	Sample size (n)
Total	+/-1.78%	3,026
King County	+/- 3.63%	730
South Sound (Pierce and Thurston Counties)	+/- 4.3%	520
Southwest WA (Lewis, Pacific, Wahkiakum, Cowlitz, Clark, Skamania)	+/- 5.8%	285
Olympic Peninsula (Kitsap, Mason, Grays Harbor, Jefferson, Clallam)	+/- 7.24%	183
Northwest WA (Snohomish, Skagit, Whatcom, Island, San Juan)	+/- 4.61%	452
Central WA (Chelan, Okanogan, Douglas, Kittitas, Yakima, Grant, Klickitat)	+/- 7%	196
Southeast WA (Benton, Franklin, Adams, Walla Walla, Columbia, Whitman, Garfield, Adams)	+/- 5.87%	279
Northeast WA (Ferry, Stevens, Pend Orielle, Lincoln, Spokane)	+/- 5.02%	381

Key Insights

This section provides a summary of key findings from three categories: all respondents; our market segments, and equity demographics. We organized the results to answer key questions that will inform the Education Plan.

The top **barriers** to adoption, concerns about EVs, and trusted sources of information are universal. The **messages** that respondents say make them more likely to switch to an EV vary by readiness to adopt, race/ethnicity, age, and region and are more diverse.

Responses related to EV perceptions were similar across market segments, but more different across regions and race/ethnicity.

Size of Potential Audience

Our key audience is people who are ready to adopt; they will replace their vehicle within five years and are already likely to choose an EV.

- 63% of all respondents say they will replace their vehicle within 5 years

- 45% of all respondents say it is very likely, likely, or somewhat likely their next vehicle will be an EV
- 27% of all respondents say that they will both replace their vehicle within 5 and years are very-to-somewhat likely to choose an EV.
- 10% of all respondents say that they will both replace their vehicle within 5 years and are neutral to unlikely to choose an EV.

Barriers

The top barriers to adoption are universal. All audiences regardless of their readiness to adopt, region, and race/ethnicity all reported the same top three barriers to buying or leasing an EV in the same order:

- **Upfront cost:** The upfront cost of buying an EV is too high.
- **Concerns about range and charging:** EVs don't have enough range and there aren't enough charging stations to get where I need to go.
- **Concerns about outdated technology:** EV technology is changing fast and I don't want to buy a new car that will be outdated.

All market segments shared the top two concerns that could become barriers to EV adoption:

- **Concerns about batteries:** EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.
- **Concerns about function in emergencies:** EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.

Messages

All market segments said the **following two messages** would make them more likely to get an EV:

- **EVs' affordability to operate:** Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- **Upfront affordability:** There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Resonant messages were more diverse across **racial/ethnic groups**. Messages that resonated with 3 of 4 groups were the following:

- **EVs' affordability to operate:** Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.

- Asian, Black, Latino respondents
- **Diverse EV models:** More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.
 - Black, Latino, Native Hawaiian/Pacific Islander respondents

Messages that resonated with respondents across **age groups** were more diverse. One message resonated across all age groups, and two more messages resonated with 5 of 7 age groups:

- **EVs' affordability to operate:** Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
 - Age groups 15-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+
- **Air quality and health:** EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.
 - Age groups 15-29, 40-49, 60-69, 70-79, 80+
- **Diverse EV models:** More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.
 - Age groups 30-39, 50-59, 60-69, 70-79, 80+

Messages that resonated with respondents also varied across **regions**. The most resonant message resonated with respondents from 6 regions, and two additional messages resonated with respondents from 5 of 8 regions. They were the following:

- **EVs' affordability to operate:** Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
 - NE WA, Central, NW WA, OP, SW WA, King
- **Upfront affordability:** There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.
 - SE WA, NE WA, NW WA, SW WA, S. Sound
- **Diverse EV models:** More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.
 - SE WA, Central, NW WA, OP, SW WA

Information Sources

The top **two trusted information** sources were the same across audiences and demographics:

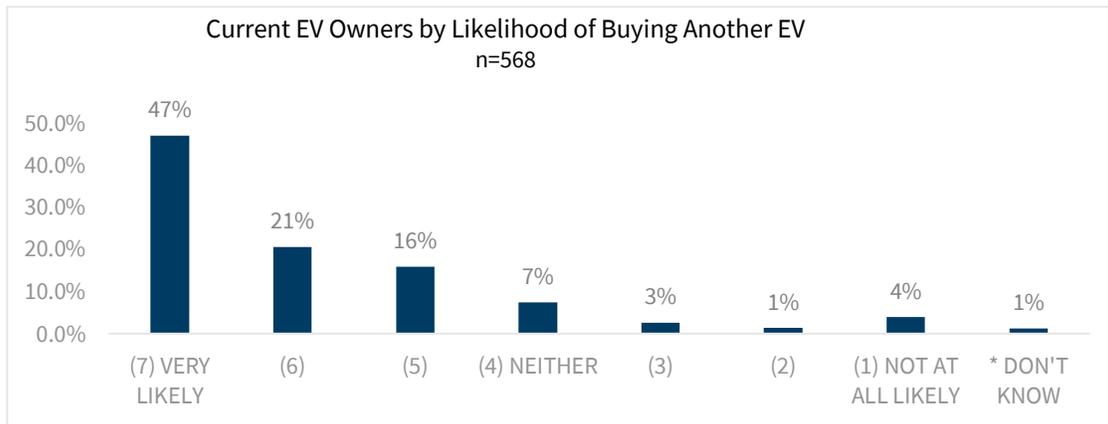
- Friends and family
- Online car shopping sites

Survey findings—all respondents

Will EV owners buy or lease another EV?

68% of respondents who own an EV are either very likely or likely to buy another EV for their next vehicle and less than 5% said that they are not at all likely to buy an EV for their next vehicle.

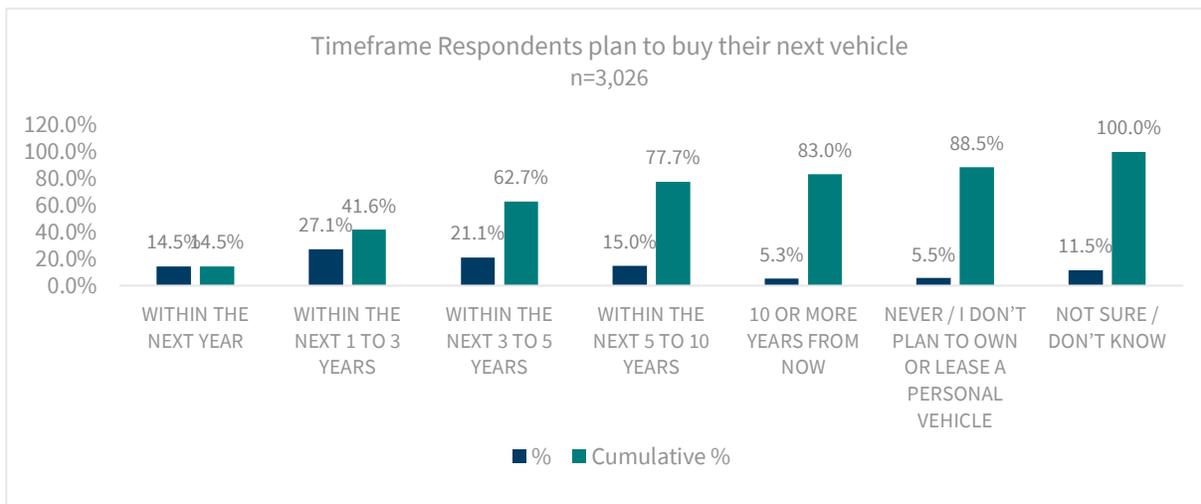
Current EV owners by likelihood of buying another EV



How soon are people going to buy a new car?

63% of respondents say they will likely replace their car within 5 years. See the "Market segments" section for demographic characteristics.

Timeframe respondents plan to buy their next vehicle



Who is most likely to buy a vehicle within 5 years?

People of all demographics said they plan to buy a vehicle in 5 years, but this group of people were more likely to have certain demographic factors.

Respondents who plan to buy a vehicle within the next 5 years tend to be under 50, male, live in a single-family house that they own, and have a driveway or garage. There is also a larger proportion of people who plan to buy a vehicle within 5 years who live in Puget Sound or Northwest WA compared to other regions in the state. However, one key difference between people who will buy a vehicle in 5 years and those who will buy a vehicle in 5 years and choose an EV is gender—**female respondents are more likely to choose an EV.**

Characteristics of respondents who plan to buy a vehicle in 5 years

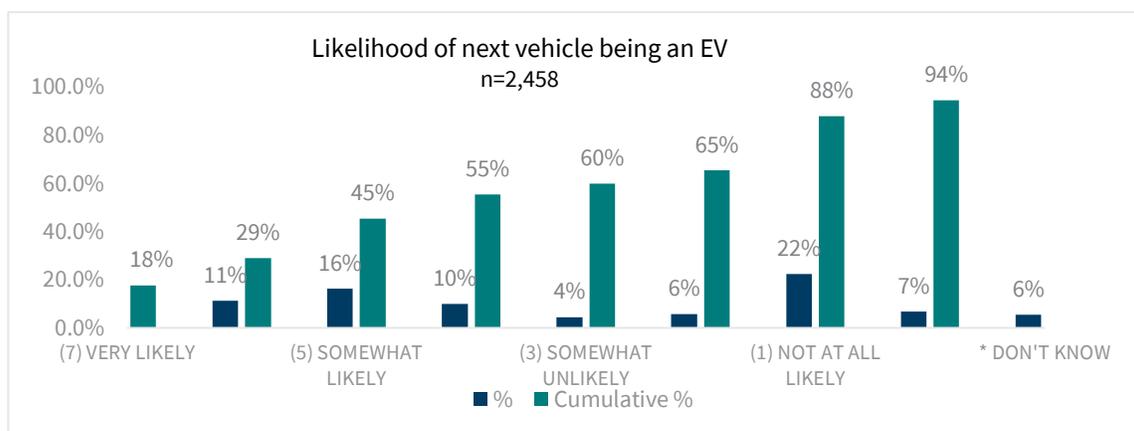
Characteristics of survey respondents:	Percentage of respondents who plan to buy a vehicle within 5 years (n=1,897)	Percentage of respondents who plan to buy a vehicle in 5 years and are very likely to choose an EV (n=813)	Percentage of respondents who plan to buy a vehicle in 5 years and are somewhat likely to choose an EV (n=813)
Age:	<ul style="list-style-type: none"> 63% age 49 or younger 	<ul style="list-style-type: none"> 59% 49 or younger 	<ul style="list-style-type: none"> 61% 49 or younger
Gender	<ul style="list-style-type: none"> 67% male 	<ul style="list-style-type: none"> 53% female 	<ul style="list-style-type: none"> 51% female
Top two regions	<ul style="list-style-type: none"> 37.6% in Puget Sound 14.5% in Northwest WA 	<ul style="list-style-type: none"> 34% in King County* 17% in South Sound 	<ul style="list-style-type: none"> 29% in King County* 18% in South Sound
Type of housing lived in Owned or rented	<ul style="list-style-type: none"> 72% Single family house 65% Homeowners (n=2819) 	<ul style="list-style-type: none"> 72% Single family house 65% homeowners 	<ul style="list-style-type: none"> 72% Single family house 60% Homeowners
Parking situation	<ul style="list-style-type: none"> 55% personal driveway (n=2820) 53% personal garage 	<ul style="list-style-type: none"> 55% personally owned garage 	<ul style="list-style-type: none"> 53% personal driveway 53% personal garage

*denotes statistical significance

What is the likelihood of people’s next vehicle being an EV?

45% of respondents said they are either somewhat likely, likely, or very likely to buy an EV for their next vehicle.

Likelihood of next vehicle being an EV



What are the barriers to EV adoption for all respondents?

The table below lists six reasons respondents were given that people may choose not to buy an EV. The barriers are listed in order of percentage of respondents who selected “Strongly agree” or “Agree” when asked about the following barriers to EV adoption.

- The upfront cost of buying an EV is the number one barrier to EV adoption among all respondents.
- Concerns about range and sufficient charging stations was the second highest-ranking barrier.
- Desire to not have an outdated vehicle was the third most cited barrier to buying an EV.

Barriers to EV adoption (all respondents)

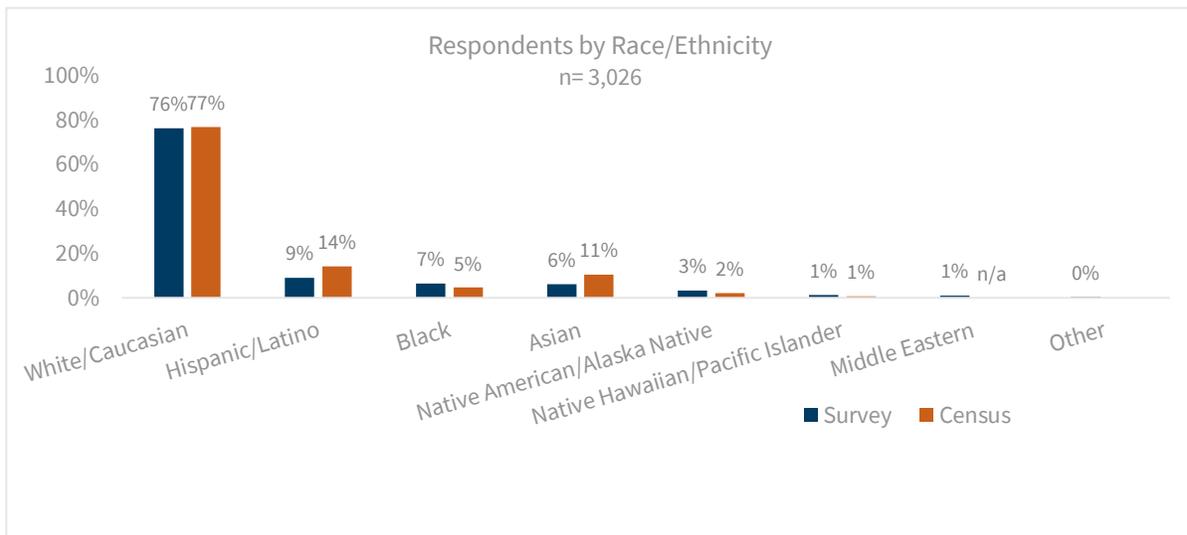
Barrier	% of respondents who selected strongly agree or agree (n= 2,859)
The upfront cost of buying an electric vehicle is too high	51%
EVs don’t have enough range and there aren’t enough charging stations to get to where I need to go	46%
Electric vehicle technology is changing fast and I don’t want to buy a car that will be outdated	34%
The types of EVs available are not the kind I want	27%
I’m not sure how to charge an electric vehicle	19%
EVs are hard to find to buy or lease	18%

Who did we hear from?

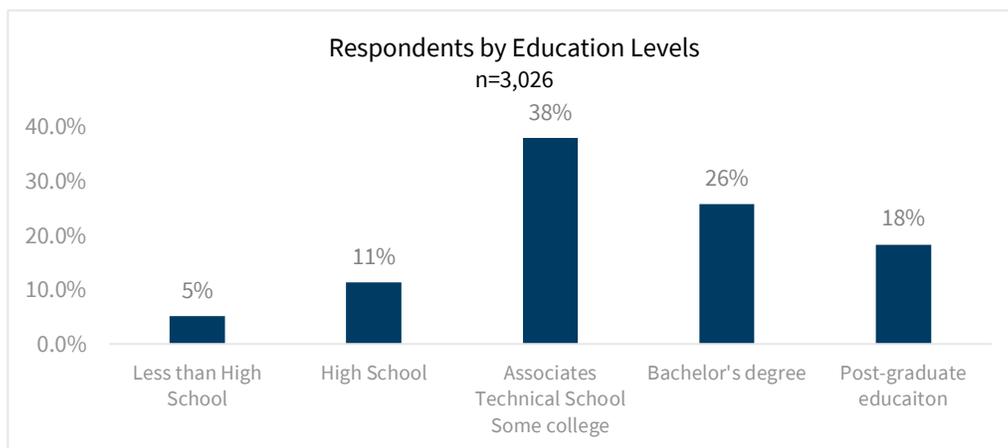
This section provides an overview of the demographics of the survey respondents. Respondents are overwhelmingly White, and almost 85% speak English at home. The majority are under 50, and over a third were from Puget Sound, with most from King County. Nearly half of respondents (48%) make under \$75,000/year, and 44% have a bachelor's degree or higher.

Where data is available, we have included Washington State census data for ease of comparability.

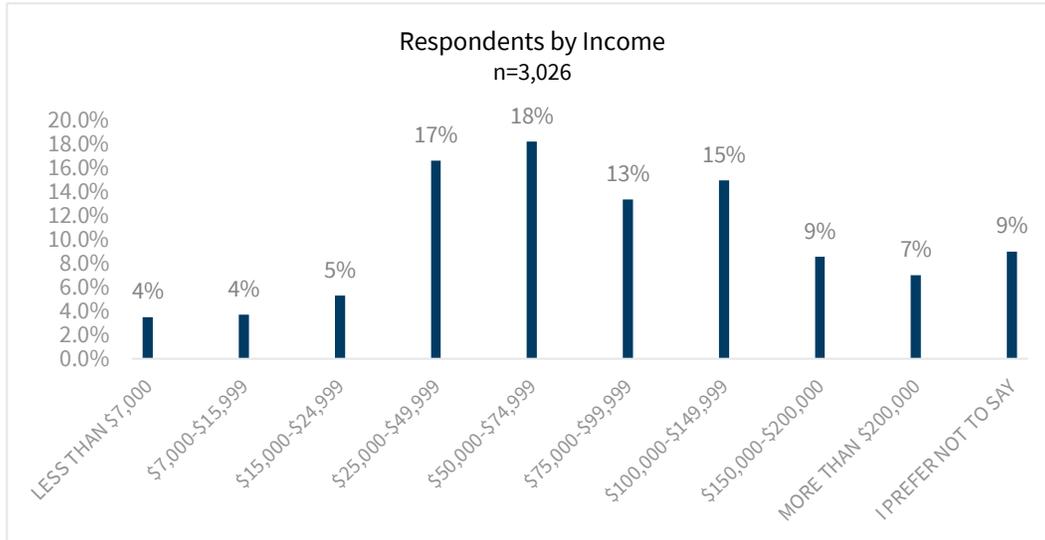
Percentage of all respondents by race/ethnicity (Source: US Census Population Estimates, July 1, 2022 (U.S. Census Bureau))



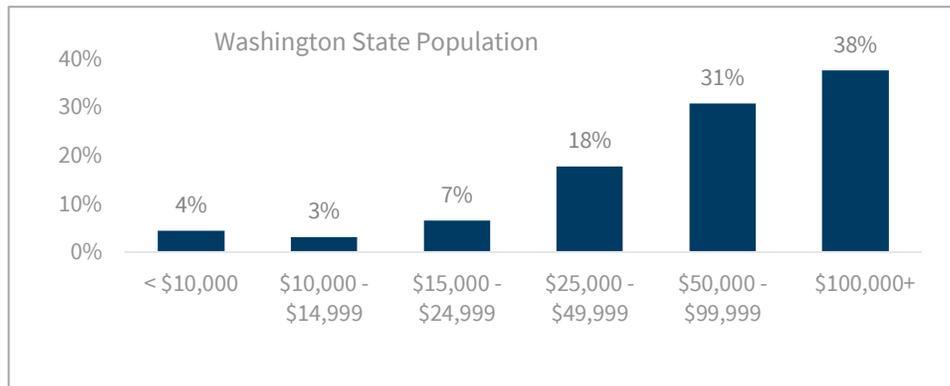
Percentage of all respondents by education level



Percentage of respondents by income

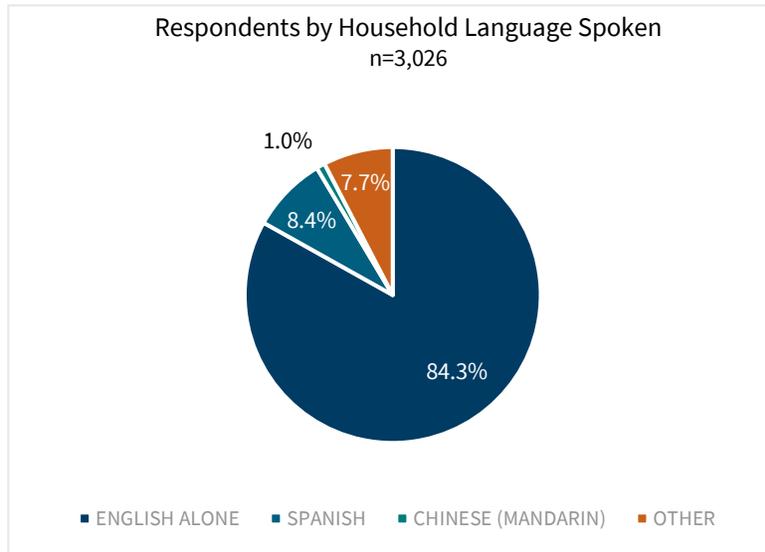


Washington population by income (Source: US Census Population Estimates, July1, 2022. US Census Bureau)

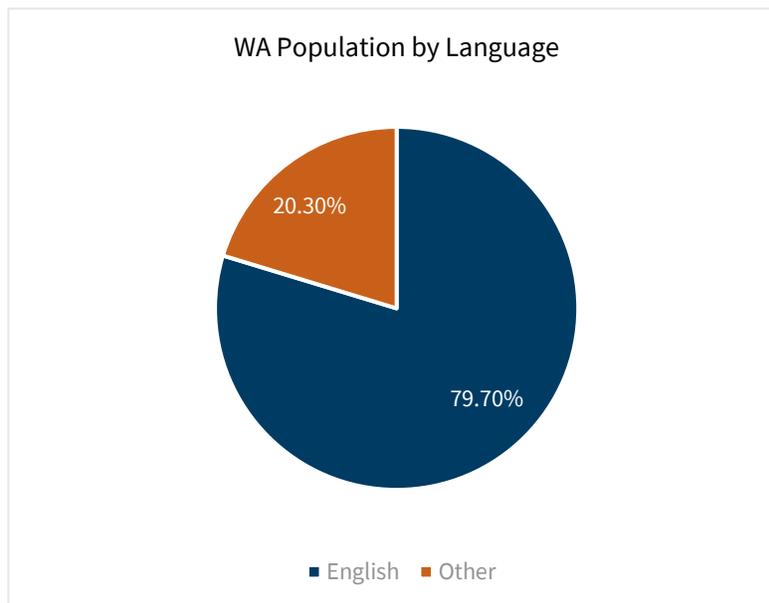


The breakdowns of the charts above do not match, because the TES Survey used a different income scale than the figures reported by the U.S. Census ACS, to better reflect levels of poverty according to federal standards, where \$14,000 is roughly equal to the federal poverty line of an individual and \$28,000 that of a family of four.

Percentage of respondents by household language spoken



Washington population by language spoken



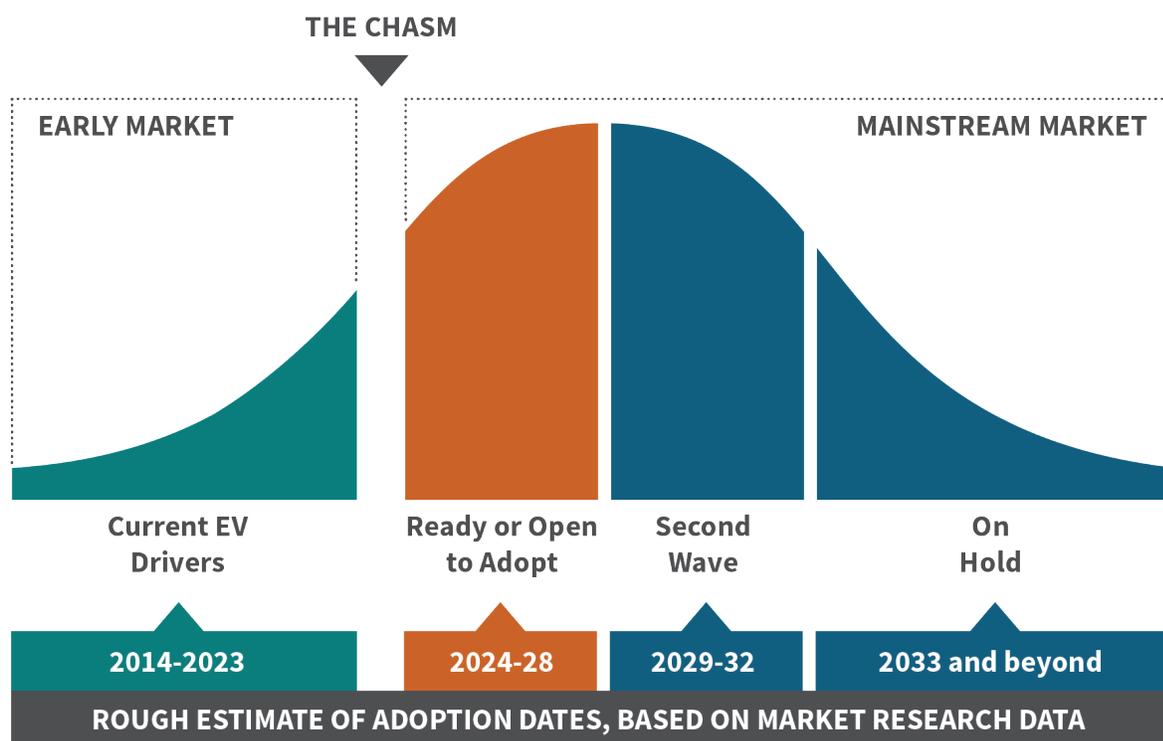
The breakdowns of the charts above do not match, because the TES Survey used different language definitions than the those reported by the U.S. Census.

We look at key demographic information by market segment in the next section.

Market segments—EV adoption segments

The project team examined survey responses in greater detail by breaking them down into four market segments, based on two questions: **When do people plan to buy their next car, and when do they plan to buy their first EV?**

Figure 1: Social Marketing Adoption Curve (adapted from the Colorado Energy Office EV Education and Awareness Roadmap)



The project team identified four market segments, described below. All 4 segments were relatively homogeneous.

- **Ready to Adopt** are respondents who said they plan to buy a vehicle within 5 years and are very likely to buy or lease an EV.
- **Open to Adopt** respondents said they plan to buy a vehicle within 5 years and are likely or somewhat likely to buy or lease an EV.
- **Second Wave** respondents said they plan to buy an EV within 5 years and are neutral, somewhat unlikely, or unlikely to buy an EV.
- **On Hold** respondents said they plan to buy or lease a new vehicle in 5-10 years.

This section presents the findings across the market segments followed by detailed results in tables and graphs by each market segment: 1) Ready to Adopts; 2) Open to Adopt; 3) Second Wave; 4) On

Hold. The demographic characteristics, barriers to EV adoption, educational needs, and messages about EVs that resonate are identified for each audience. Paired/overlap Z-test analysis was used to examine response differences across market segments. Key differences noted at the 95% confidence interval.

Market Segment Findings:

This section highlights some key findings across the market segments divided by readiness to purchase an EV. There were many similarities across audiences, especially in the highest-ranking responses. Differences were primarily in lower ranking responses.

BARRIERS

The barriers for all market segments to purchase an EV were the same, in the same order.

- **Upfront Cost:** The upfront cost of buying an electric vehicle is too high
- **Range and Charging Infrastructure:** EVs don't have enough range and there aren't enough charging stations to get to where I need to go
- **Outdated vehicle technology:** Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated

Top barriers

Barrier	Current Drivers n=568	Ready to Adopt n=330	Open to Adopt n=483	Second Wave n=296	On Hold n=453
Upfront cost	49%	38%	47%	53%	52%
Range and charging	45%	29%	38%	50%	50%
Outdated technology	48%	26%	30%	27%	35%
Limited options				27%	

CONCERNS

Respondents across all market segments reported the following two messages would most likely negatively impact their likelihood of purchasing an EV:

- **Battery sustainability:** EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.
- **EV function in emergencies:** EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top concerns

Concern	Current Drivers n=568	Ready to Adopt n=330	Open to Adopt n=483	Second Wave n=296	On Hold n=453
Battery sustainability	24%	37%	40%	48%	55%
Function in emergencies	21%	32%	36%	46%	52%

There were also some differences in messaging that respondents said would influence them away from choosing an EV.

- Ready-to-Adopters said that messaging around the potential for EVs stressing the grid was least likely to influence them to get an EV.
- Open-to-Adopters, Second Wave, and On Hold respondents said that messaging around “EVs not working well in cold weather, rural areas, or the mountains” was least likely to influence them to get an EV.

RESONANT MESSAGES

Every audience reported the following two messages would make them more likely to get an EV:

- **Operational Savings:** Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- **Upfront affordability:** There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Top messages

Message	Current Drivers	Ready to Adopt n=330	Open to Adopt n=483	Second Wave n=296	On Hold n=453
Operational savings	62%	72%	49%	59%	40%
Upfront affordability	62%	71%	47%	59%	36%

The third most resonant messages that respondents said would influence them to buy an EV varied by readiness to adopt.

- Current Driver respondents noted that “more models of EVs coming on the market” was more likely to influence them to get an EV.

- “More models of EVs coming on the market” resonated with Ready to Adopts and Second Wave.
- Open to Adopt respondents said that messaging around “Washington installing thousands of fast chargers a year.”
- On Hold respondents said messaging around “EVs improving air quality” was more likely to influence them to get an EV.

INFORMATION SOURCES

The top two trusted information sources were the same across audiences.

- Friends and family
- Online car shopping sites

Top trusted information sources

Message	Current Drivers	Ready to Adopt n=330	Open to Adopt n=483	Second Wave n=296	On Hold n=453
Friends or family	59%	70%	71%	74%	73%
Online car sites		55%	36%	51%	55%

The third most trusted information source was different among 3 of 4 market segments.

- Current Driver respondents second and third most trusted information sources were YouTube reviews and social media sources, respectfully.
- Ready to Adopt respondents’ third most trusted information source is YouTube reviews.
- Open to Adopt respondents’ third most trusted information source is auto magazines.
- Respondents in the Neutral and On Hold’s third most trusted information source is their regular mechanic.

Equity Considerations

Respondents who identified as a race or ethnicity other than White comprised 24% of survey respondents. This section describes survey response findings across minority racial and ethnic groups, highlighting similarities This section presents results for the following groups: Asian, Black, Hispanic/Latino, and Native American/Alaska Native/Native Hawaiian/Pacific Islander.⁶

⁶ Cascadia recognizes Native Americans, Alaska Natives, and Native Hawaiians/Pacific Islanders are distinct racial and ethnic groups, but grouped them in this survey report to increase the sample size of that group.

Findings by Race/Ethnicity

Barriers were the same for all respondents and for each market segment. However, messaging that resonates with each racial/ethnic group is more diverse. There were no messages that were in the top three for every race/ethnicity, in terms of making respondents more likely to consider getting an EV for their household. The table below shows which messages were the three that resonated most with each group. Yellow shading identifies the top resonant message, gray shading identifies the 2nd most resonant message, and green shading the 3rd most resonant message in each demographic group.

Resonant messages by Race/Ethnicity

Message	Asian n=173	Black n=182	Hispanic/Latino n=258	Native American, Alaska Native, Native Hawaiian or Pacific Islander n=125
Cheaper Operations	49%	42%	48%	
More EV models		47%	43%	42%
Air quality		44%	45%	
Charging infrastructure	42%			36%
Upfront affordability	41%			
Home Charging				40%

Information sources:

Respondents from all non-White identifying races and ethnicities listed the same three trusted sources of information in the same order:

- Friends or family
- Online car shopping sites
- YouTube reviews

More details about each demographic group are at the end of this document.

Barriers and Messaging by Age and Region

Findings by Age

The **barriers** each age group reported were the same, and in the same order, as across all market segments and across all racial and ethnic groups.

Messages that resonated across age groups were more similar than racial/ethnic groups but more diverse than the market segments. The table below shows which messages respondents reported would make them likely to purchase an EV, by percentage. Yellow shading identifies the top resonant

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message, gray shading identifies the 2nd most resonant message, and green shading the 3rd most resonant message in each age group.

Resonant messages by age group

Message	15-29 n=338	30-39 n=554	40-49 n=603	50-59 n=1032	60-69 n=499	70-79 n=1269	80+ n=875
Cheaper Operations	41%	50%	47%	38%	41%	38%	44%
More EV models		47%		39%	42%	38%	41%
Air quality	39%		46%		45%	38%	42%
Improved range	34%						
Charging infrastructure							
Upfront affordability		49%	47%	39%		38%	
Home Charging							

More details about messaging and barriers by age group are at the end of this document.

Findings by Region:

BARRIERS:

This regional breakdown is the first in which there are differences in reported barriers across groups. The three barriers remain the same—cost, range/charging, and concerns about outdated EV technology. However, in a couple of regions the order is different: Central and Southwest WA both reported range and charging concerns as their top barrier, with cost second. The shading in table below shows the order of the barriers reported by regions. Yellow identifies the top barrier, grey the second barrier, and green the third barrier.

Barriers by Region

Barrier	% King	% S. Sound	% SW WA	% OP	% NWWA	% CTRL	% SE WA	% NE WA
Cost	47%	49%	51%	60%	52%	55%	56%	60%
Concerns about range and charging infrastructure	41%	38%	54%*	43%	43%	59%	50%	55%
Concerns about outdated EV technology	33%	32%	37%	43%	32%	38%	38%	33%

MESSAGING:

The messages that respondents reported making them more likely to buy an EV also varied across regions. Only one message resonated across 6 of 8 regions and two resonated across 5 of 8 regions. Two additional messages resonated with only 3 and 2 regions, respectively, showing that this is a market breakdown where targeted messaging could make a difference.

The table below shows which messages respondents from each region reported would make them likely to purchase an EV, by percentage. Yellow shading identifies the top resonant message, gray shading identifies the 2nd most resonant message, and green shading the 3rd most resonant message in each region.

Messages by Region

Message	% King	% S. Sound	% SW WA	% OP	% NW WA	% CTRL	% SE WA	% NE WA
Cheaper Operations	51%		43%	43%	43%	39%		34%
More EV models			43%	43%	41%	38%	50%	
Air quality	49%	41%				38%		
Improved range		38%		40%				
Charging infrastructure	47%						52%	
Upfront affordability		42%	41%		41%		49%	33%
Home Charging								35%

Details by region are at the end of this document.

Conclusions

Survey limitations

There is the possibility of sampling bias and non-response bias in any market research survey, and this one is no exception. This can cause results to favor characteristics or demographics based on interest in the survey content, though the project team employed a market research firm to administer the survey to reduce sampling bias, by setting statistically representative quotas by age, gender, and region.

One such sampling bias revealed itself in the analysis of market segments. When the survey results were analyzed, the percentage of EV drivers among survey respondents was nearly 20%, while the real percentage of EV drivers in Washington is closer to 2%, based on vehicle registration data. The project

team is aware that this number of EV drivers is much higher than in the general population and examined descriptive statistics from a sample weighted at 2%, to see if there were critical differences in the results. The project team found no significant differences between the weighted data set and the unweighted dataset, so proceeded with the original dataset, understanding that Current EV drivers are oversampled.

Possible further analysis

Data from this survey could be compared to Washington State Census data to better understand the impact of sampling and non-response bias on the results. Additionally, further analysis could be conducted on subgroups of this dataset, including on respondents by income, housing type, parking type, or miles traveled.

Next steps

The results of these analyses will be used to inform the Transportation Electrification Strategy together with the results of the 1:1 interviews and focus groups that comprise the rest of the engagement for the Transportation Electrification Strategy.

Market Segment Details

Readiness to Adopt Fact Sheets

Market segment 1: Current EV Drivers (N=568)

Current EV drivers are characterized as respondents who responded that they currently own or lease an EV. There are 568 respondents or 19% of the total 3,026 survey respondents who are classified as current EV drivers. The actual number of EV drivers in Washington is closer to 2%, which means that this survey inadvertently oversampled current EV drivers.

They can be **characterized** as:

- Under 40
- From King County, Southeast or Northwest Western Washington
- Owners of single-family homes with personally owned garages
- Having a yearly household income over 100,000

Their top three **barriers** to EV adoption are:

- Cost
- Worry about an EV becoming outdated
- Range/charging concerns

Their top three **educational needs** are around:

- The longevity and sustainability of EV batteries
- EV functionality in the mountains or rural areas
- EV functionality during power outages and emergencies

The top three **messages** most likely to encourage them to buy an EV are:

- More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.
- Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Their top trusted information sources are:

- Family and friends
- YouTube reviews
- Social media

More details are in the tables and figures below.

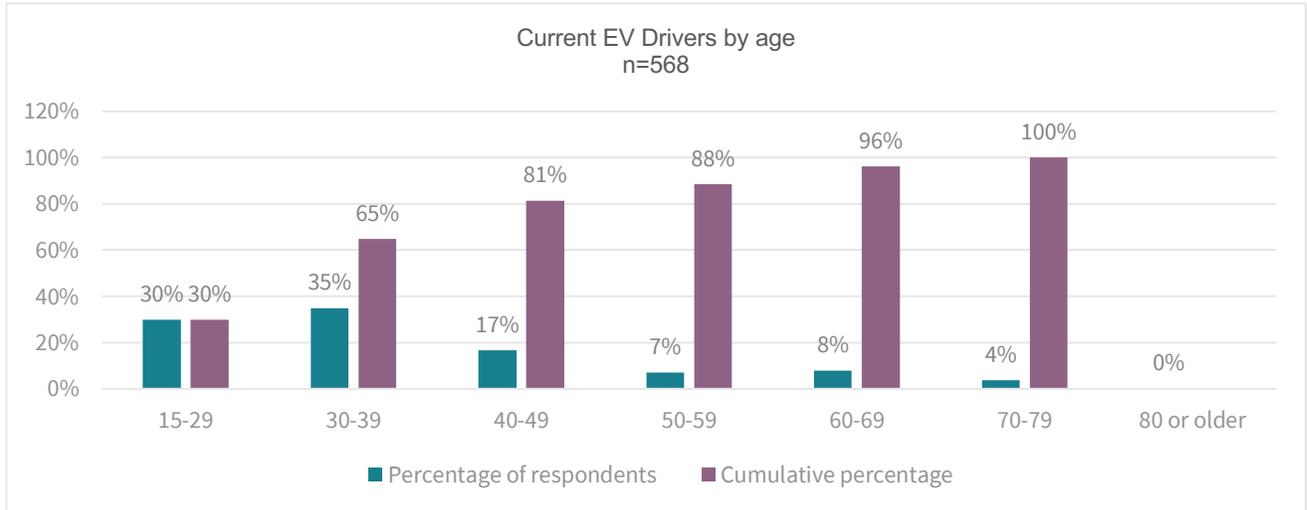
Demographic Characteristics of Current EV Drivers

Characteristics of Ready to Adopt:	Majority Category	Percentage (n=568)
Age	Under 40	65%
Gender	Male	54%
Region (Top 3 selected)	King County	25%
	Southeast WA	18%
	Northwest Western WA	14%
Housing type	Single Family Housing	68%
Own/Rent	Homeowners	79%
Parking	Personally owned garage	67%

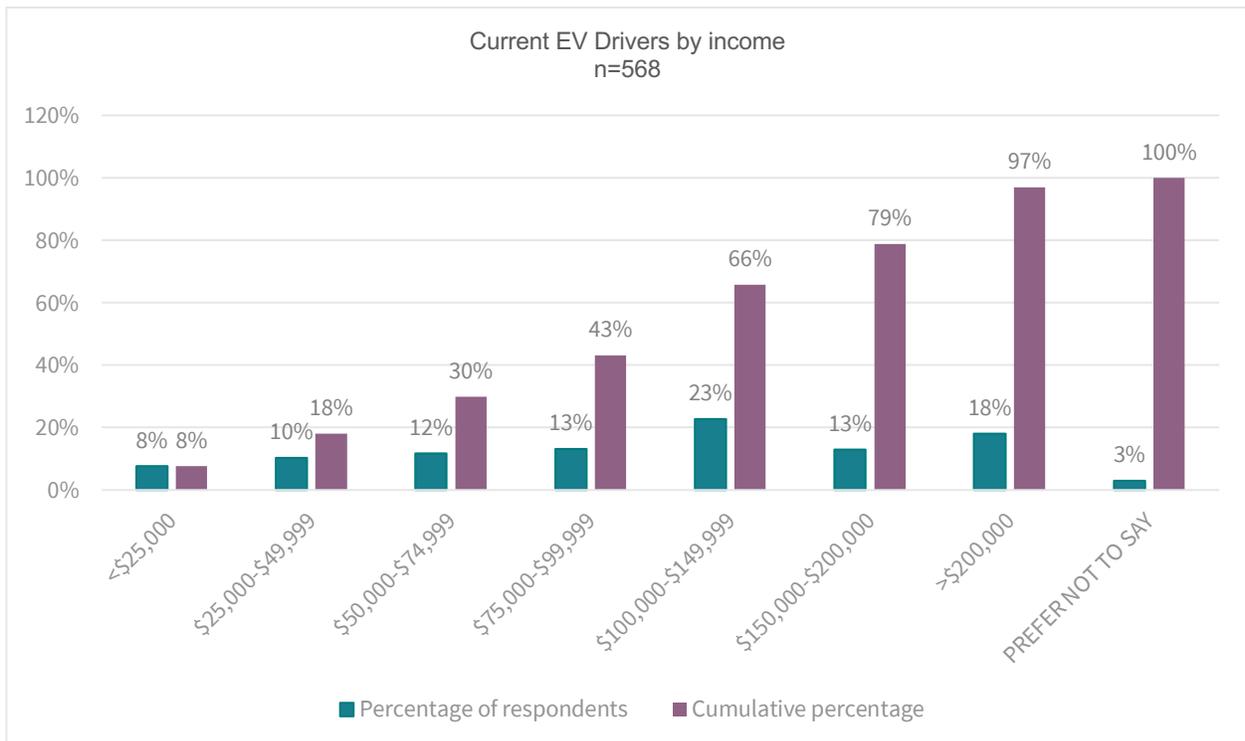
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Percentage of responders who are Current EV Drivers by age group (n=568)



Percentage of responders who are Current EV Drivers by income (n=568)



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Current EV Drivers' Top 3 Barriers to EV Adoption

Barrier	Percent of Ready to Adopt responding 7 or 6 (very likely or likely) n=568
The upfront cost of buying an electric vehicle is too high.	49%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	48%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	45%

3 Messages most likely to encourage Current EV Drivers to buy an EV

Message	Percent responding 7 or 6 (very likely or likely) n=568
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	62%
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	62%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	60%

3 Messages least likely to encourage Current EV Drivers to buy an EV

Message	Percent responding 1 or 2 (very unlikely or unlikely) n=568
EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.	24%
EVs don't work well in cold weather, rural areas, or the mountains.	22%
EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.	21%

Top 3 Trusted Information Sources for Current EV Drivers

Source	Percent responding (n=568)
Friends or family	59%
YouTube reviews	40%
Social media such as Facebook, Instagram, or Twitter	39%

Market segment 2: Ready to Adopt (n=330)

Ready to Adopt are characterized as respondents who responded that they plan to purchase a new vehicle within 5 years and responded that they are very likely to purchase an EV. There are 330 respondents or 11% of the total 3,026 survey respondents who are classified as Ready to Adopt.

They can be **characterized** as:

- Under 50
- From Puget Sound or Northwest WA
- Owners of single-family homes with personally owned parking
- Having a yearly household income under \$100,000

Their top three **barriers** to EV adoption are:

- Cost
- Range and charging infrastructure concerns
- Worry about an EV becoming outdated

Their top three **educational needs** are around:

- The longevity and sustainability of EV batteries
- The effect of EVs on the grid, electricity prices, and power outages
- EV functionality during power outages and emergencies

The top three **messages** most likely to encourage them to buy an EV are:

- More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.
- Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save thousands of dollars in operating costs.
- There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Their top trusted **information sources** are:

- Family and friends
- Online car shopping websites
- Social Media sites

More details are in the tables and figures below.

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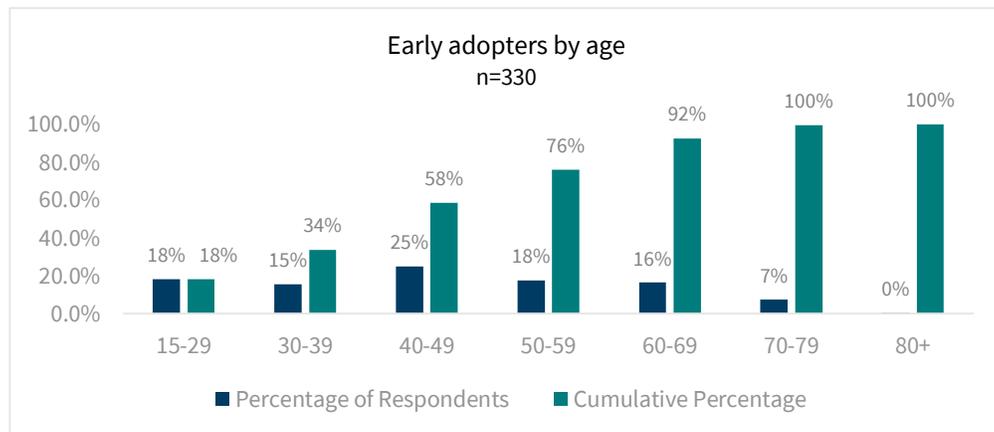
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Demographic Characteristics of Ready to Adopt

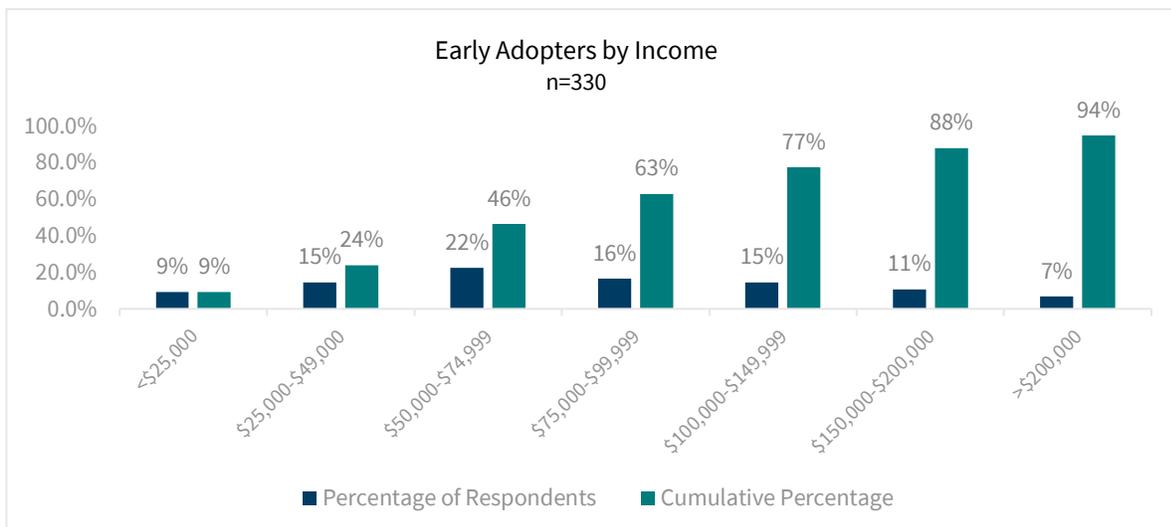
Characteristics of Ready to Adopt:	Majority Category	Percentage (n=330)
Age	Under 49	59%
Gender	Female	53%
Region (Top 3 selected)	King County	34%*
	South Sound	17%
	Northwest Western WA	15%
Housing type	Single Family Housing	72%
Own/Rent	Homeowners	65%
Parking	Personally owned garage	55%

* denotes statistical significance

Percentage of responders who are Ready to Adopt by age group (n=330)



Percentage of respondents who are Ready to Adopt by income (n=330)



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Ready to Adopt' Top 3 Barriers to EV Adoption

Barrier	Percent of Ready to Adopt responding 7 or 6 (very likely or likely) n=330
The upfront cost of buying an electric vehicle is too high.	38%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	29%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	26%

3 Messages most likely to encourage Ready to Adopt respondents to buy an EV

Message	Percent responding 7 or 6 (very likely or likely) n=330
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	74%
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	72%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	71%

3 Messages least likely to encourage Ready to Adopt respondents to buy an EV

Message	Percent responding 1 or 2 (very unlikely or unlikely) n=330
EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.	37%
If everyone gets an EV, they will stress our electric grid, drive up electricity prices, and cause more power outages.	35%
EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes. (32%)	32%

Top 3 Trusted Information Sources for Ready to Adopt:

Source	Percent responding (n=330)
Friends or family	70%
Online car sites	55%
YouTube Reviews	28%

Market segment 3: Open to Adopt (n=483)

Open to Adopt respondents will purchase a new vehicle within 5 years and are likely or somewhat likely to purchase an EV. There are 483 respondents who fall into the Open to Adopt category, or 16% of the total 3026 survey respondents. Open to Adopt respondents can be **characterized** as:

- Under 50
- From Puget Sound or Northwest WA
- Owners of single-family homes with personally-owned parking
- Most have a yearly household income under \$100,00

Their top three **barriers** to EV adoption are:

- Cost
- Range and charging infrastructure concerns
- Worry about an EV becoming outdated

Their top three **educational needs** are around:

- The longevity and sustainability of EV batteries
- EV functionality during power outages and emergencies
- EV functionality in the mountains or rural areas

The top three **messages** most likely to encourage them to buy an EV are:

- Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.
- There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Their top **trusted information sources** are:

- Family and friends
- Online car shopping websites

More details are in the figures and tables below.

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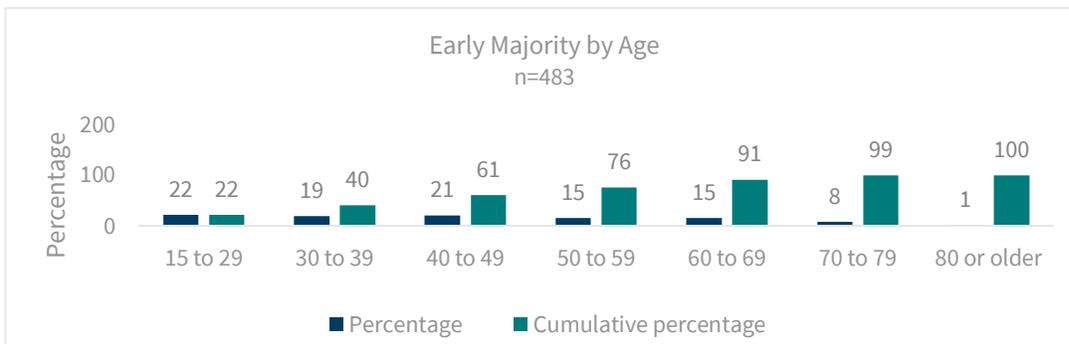
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Characteristics of Open to Adopt respondents

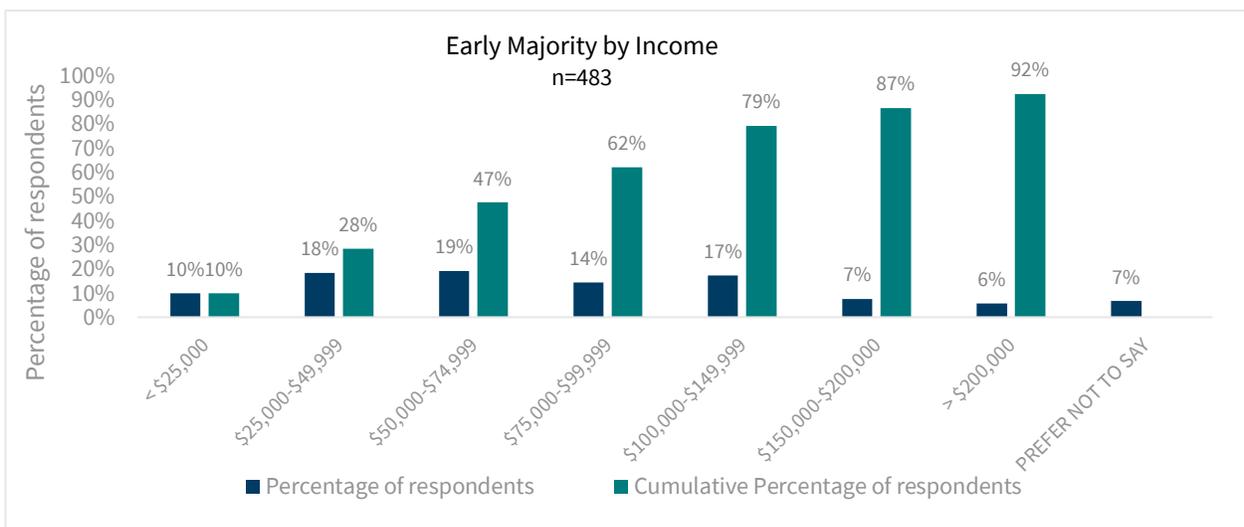
Characteristics of Open to Adopt Respondents:	Majority Category	Percentage of Open to Adopt responding (%) n=483
Gender	Female	51%
Region (Top 3 selected)	King County	29%*
	South Sound	18%
	Northwest Western WA	16%
Housing Type	Single Family House	72%
Rent/Own	Homeowners	60%
Parking	Personally owned driveway	53%
	Personally owned garage	53%

*denotes statistical significance

Percentage of respondents who are in the Open to Adopt by age group (n=483)



Percentage of respondents in the Open to Adopt by income (n=483)



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Top 3 barriers to EV Adoption for Open to Adopt respondents

Barrier	Percent responding 7 or 6 (very likely or likely) n=483
The upfront cost of buying an electric vehicle is too high.	47%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	38%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	30%

3 messages most likely to encourage Open to Adopt respondents to buy an EV

Message	Percent responding 7 or 6 (very likely or likely) n= 483
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	49%
Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.	49%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay even less for an EV than a comparable gas-powered car.	47%

3 Messages least likely to encourage Open to Adopt respondents to buy an EV

Message	Percent responding 1 or 2 (very unlikely or unlikely) n=483
EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.	40%
EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.	36%
EVs don't work well in cold weather, rural areas, or the mountains.	34%

Top 3 Trusted Information Sources for Open to Adopt respondents

Source	Percent responding (n=483)
Friends or family	71%
Online car sites	52%
Auto Magazines	30%

Market segment 4: Second Wave (n=296)

Second Wave respondents plan to purchase a new vehicle within 5 years and are neutral, somewhat unlikely, or unlikely to purchase an EV. There are 296 respondents who fall into the neutral Open to Adopt category, or 10% of the total 3,026 survey respondents. Second Wave respondents can be **characterized** as:

- Under 50, with over 20% under 30
- From Northwest WA, South Sound or King County
- Owners of single-family homes with personally-owned parking
- Most have a yearly household income under \$75,000

Their top four* **barriers** to EV adoption are:

- Cost
- Range and charging infrastructure concerns
- Worry about an EV becoming outdated

*Their 3rd ranking barrier was a tie, with the tying barrier being types of Evs available

Their top four* **educational needs** are around:

- The longevity and sustainability of EV batteries
- EV functionality during power outages and emergencies
- EV functionality in the mountains or rural areas

*Their 3rd educational need was a tie, with *The effect of Evs on the electric grid, electricity prices, and power outages

The top three **messages** most likely to encourage them to buy an EV are:

- Electricity is much cheaper than gas, and Evs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for Evs means you could pay the same or even less for an EV than a comparable gas-powered car.
- More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.

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Their top trusted information sources are:

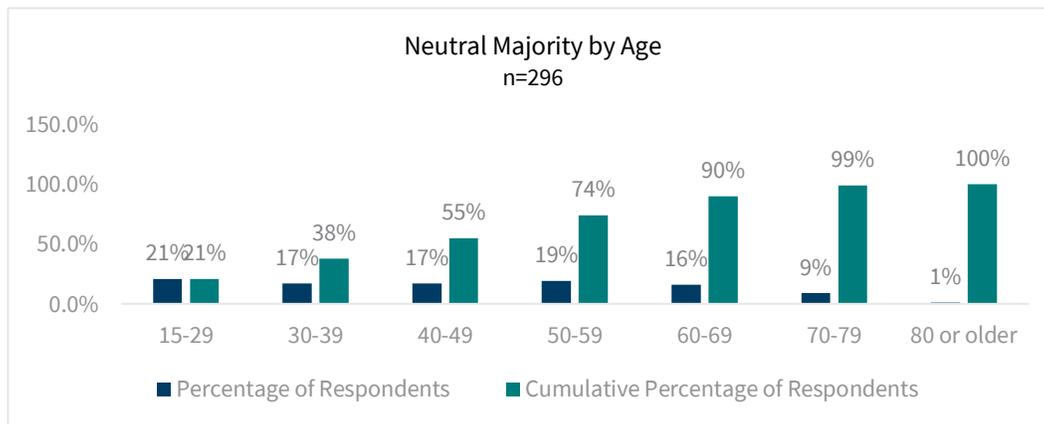
- Family and friends
- Online car shopping websites

More details are in the tables and figures below.

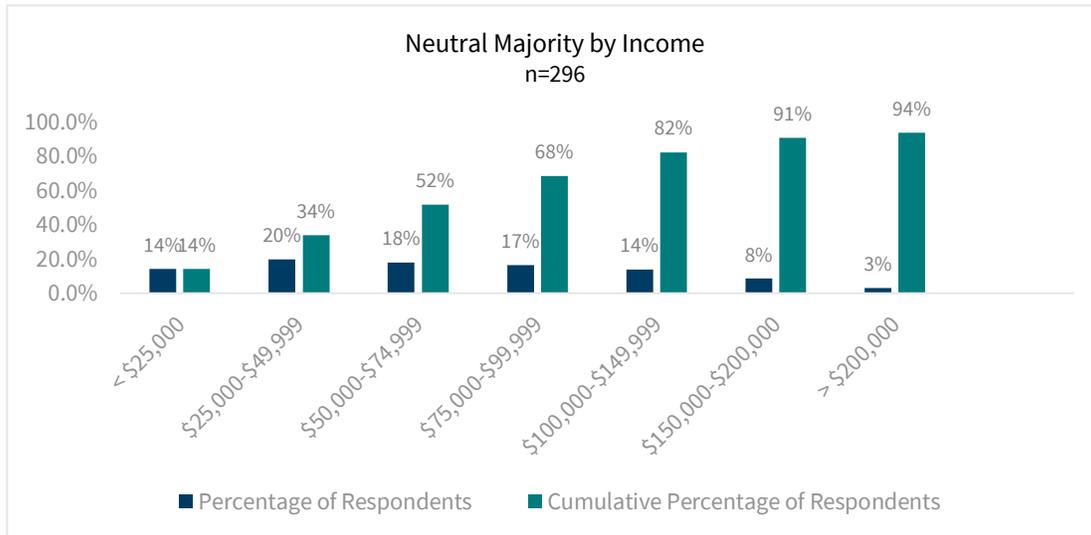
Characteristics of Second Wave respondents

Characteristics of Second Wave respondents:	Majority Category	Percentage of Second Wave responding (%) n=296
Gender	Female	51%
Region (Top 3 selected)	Northeast WA	29%
	South Sound	25%
	King County	18%
Housing Type Rent/Own	Single Family Housing	77%.
	Homeowners	61
Parking	Personally-owned driveway	61%

Percentage of respondents who are in the Second Wave by age group (n=296)



Percentage of respondents in the Second Wave by income (n=296)



Top 3 Barriers to EV Adoption for Second Wave respondents

Barrier	Percent responding 7 or 6 (very likely or likely) n=296
The upfront cost of buying an electric vehicle is too high.	53%
Evs don't have enough range and there aren't enough charging stations to get to where I need to go.	50%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	27%
The types of Evs available are not the kind I want.	27%

3 Messages most likely to encourage Second Wave respondents to buy an EV

Message	Percent responding 7 or 6 (very likely or likely) n= 296
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	59%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay even less for an EV than a comparable gas-powered car.	59%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	57%

Messages least likely to encourage Second Wave respondents to buy an EV

Message	Percent responding 1 or 2 (very unlikely or unlikely) n=296
EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.	55%
EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.	52%
EVs don't work well in cold weather, rural areas, or the mountains.	44%
If everyone gets an EV, they will stress our electric grid, drive up electricity prices, and cause more power outages.	44%

Top 3 Trusted Information Sources for Second Wave respondents

Source	Percent responding (n=296)
Friends or family	74%
Online car sites	51%
My regular mechanic	35%

Market segment 5: On hold (n=614)

On Hold respondents are characterized as respondents who responded that they are going to replace their vehicle in 5-10+ years. There are 614 respondents or 20% of the total 3,026 survey respondents who are classified as the On Hold.

They can be **characterized** as:

- Under 50
- From King County, Northwest Western or Northeast Washington
- Owners of single-family homes with personally owned parking
- Having a yearly household income under \$100,000

Their top three **barriers** to EV adoption are:

- Cost
- Range and charging infrastructure concerns
- Worry about an EV becoming outdated

Their top three **educational needs** are around:

- The longevity and sustainability of EV batteries
- EV functionality during power outages and emergencies

- EV functionality in the mountains or rural areas

The top three **messages** most likely to encourage them to buy an EV are:

- Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.
- EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.
- There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.

Their top **trusted information sources** are:

- Online car shopping sites
- Friends and family
- Their mechanics

More details are in the table and charts below.

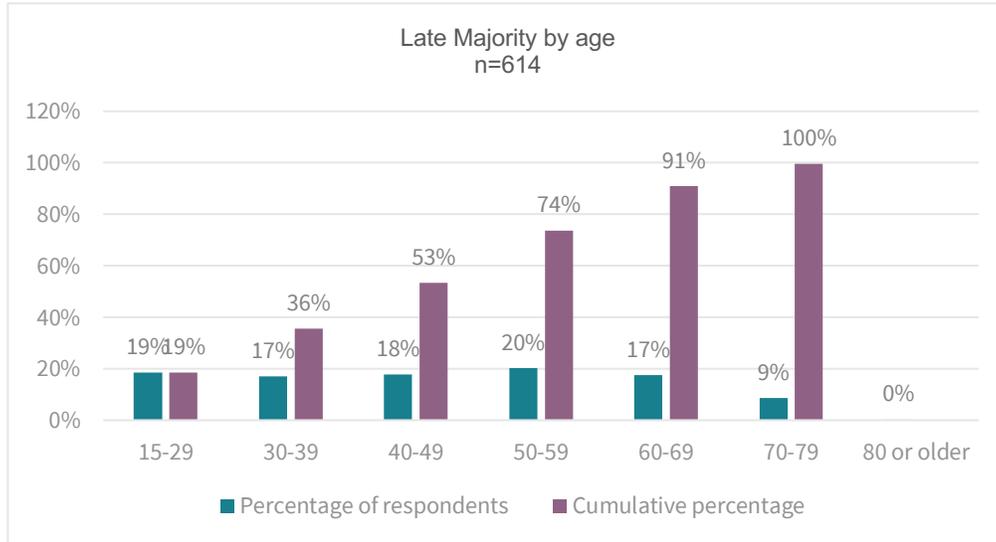
Characteristics of the On Hold

Characteristics of On Hold Respondents:	Majority Category	Percentage of On Hold responding (%) n=614
Gender	Female	58%
Age	Under 50	54%
Region (Top 3 selected)	King County	21%
	Northwest Western WA	18%
	Northeast WA	17%
Housing type	Single Family House	79%
Rent/lease	Homeowners	73%
Parking	Personally owned driveway	56%

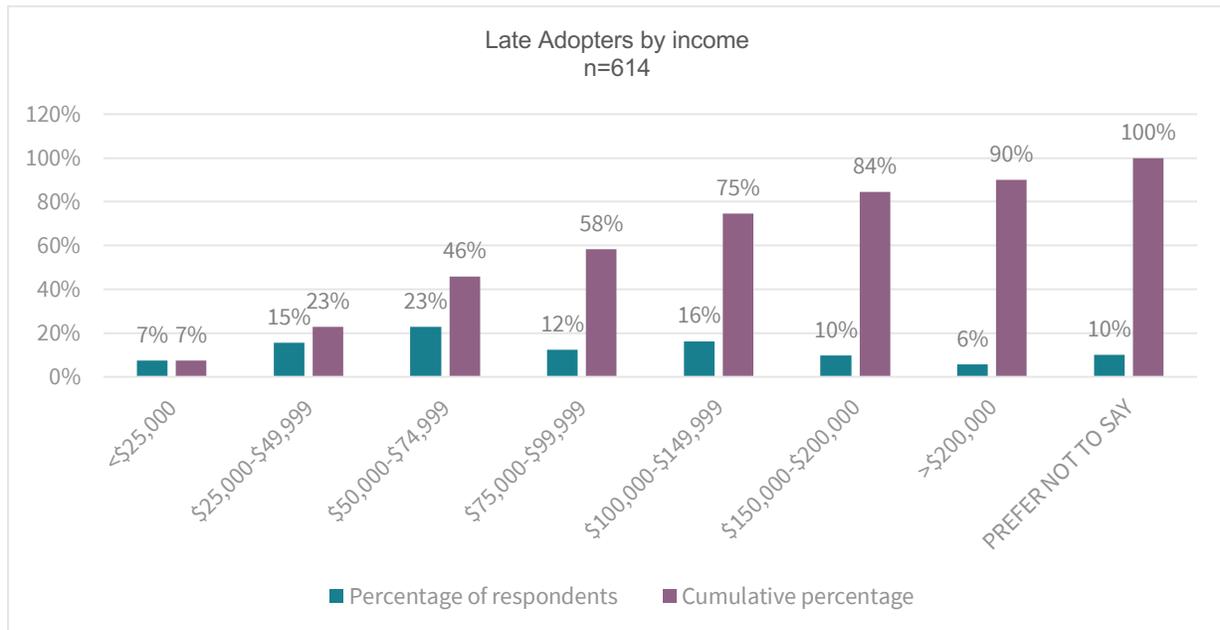
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Percentage of respondents who are in the On Hold segment by age group (n=614)



Percentage of respondents On Hold by income category (n=614)



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Top 3 Barriers to EV Adoption for On Hold respondents

Barrier	Percent responding 7 or 6 (very likely or likely) n=614
The upfront cost of buying an electric vehicle is too high.	54%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	51%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	35%

Top 3 Messages most likely to encourage On Hold respondents to buy an EV

Message	Percent responding 7 or 6 (very likely or likely) n= 614
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	38%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	36%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	35%

Messages least likely to encourage On Hold respondents to buy an EV

Message	Percent responding 1 or 2 (very unlikely or unlikely) n=614
EV batteries wear out quickly, can't be recycled, and use rare earth minerals that are mined in harmful ways.	53%
EVs may not work during power outages or if people need to evacuate for wildfires, floods, or earthquakes.	51%
EVs don't work well in cold weather, rural areas, or the mountains.	49%

Top 3 trusted sources of information for On Hold respondents

Source of Information	Percentage responding (%) n=614
Online car shopping sites	77%
Friends and family	73%
My regular mechanic	29%

Race/Ethnicity

Washington’s population, and the majority of survey respondents across market segments are White, which can obscure differences in opinions among respondents of non-white racial and ethnic groups. Therefore, we analyzed barriers, most resonant messages, and most trusted information channels by racial and ethnic group to identify differences between these groups and the market segments divided by readiness to adopt EVs.

Analysis showed that while barriers were the same as the readiness to adopt market segments, there were differences in messages that made respondents more likely to buy an EV and trusted information channels.

Asian Respondents (n=173)

Top 3 Barriers to EV Adoption for Asian respondents

Barrier	Percent Asians responding 7 or 6 (very likely or likely) n ⁷ =173
The upfront cost of buying an electric vehicle is too high.	49%
EVs don’t have enough range and there aren’t enough charging stations to get to where I need to go.	36%
Electric vehicle technology is changing fast, and I don’t want to buy a car that will be outdated.	27%

Top 3 messages most likely to encourage Asian respondents to buy an EV

Message	Percent Asians responding 7 or 6 (very likely or likely) n = 173
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	49%
Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.	42%

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Message	Percent Asians responding 7 or 6 (very likely or likely) n= 173
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	41%

Top 3 most trusted information sources for Asian respondents

Information Source	Percent Asians responding n= 173
Friends or Family	72%
Online car shopping sites, like Kelley Blue Book, Edmunds, Autotrader, True Car or CarMax	46%
YouTube Reviews	43%*

*Denotes statistical significance

Black Respondents (n=182)

Top 3 Barriers to EV Adoption for Black respondents

Barrier	Percent Black respondents answering 7 or 6 (very likely or likely) n=182
The upfront cost of buying an electric vehicle is too high.	46%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	34%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	34%

Top 3 messages most likely to encourage Black respondents to buy an EV

Message	Percent Black respondents answering 7 or 6 (very likely or likely) n= 182
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	47%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	44%
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	42%

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 most trusted information sources for Asian respondents

Information Source	Percent Black respondents answering n= 182
Friends or Family	70%
Online car shopping sites, like Kelley Blue Book, Edmunds, Autotrader, True Car or CarMax	43%
YouTube Reviews	32%*

*Denotes statistical significance

Hispanic/Latino Respondents (n=258)

Top 3 Barriers to EV Adoption for Latino respondents

Barrier	Percent Latinos responding 7 or 6 (very likely or likely) n=258
The upfront cost of buying an electric vehicle is too high.	53%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	46%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	35%

Top 3 messages most likely to encourage Latino respondents to buy an EV

Message	Percent Latinos responding 7 or 6 (very likely or likely) n= 258
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	48%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	45%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	43%

Top 3 most trusted information sources for Latino respondents

Information Source	Percent Latinos responding n= 258
Friends or Family	68%
Online car shopping sites, like Kelley Blue Book, Edmunds, Autotrader, True Car or CarMax	39%

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Information Source	Percent Latinos responding n= 258
YouTube Reviews	39%*

*Denotes statistical significance

Native American, Alaska Native, Native Hawaiian, and Pacific Islanders (n=125)

Top 3 Barriers to EV Adoption for Native American, Alaska Native, and Native Hawaiian/Pacific Islanders

Barrier	Percent Native American/Alaska Native/Native Hawaiians responding 7 or 6 (very likely or likely) n=125
The upfront cost of buying an electric vehicle is too high.	46%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	38%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	34%

Top 3 messages most likely to encourage Native American, Alaska Native, and Native Hawaiian/Pacific Islander respondents to buy an EV

Message	Percent Native American/Alaska Native/Native Hawaiians responding 7 or 6 (very likely or likely) n= 125
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	42%
80% of charging happens at home and many EVs now come with a portable charger.	40%
Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.	36%

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 most trusted information sources for Native American, Alaska Native, and Native Hawaiian/Pacific Islander respondents

Information Source	Percent Native American/Alaska Native/Native Hawaiians responding n= 125
Friends or Family	69%
Online car shopping sites, like Kelley Blue Book, Edmunds, Autotrader, True Car or CarMax	42%
YouTube Reviews	33%*

*Denotes statistical significance

Age Groups

Barriers by Age Group

Top 3 barriers across age groups

Barrier	% 15-29	% 30-39	% 40-49	% 50-59	% 60-69	% 70-79	% 80+
The upfront cost of buying an EV is too high.	42%	53%	52%	53%	60%	61%	41%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	31%	42%	47%	49%	52%	61%	31%
EV technology is changing fast, and I don't want to buy a car that will be outdated.	30%	30%	36%	32%	37%	38%	24%

Top 3 Messages by Age Group

Top 3 messages by 15-29-year-olds (n=338)

Message	% of 15-29-year-olds responding 7 or 6 (n=338)
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	41%

Washington State Transportation Electrification Strategy EV Education Plan

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Message	% of 15–29-year-olds responding 7 or 6 (n=338)
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	39%
When EVs first came out, they had less than 100 miles of battery range. Now, most have more than 200 (many over 300) miles of range.	34%

Top 3 messages by 30–39-year-olds (n=554)

Message	% of 30–39-year-olds responding 7 or 6 (n=554)
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	50%*
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	49%*
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	47%

*denotes statistical significance

Top 3 messages by 40–49-year-olds (n=603)

Message	% of 40–49-year-olds responding 7 or 6 (n=603)
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	47%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	47%*
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	46%

*denotes statistical significance

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 messages by 50–59-year-olds (n=1032)

Message	% of 50–59-year-olds responding 7 or 6 (n=1032)
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	39 %
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	39%
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	38%

Top 3 messages by 60–69-year-olds (n=499)

Message	% of 60–69-year-olds responding 7 or 6 (n=499)
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	45%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	42%*
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	41%

*denotes statistical significance

Top 3 messages by 70–79-year-olds (n=1269)

Message	% of 70–79-year-olds responding 7 or 6 (n=1269)
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	38%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	38%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	38%

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Message	% of 70–79-year-olds responding 7 or 6 (n=1269)
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	38%

Top 3 messages by 80+-year-olds (n=875)

Message	% of 80–89-year-olds responding 7 or 6 (n=875)
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	44%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	42%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	41%

Details by Region

Top 3 barriers by Region

Barriers by Region

Barrier	% King	% S. Sound	% SW WA	% OP	% NWWA	% CTRL	% SE WA	% NE WA
The upfront cost of buying an electric vehicle is too high.	47%	49%	51%	60%	52%	55%	56%	60%
EVs don't have enough range and there aren't enough charging stations to get to where I need to go.	41%	38%	54%*	43%	43%	59%	50%	55%
Electric vehicle technology is changing fast, and I don't want to buy a car that will be outdated.	33%	32%	37%	43%	32%	38%	38%	33%

*denotes statistical significance

Top 3 messages by Region

Top 3 messages by King County

Message	% of King County residents responding 7 or 6
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	51%*
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	49%*
Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.	47%*

*denotes statistical significance

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 messages by South Sound

Message	% of South Sound residents responding 7 or 6
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	42%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	41%
When EVs first came out, they had less than 100 miles of battery range. Now, most have more than 200 and many have over 300 miles of range.	38%

Top 3 messages by Southwest WA (SW WA)

Message	% of SW WA residents responding 7 or 6
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	43%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	43%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	41%

Messages by the Olympic Peninsula (OP)

Message	% of OP residents responding 7 or 6
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	43%*
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	43%
When EVs first came out, they had less than 100 miles of battery range. Now, most have more than 200 and many have over 300 miles of range.	40%

*denotes statistical significance

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 messages by Northwest WA (NW WA)

Message	% of NW WA residents responding 7 or 6
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	43%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	41%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	41%*

*denotes statistical significance

Top 3 messages by Central WA

Message	% of Central WA residents responding 7 or 6
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	39%
EVs are one of the most important ways for us to improve air quality. Better air quality prevents asthma, heart, and lung diseases that cause early death.	38%
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	38%

Top 3 messages by Southeast WA (SE WA)

Message	% of SE WA residents responding 7 or 6
Washington is installing thousands of fast chargers a year, so a strong charging network will soon be in place across the state.	52%*
More models of electric vehicles than ever before are coming onto the market, with pick-ups, SUVs, crossovers, all-wheel drive, and other options now available.	50%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	49%*

*denotes statistical significance

Washington State Transportation Electrification Strategy EV Education Plan

Appendix A: Washington EV Survey Report

Top 3 messages by Northeast WA (NE WA)

Message	% of NE WA residents responding 7 or 6
80% of charging happens at home and many EVs now come with a portable charger.	35%
Electricity is much cheaper than gas, and EVs require much less maintenance than gas-powered cars and trucks. This means an EV can save you thousands of dollars in operating costs.	34%
There are now several EV models in the \$25,000-\$30,000 price range. Federal tax credits of up to \$7,500 and no state sales tax for EVs means you could pay the same or even less for an EV than a comparable gas-powered car.	33%





EV COUNCIL

EV Coordinating Council

Annual Report

2023 EV Council membership

The EV Council has 10 member agencies, each of which has a primary representative and a backup. A list of current primary and backup representatives appears below. We acknowledge the below individuals and all of the other agency staff members who contributed to the creation of this report.

Department of Commerce (co-chair)

Deborah Reynolds
Andrew Rector

Department of Transportation (co-chair)

Tonia Buell
Kara Symonds

Department of Agriculture

Tahis McQueen
Julia Terlinchamp

Department of Ecology

Joshua Grandbouche
Dustin Watson

Department of Enterprise Services

Ann Larson
Courtney Speer

Department of Health

Kaitlyn Kelly
Julie Fox

Office of Financial Management

Erik Hansen
Tiff West

Office of Superintendent of Public Instruction

Patti Enbody
Chris Jose

State Energy and Environmental Performance Office

Hanna Waterstrat
Seth Kolodziejwski

Utilities and Transportation Commission

Aaron Cahen
Andrew Sellards

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Executive summary

Overview

The purpose of this report is to inform the state Legislature of the activities and accomplishments of the Interagency Electric Vehicle Coordinating Council (EV Council) during the period July 1, 2022 through June 30, 2023. The report is required annually by [RCW 43.392.040\(2\)](#). This report is being submitted as an appendix to the Transportation Electrification Strategy (TES) required by RCW 43.392.040(1)(a), and references the main TES document frequently.

Highlights

This reporting period has been a formative one for the EV Council. It saw the creation of the EV Council itself, along with an Executive Committee, an Advisory Committee, and a pair of working groups to help it achieve its goals. The Council also agreed to a decision-making process, and hired a consulting team to draft the TES.

Having organized itself, the members of the EV Council then set about fulfilling the vision laid out in the authorizing statute, [RCW 43.392.040](#). The TES and its related education and engagement plans will be sent to the Legislature in January 2024. The EV Council identified \$818 million in transportation electrification funding available in the 2023-2025 biennium. The EV Council members, along with other state agencies, began to coordinate the efforts funded by this \$818 million in venues such as the working groups and the Executive Committee.

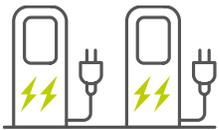
Throughout these efforts, the EV Council strove to ensure that its members' projects and programs "benefit vulnerable and overburdened communities."¹ In the TES, the EV Council adopts a definition of overburdened communities that includes any area measured at a 9 or 10 on the [Environmental Health Disparities map](#); all tribal communities; and Census tracts in the U.S. Environmental Protection Agency's [EJSCREEN](#) tool that fall into the 80th percentile or above for race and income.

All the while, the EV Council's member agencies were busy implementing existing programs and projects. Some key accomplishments are highlighted in Figure 1. As we move into 2024, the EV Council has four main objectives: implement the TES; gather the data that will guide TES implementation; continue to identify and coordinate funding; and implement the education and engagement plans that accompany the TES.

FIGURE 1: KEY EV COUNCIL MEMBER ACCOMPLISHMENTS FOR 2023

137 

Number of Level 2 ports installed

114 

Number of Level 3 ports installed

41 

Number of electric buses funded

30 

Number of electric state fleet vehicles funded

2 

Number of electric fire trucks funded

¹ [RCW 43.392.040\(1\)\(f\)](#).

Introduction

Background

The Interagency Electric Vehicle Coordinating Council (EV Council) was created by Section 428, Chapter 182, Laws of 2022 (ESSB 5974). [RCW 43.392.030](#) charges the departments of Commerce and Transportation (WSDOT) with jointly leading the EV Council, and names eight additional agencies as EV Council members: the departments of Ecology, Enterprise Services (DES), Agriculture and Health; the Office of Financial Management (OFM); the State Efficiency and Environmental Performance Office (SEEP, a part of the Department of Commerce); the Utilities and Transportation Commission (UTC); and the Office of the Superintendent of Public Instruction (OSPI). The responsibilities of the EV Council include developing a statewide transportation electrification strategy (TES); identifying and coordinating all EV infrastructure grant- and nongrant-related funding; conducting robust public and private outreach through an outreach plan and an industry advisory committee; and ensuring that all programs and activities benefit vulnerable and overburdened communities.

The next section of this report will provide additional context for the EV Council's activities, including its organization and a few key actions taken to date. The following section will examine the accomplishments of the EV Council's as a whole in addressing each of the requirements listed in [RCW 43.392.040\(1\)](#). Then, the report will describe the programmatic activities and accomplishments for each of the EV Council's member agencies. Finally, the report will conclude with a discussion of the EV Council's expected activities in 2024.

Legislative mandate

[RCW 43.392.040\(2\)](#) requires that the EV Council provide "an annual report to the appropriate committees of the legislature summarizing electric vehicle implementation progress, gaps, and resource needs."

This report serves as the annual report for 2023. The report only covers implementation progress, but is being submitted as an appendix to the TES, which covers gaps and resource needs.

The EV Council: Structure and key events in FY23

Structure

The EV Council held its first meeting on July 21, 2022. It met again on Sept. 27, 2022, when the EV Council's structure and decision-making processes took shape. The results of this meeting were:

- The creation of an EV Council Executive Committee and two working groups
- Approval for Commerce and WSDOT, in their capacity as EV Council co-chairs, to publish a request for Advisory Committee members
- Approval for Commerce to hire consultants that would create the TES
- Adoption of an EV Council decision-making process

EV Council Executive Committee

The EV Council's Executive Committee was created to manage the EV Council's governance and steer its administrative functions.² The Executive Committee is made up of Commerce, WSDOT, Ecology, the UTC, and DES. It meets every Wednesday morning; those meetings are often joined by representatives from the Governor's Office and the TES contracting team. The duties of the Executive Committee include providing direction to EV Council staff and consultants; tracking the progress of EV Council activities; making recommendations to the full EV Council; and coordinating with the Governor's Office, the Department of Health, and the Environmental Justice Council (EJ Council).³

EV Council Advisory Committee

During the second EV Council meeting, the EV Council members voted to direct Commerce and WSDOT to publish a request for Advisory Committee applications, and to request that the Executive Committee propose a roster of Advisory Committee members ([RCW 43.392.040\(1\)\(e\)](#)). The Advisory Committee comprises 25 individuals from across Washington's EV landscape; the full list can be found in Appendix A. The Advisory Committee is charged with providing feedback on draft documents and agency programs; gathering information and developing recommendations for the TES; and

EV Council Members

- Dept. of Commerce (Co-Chair)
- Dept. of Transportation (Co-Chair)
- Dept. of Agriculture
- Dept. of Ecology
- Dept. of Enterprise Services
- Dept. of Health
- Office of Financial Management
- Office of the Superintendent of Public Instruction
- State Efficiency and Environmental Performance Office
- Utilities and Transportation Commission

² "Creation of EV Council committees and workgroups." September 27, 2022, memo to the EV Council (Sept. 27, 2022, EV Council Committees & Workgroups Memo), at 1-2. Available from: <https://www.commerce.wa.gov/wp-content/uploads/2022/10/Agenda-item-memo-Committees-and-workgroups-Webpage-version.pdf>.

³ RCW 70A.02.110.

supporting communication and public outreach efforts, among other duties.⁴ It meets monthly on the third Wednesday of each month.

Establishing EV Council working groups

In its September meeting, the EV Council voted to create and facilitate two issue-specific working groups to carry out the identification and coordination functions detailed in [RCW 43.392.040](#)(1). The two working groups are focused on EV charging infrastructure and EV adoption. They are made up of a variety of state agency representatives. The two workgroups have met together on the fourth Wednesday of each month, but could begin to meet separately in the future.⁵

Hiring of TES consultants

The EV Council voted to direct Commerce to hire and contract with a consultant to create the TES. Commerce hired the Rocky Mountain Institute (RMI) as the prime contractor in early 2023, with several subcontractors selected to complete various portions of the TES.

EV Council decision-making process

Finally, the EV Council adopted a decision-making process that governs how the EV Council will meet its statutory responsibilities and comply with the Open Public Meetings Act. The process adopted by the EV Council outlines how agencies should be represented on the EV Council, how the EV Council will take up proposals for action and set agendas for its monthly meetings, and how votes on agenda topics will be recorded.⁶ The decision-making process can evolve over time as necessary, with the approval of the EV Council.

Timeline of EV Council actions

Figure 2 below details the major events and actions taken by the EV Council from July 2022 through December 2023.

⁴ Sept. 27, 2022, EV Council Committees & Workgroups Memo, at 3-4. The full list of Advisory Committee members is available from: <https://deptofcommerce.app.box.com/s/823h2j6tynfbsbp5fb88tftar40o959n>.

⁵ Id., at 4-6.

⁶ See "EV Council decision-making process", September 27, 2022, memo to the EV Council. Available from <https://www.commerce.wa.gov/wp-content/uploads/2022/10/Agenda-item-memo-Decision-making-process-Webpage-version.pdf>.

Figure 2: Timeline of Major EV Council Actions



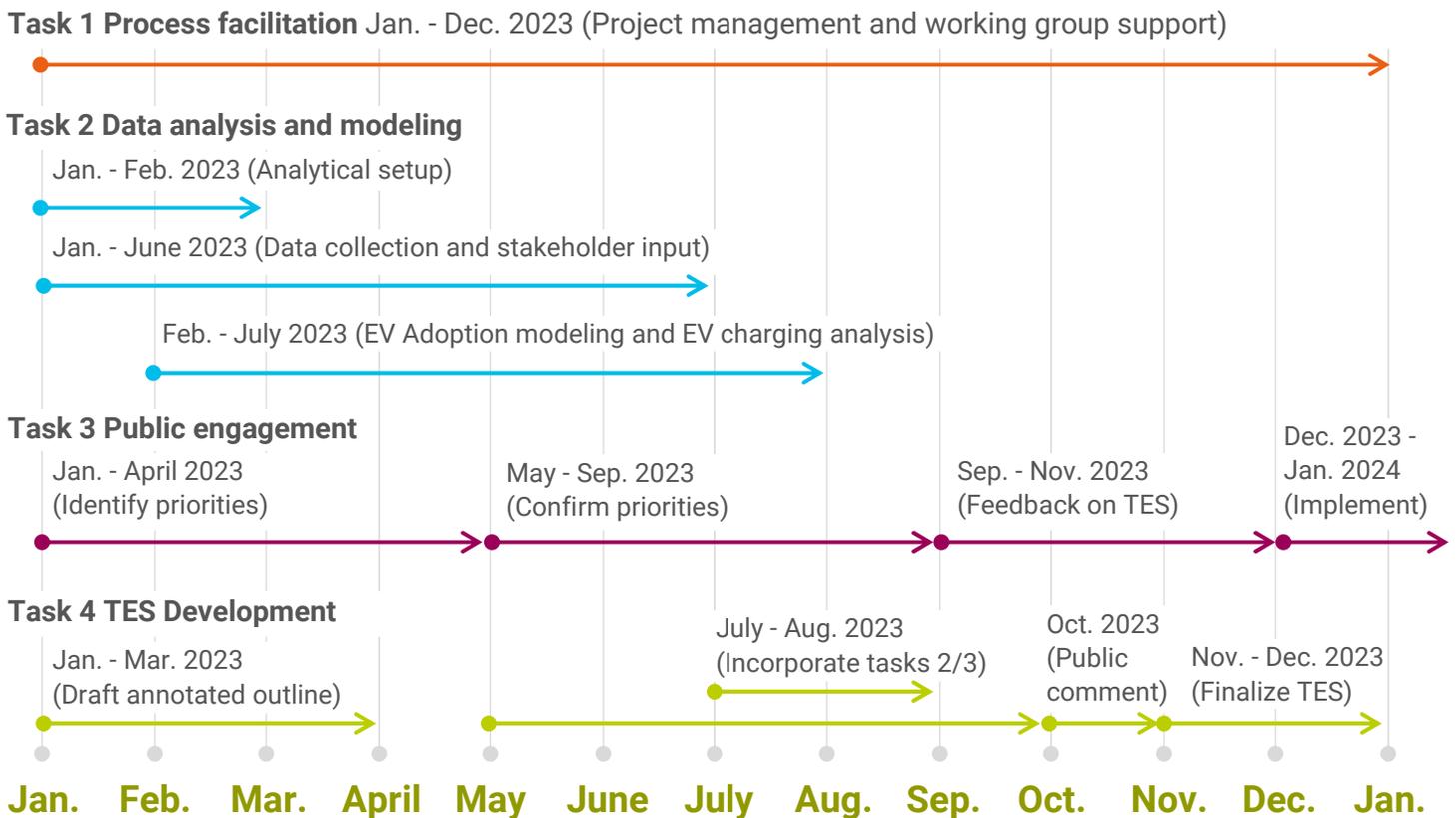
EV Council work plan

The EV Council has closely followed its statutory mandates in its work, beginning with the development of the Transportation Electrification Strategy.

Develop Transportation Electrification Strategy

The EV Council's most important responsibility in 2023 was creating the Transportation Electrification Strategy ([RCW 43.392.040\(1\)\(a\)](#)). The contracting team began working on the TES early in the year, and is on track to finish it in time for delivery to the Legislature in January 2024. Figure 3 below shows the four tasks involved in the TES project, as well as a timeline for each task's completion.

Figure 3: Transportation Electrification Strategy Timeline



There are many deliverables involved in the TES project, including final versions of the following:

- The results from the modeling that underlies the TES. RMI modeled the number and type of EVs, as well as the infrastructure needed to service those vehicles in order to meet the state's 2030 transportation electrification targets.
- An analytical dashboard that allows users to interact with the modeling results.
- Communication tools to publicize the TES.
- Education and engagement plans that meet RCW 43.392.040(1)(d) requirements. The education and engagement plans have been informed by focus groups, one-on-one interviews, and statewide surveys.
- The policy recommendations that stem from the TES.
- The TES itself.

This report serves as an appendix to the TES. The full scope of the TES, including the work noted above, is discussed elsewhere.

Identify EV infrastructure grant-related funding

The EV Council has identified more than \$818 million in "electric vehicle infrastructure grant-related funding"⁷ (RCW [43.392.040](#)(1)(b)). This funding includes state, some federal, and other sources such as VW settlement funds. The funding described in Appendix B: Clean Transportation Funding Summary covers four areas of investment for the 2023-2025 biennium: charging and fueling, on-road vehicle incentives, non-road vehicle electrification (including yard, rail, marine, and aviation vehicles), and studies and program support.

\$512.2 million of this funding is for investments in on-road vehicles and related charging and fueling. \$267 million is targeted toward charging and fueling investments which may include both electrification and other alternative fuels such as hydrogen. An additional \$245 million is allocated to on-road vehicle incentives. This category includes funds for light-duty vehicle electrification, medium- and heavy-duty vehicles, school buses, e-bikes, and car share programs. Many of these on-road programs also offer funding for charging infrastructure.

An additional \$288 million is dedicated for non-road purposes, including both vehicle replacements and related charging infrastructure. Most of these non-road funds are allocated to WSDOT, and will serve to electrify ports and the state's ferry vessels, along with some sustainable aviation, rail electrification, and cargo and off-road projects. Finally, \$18 million is dedicated to conducting studies and funding supporting programs, including the EV Council. Some examples of the studies for 2023-2025 include measuring the utility-side costs for electric vehicle supply equipment (EVSE); and two studies to be completed by the Legislature's Joint Transportation Committee on medium- and heavy-duty programs and Climate Commitment Act evaluation tools.

The EV Council also provides an opportunity at each meeting for members and others to share new funding opportunities. EV Council meetings are aired live on TVW and recorded, so viewers can be aware of those opportunities. EV Council staff collect information about funding opportunities from state agencies, federal agencies, and other sources, and post them on the EV Council website monthly.

Coordinate grant-related funding criteria

The EV Council continues to work on coordinating "grant funding criteria across agency grant programs" (RCW [43.392.040](#)(1)(c)). In summer 2023,

\$818M

In clean transportation funding

\$512.2 Million

EV incentives and charging investments

\$15.0 Million

For state agency fleets

\$243.9 Million

For WSDOT initiatives

\$210.5 Million

For Commerce programs

\$40.9 Million

For Ecology programs

\$2.0 million

EPA Clean School bus grants

\$288 Million

Available for non-road electrification

\$55 Million

For Commerce initiatives

\$233 Million

For WSDOT initiatives

\$18 Million

Available for studies and program development

⁷ The Laws of 2023, Chapter 431, Section 13 expanded the funding identification mandate to include "...nongrant-related funding, including revenues generated by an electric utility from credits under the clean fuels program."

EV Council staff gathered data from all of the agencies that run transportation electrification programs. That data included funding sources, program goals, applicable market sectors, eligibility criteria, funding levels, and upcoming important dates for each program. This data has become the starting point for weekly discussions at Executive Committee meetings and monthly discussions at working group meetings. The goal of these discussions has been to uncover market sectors that are not sufficiently served by existing programs, and discuss whether funding levels for existing programs are sufficient.

The EV Council hopes to advance these efforts in several ways. First, Commerce plans to stand up a new website, EVstate.wa.gov, to serve as a one-stop shop for transportation electrification-related programs. The website will provide links to the state transportation electrification programs mentioned above. Other information will be added to the website over time. Second, EV Council staff will continue working with state agencies that participate in the working groups to coordinate eligibility criteria and identify gaps in program offerings. The TES and its implementation plan will be the guide for these efforts.

Further coordination work is occurring between some of the member agencies. For instance, WSDOT, Commerce, Ecology, and the Office of Equity have asked, and the EV Executive Committee has agreed, to serve as the Steering Committee for the development of the Zero-Emission Vehicle Mapping and Forecasting Tool, a very large project that will support the coordination of criteria through the use of common mapping elements.

Develop a robust outreach plan

RCW 43.392.040(1)(d) requires that the EV Council create a "robust public and private outreach plan." The outreach plan must include engagement with community organizers, the EJ Council, and local governments. As described above, one of the tasks assigned to the TES contracting team was to create education and engagement plans. The EV Council believes that the education and engagement plans meet these requirements. The education and engagement plans are also included with the TES.

Create an industry EV advisory committee

The EV Council voted to create an advisory committee to inform the EV Council on the TES and other related topics. A total of 97 individuals initially indicated interest in joining the committee. The EV Council's Executive Committee then scored and ranked the applicants, eventually whittling the list down to 25 individuals who represented a cross-section of more than 15 EV stakeholder groups in the state.⁸

The EV Council approved the final Advisory Committee roster in January 2023, and the Advisory Committee held its first official meeting on Feb. 15, 2023. The Advisory Committee chose two members to serve as co-chairs. The Advisory Committee supported the EV Council throughout the TES development process by providing critical input at each step, both at monthly Committee meetings and separately with EV Council staff.

In addition to the main Advisory Committee, the EV Council also formed six task forces focused on different segments of the transportation electrification landscape:

- Capacity-building
- Charging and utility infrastructure
- Electrifying efficient transportation and compact development
- Light-duty passenger vehicles

⁸ "Advisory Committee selection process", January 4, 2023, memo to the EV Council. Available from <https://deptofcommerce.app.box.com/s/81wk97w1c9f0q8wt7211kqohtzyazrpd>.

- Medium- and heavy-duty vehicles
- Workforce

Each of those task forces met at least twice each between June and August 2023 and provided recommendations for draft policy proposals in their topic area.

Ensure vulnerable and overburdened communities benefit from transportation electrification

Equity is a guiding principle for the EV Council.⁹ This shows most prominently in the TES, where the EV Council insisted that equity be a central tenet. The equity focus in the TES is a product of the robust outreach that the Council and the TES contracting team conducted to make sure all voices were heard throughout the TES' development. For example:

- The TES contracting team coordinated a special equity task force with a series of workshops in spring 2023 that informed how equity was centered in the TES. The task force's accomplishments include creating an approach to identify vulnerable populations and overburdened communities¹⁰ and drafting equity indicators that will help measure the EV Council's progress in implementing the TES equitably.
- The outreach conducted by TES subcontractors Cascadia and SRA included one-on-one interviews with organizations that represent and serve vulnerable populations and overburdened communities to discuss their barriers to electrification and opportunities for an equitable shift to electrified transportation.
- EV Council staff connected with the EJ Council, particularly during the development of the TES policy recommendations. EV Council staff presented to a subcommittee of the EJ Council to solicit their input on the TES and answer questions from subcommittee members.
- Commerce and WSDOT's respective Offices of Tribal Relations sent letters to every tribe in the state inviting them to participate in drafting the TES. This outreach resulted in a meeting with tribal authorities.

As a result, the TES is informed by diverse viewpoints from across the state and centers equity as required by law. As the EV Council moves into the implementation phase of the TES, it will be important to continue the conversations that have begun and develop the robust set of metrics that will help ensure the TES is implemented equitably. The TES has a chapter dedicated to discussing how it incorporated equity.

Approach to identifying vulnerable populations and overburdened communities

- Any Census tracts that are measured at a 9 or 10 on the Environmental Health Disparities map
- All tribal lands
- Census tracts in the U.S. Environmental Protection Agency's EJSCREEN tool that are at the 80th percentile or above for race and income

⁹ RCW 43.392.040(1)(f) requires that the EV Council "[e]nsur[e] the statewide transportation electrification strategy, grant distribution, programs, and activities associated with advancing transportation electrification benefit vulnerable and overburdened communities."

¹⁰ The approach recommended by the task force includes any area measured at a 9 or 10 on the Environmental Health Disparities map; all tribal lands; and Census tracts in the U.S. Environmental Protection Agency's [EJSCREEN](#) tool that are at the 80th percentile or above for race and income.

EV Council agency summaries

This section details the transportation electrification-related activities and accomplishments for each member agency of the EV Council in FY23.

Department of Commerce

CLEAN ENERGY FUND ELECTRIFICATION OF TRANSPORTATION PROGRAM

26 

Level 2 charging ports installed

15 

Level 3 charging ports installed

The Department of Commerce plays a prominent role in the state's transportation electrification programs. In addition to being the co-lead agency for the EV Council, Commerce is the home of the Clean Transportation unit, which is housed in the State Energy Office. Commerce also runs several transportation electrification programs, including an EV charging program and the Clean Energy Fund (CEF), a portion of which is dedicated to installing EV supply equipment.

Key activities and accomplishments include:

- Created the Clean Transportation unit within the State Energy Office. The team added staff during the fiscal year, including a grants manager, EV Council manager, grants and incentive specialists, and policy staff.
- Clean Transportation staff stood up the EV Council and hired RMI to complete the TES.
- Offered free technical assistance to applicants for the \$64 million EV Charging program. Applications were due Dec. 1, and notices of awards are expected by Jan. 15, 2024.
- Hired a consultant to help design EV incentive programs and a second consultant to administer a \$22 million EV Rebate program expected to begin in April 2024.
- Clean Transportation hired a consultant to build a mapping tool to facilitate application submissions for the Community Charging program.
- The CEF's Electrification of Transportation program released two rounds of solicitations for funding available from the 2021-2023 biennium. The first round of funding resulted in five awards made to tribal applicants across the state. Awards for the second round of funding will be announced in late 2023; CEF received 33 initial applications.

Department of Transportation



Number of Level 3 charging ports installed through ZEVIP program



Number of ZEV car share programs launched through ZAP program



Number of electric transit buses purchased through Green Transportation program

WSDOT serves as the second co-lead of the EV Council. It is the home of several transportation electrification programs, including the Zero-Emission Vehicle Infrastructure Partnerships (ZEVIP) grants, which fund EVSE and hydrogen fueling infrastructures; the Zero-Emission Access Program (ZAP) grants, funding zero-emission car shares programs; and the Green Transportation Capital program, which provides funds to transit agencies to purchase zero-emission buses and supporting infrastructure.

Key activities and accomplishments include:

- Wrote and submitted the Washington State Plan for EV Infrastructure Deployment as part of the federal National Electric Vehicle Infrastructure (NEVI) program. WSDOT submitted the initial plan to the EV Council for approval in July 2022, and submitted an update to the plan one year later.
- Maintains an interactive map that can be used to suggest EV charging locations.
- Maintained websites and GovDelivery email distribution lists for the ZEVIP, ZAP, and Green Transportation programs, and released calls for applications for all three programs for the 2023-2025 biennium.
- Worked with other members of the EV Council by supporting grant reviews and sharing best practices, and creating a Zero-Emissions Vehicle Mapping and Forecasting Tool.¹¹
- WSDOT staff drafted the agency's Transportation Carbon Reduction Strategy for the Federal Highway Administration. The strategy describes how multiple WSDOT divisions are involved in reducing transportation sector emissions.

¹¹ RCW 47.01.520.

CLEAN DIESEL PROGRAM



Number of Clean Diesel Program grant agreements

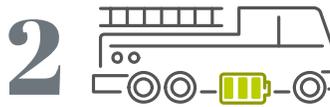


Number of electric yard trucks and associated charging stations delivered



Number of electric school buses and associated charging stations delivered

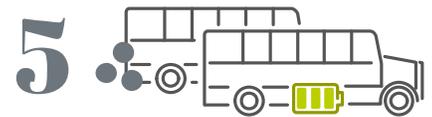
VW SETTLEMENT FUNDS



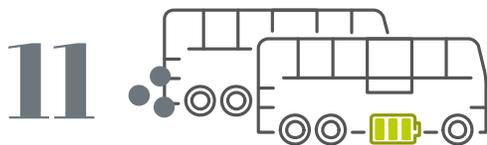
Number of electric fire trucks funded



Public Level 2 charging ports installed



Diesel school buses replaced with electric versions



Diesel transit buses replaced with electric versions



Number of electric State fleet vehicles purchased

Ecology plays two key roles in the state's push for transportation electrification. It is the home to two major sources of funds: The Volkswagen settlement fund (VW settlement), a \$141.1 million pot of money funded through Volkswagen's settlement with the federal and state governments; and the Clean Diesel grant program, which aims to electrify the state's school buses. In addition, Ecology implements several of the state's major clean air programs, including the Climate Commitment Act, Clean Fuels Standard (CFS), and the Advanced Clean Cars II and Advanced Clean Trucks regulations.

Key activities and accomplishments include:

- Adopted and began implementing several different rules, including Advanced Clean Cars II; heavy-duty low NOx¹² omnibus regulations; a one-time fleet reporting requirement that requires managers of medium- and heavy-duty fleet vehicles to report on vehicles, their locations, and their operating characteristics; and the CFS.
- Finalized rules for the CFS (including designating a backstop aggregator¹³), registered more than 300 participants in the program, planned for the upcoming first CFS credit market, and began the first quarterly reporting period for the program.

¹² Nitrogen oxides.

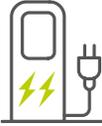
¹³ RCW 70A.535.030(9).

- Created a map showing all VW settlement projects throughout the state.¹⁴
- Supported WSDOT in reviewing grant applications for several WSDOT programs.
- Prepared for upcoming funding rounds for all programs in the second half of 2023.

Department of Enterprise Services

87 

**Level 2 charging ports
installed**

7 

**Level 3 charging ports
installed**

The Department of Enterprise Services (DES) is a critical part of the effort to electrify the state's fleet vehicles because it owns and manages a large shared fleet. In partnership with SEEP, DES is responsible for the implementation of [Executive Order 21-04](#), which requires state executive and small-cabinet agencies to meet specific vehicle electrification targets for light duty (Class 1-2a) vehicles, and medium- and heavy-duty (Class 2b and higher) vehicles. Money allocated to DES through the operating and transportation budgets aids in installing EVSE at state and leased facilities to support state vehicle fleets.

Key activities and accomplishments include:

- Created its EVSE implementation team in July 2022, adding three employees to focus on electrification efforts
- Created a standardized process to evaluate EVSE project proposals and distribute funds assigned by the Legislature. Project proposals and applications launched in August 2023 and the team started reviewing project applications starting in September 2023.
- The team worked very closely with SEEP in creating the EVSE Implementation Tool, which includes a cost estimator and charging infrastructure planning components.
- Pursuant to the 2022 supplemental budget¹⁵ and Executive Order 21-04, DES hired Accenture LLP to develop a zero-emissions vehicle implementation strategy for all state cabinet agencies who manage vehicle fleets larger than 50 vehicles.
- EVSE installation projects overseen by DES in recent years have required agencies to collect and track charging infrastructure data.

¹⁴ Available from: <https://storymaps.arcgis.com/stories/4a720afe65a54c2c8680bd557eadcecc>.

¹⁵ Laws of 2022, Chapter 297, Section 148(11).

State Energy and Environmental Performance Office

SEEP works in close partnership with DES to implement Executive Order 21-04. SEEP works directly with state cabinet agencies to establish vehicle purchase exemption criteria and evaluate requests for exemptions, plan and implement fleet electrification efforts, and support EVSE at state facilities.

Key activities and accomplishments include:

- Developing and sharing the zero-emission vehicle (ZEV) implementation plan template subject to EO 21-04. Agencies will submit initial comprehensive plans for fleet electrification by Dec. 1, 2023. SEEP has held multiple webinars and is providing ongoing technical assistance.
- Facilitating the vehicle exemption process for agencies subject to EO 21-04. On many occasions, fleet managers and other agency staff have problem-solved with SEEP staff to find opportunities to adopt EVs in cases where appropriate.
- Adding an EO 21-04 dashboard, links to resources, the implementation plan template, and tracking of plan submissions to the SEEP website.
- Continuing to coordinate and facilitate monthly ZEV work group meetings, including coordinating key guest speakers from the utility industry, EVSE contractors, and national entities such as NREL.
- Supporting growth in resources, capacity, and expertise at state agencies by advocating with the Governor's Office for additional FTEs that work on fleet electrification, and providing ongoing training opportunities and technical assistance.
- Coordinating with NREL to develop agency EVSE site plans. Multiple agencies are currently using this resource.

Office of Superintendent of Public Instruction



School bus grants awarded through Ecology Clean Diesel program



EPA Clean School Bus rebates received



Number of electric school buses purchased in FY23



Total electric school buses statewide as of July 2023

As a Council member, OSPI provides input on how the Council's activities will impact Washington's school districts, and advocates for the districts to receive the resources they need to electrify their school bus fleets.

Many school buses run on diesel fuel, and diesel exhaust is associated with negative health outcomes for children. Electrifying school buses presents a crucial opportunity to positively affect our children's health while also reducing greenhouse gas emissions.¹⁶

¹⁶ The Electric School Bus Initiative, "Why We Need to Transition to Electric School Buses". Available from:

<https://electricschoolbusinitiative.org/why-we-need-transition-electric-school-buses#:~:text=Diesel%20exhaust%20pollution%20is%20linked,increasingly%20threatens%20our%20children%27s%20future>. Accessed Sept. 2, 2023.

Key activities and accomplishments include:

- Collaborating with Ecology on the Clean Diesel grant program.
- Providing school bus data to RMI as part of the TES modeling.

Utilities and Transportation Commission

The UTC plays a key role in the state's transition to electric vehicles through its oversight of the state's investor-owned electric utilities. The UTC reviews and accepts utility transportation electrification plans, and regulates the rates utilities are allowed to charge customers for electricity that they obtain from EVSE. The UTC also works with the utilities to ensure that the state's electric grid is prepared for the additional electricity it must provide as more vehicles electrify.

Key activities and accomplishments include:

- All three electric utilities regulated by the UTC have submitted transportation electrification plans, which are multi-year plans to install EVSE and prepare the grid for electrified transportation.
- The UTC approved a set of transportation electrification tariffs from Puget Sound Energy. The tariffs include a variety of EVSE ownership models and limited demonstration projects.
- UTC staff collaborated with Commerce and Ecology to create a list of eligible investments for revenue from CFS credits from electric utilities.
- The UTC supported Commerce in its utility-side EVSE study.

Department of Health

The Department of Health provides recommendations and resources on how people can best protect themselves from air pollution, smog, and particle pollution emitted by gasoline-powered cars and trucks, which is associated with a number of heart and lung ailments.¹⁷ As a member of the EV Council, DOH provides data and input into the impacts transportation electrification will have on the health of people who live in Washington, and advocates for improving health impacts. DOH houses the [Environmental Health Disparities Map](#), an interactive mapping tool that compares communities for environmental health disparities. Finally, it provides operational and administrative support for the EJ Council, an important advisor in the equitable transition to electric transportation.

Key activities and accomplishments include:

- Advocated for incorporating public health and health co-benefits into the development of the TES, including by participating in the equity task force and bringing overburdened communities' perspectives into the process.
- Connected other EV Council members and staff to key personnel working on equity issues, such as the Environmental Health Disparities map, and to staff at the EJ Council.

Department of Agriculture

The Department of Agriculture (WSDA) plays an important role in the oversight of public EV charging infrastructure. It implements WAC 16-662-200 through WAC 16-662-220, which require publicly available EVSE

¹⁷ United State Environmental Protection Agency, "Learn About How Mobile Source Pollution Affects Your Health". Available from: <https://www.epa.gov/mobile-source-pollution/learn-about-how-mobile-source-pollution-affects-your-health#top>. Accessed Sept. 2, 2023.

to accept specific forms of payment and clearly display the costs incurred by charging at that EVSE, and do so in multiple languages.

The department completed rulemaking for WAC 16-662-200 through WAC 16-662-220 on January 1, 2023, and these new rules go into effect on January 1, 2024. In September 2023, WSDA issued a policy statement delaying payment method implementation while the agency considers a petition for changes that would align with new federal guidance on the topic. The main goal of this program is to create equity, consistency, and transparency in the EV charging space similar to the transparency offered by its traditional Weights and Measures Program.

Expansion of WSDA's ability to use electric transportation options is predicated on a significant increase in the total number of EVSE in rural areas of the state. Implementation of WAC 16-662-200 will assist WSDA and other state agencies that work in rural areas of the state in increasing their electric transportation options.

Office of Financial Management

OFM provides the EV Council with information, policy recommendations, and financial data related to the state's transportation electrification programs. OFM brings a long-term budget perspective to the EV Council. Throughout 2023, OFM has helped ensure that other agencies understand the fiscal ramifications of their proposals.

Key activities and accomplishments include:

- Advising the EV Council on budget building and coordination among executive branch agencies and legislative timelines. At EV Council meetings, OFM shares its perspective on the budget implications of proposed actions, and provides guidance on whether proposals require legislation to enact.
- Promoting the work of the EV Council and transportation electrification programs with other state agencies.
- Coordinating and sharing policy questions and concerns, and connecting involved entities with the EV Council.

2024 EV Council plans

This section details the EV Council and its members' plans for the next year.

The EV Council will have several priorities for 2024. The most important is beginning to implement the TES. Implementation will involve state agencies and partners undertaking many activities, with coordination from the EV Council. To that end, the EV Council intends to adopt a 2024 work plan, which will serve as a guide for all transportation electrification activities at state agencies. This plan is currently under development.

As TES implementation begins, the next priority is measuring the state's progress toward the 2030 target. Some of the metrics the EV Council will track have become evident as the TES was drafted; others will require more development. Regardless, EV Council staff will need to precisely define each metric, as well as ensure a suitable data source is available. There is currently no central repository for certain transportation electrification-related data used by state agencies; for example, much of the data for this report was sourced directly from the agencies, which can be time-consuming. EV Council staff will look into creating a database for information from all the agencies on the EV Council, and potentially other relevant external information.

The third priority will be fulfilling the identification and coordination function required of the EV Council in RCW 43.392.040(1). EV Council staff will build upon the activities discussed in this report to further the identification and coordination functions. These two responsibilities will be a focus of the work plan, to be finalized in early 2024.

Finally, public education and engagement are crucial to reaching the 2030 target. The education and engagement plans that will accompany the TES will serve as an implementation guide for state agencies. Commerce will also launch the [EVstate.wa.gov](https://www.evstate.wa.gov) website and keep it updated with programmatic information, funding sources, and other information that would be useful for the public.

Appendix A: EV Council Advisory Committee Members

The below organizations and perspectives are represented on the EV Council's Advisory Committee:

- 8020 Vision
- AAA Washington
- Alliance for Automotive Innovation
- Association of Washington Business
- BlueGreen Alliance
- CaliberA LLC
- City of Seattle Office of Sustainability and Environment
- Climate Solutions
- Confederated Tribes of the Colville Reservation
- Energy Northwest
- EV Support (a division of Puget Sound Solar LLC)
- FMS Global Strategies/WA Build Back Black Alliance
- King County Metro Transit Department
- The Northwest Seaport Alliance
- Pacific Northwest National Laboratory
- Pierce County Planning and Public Works, Sustainable Resources division
- Puget Sound Clean Air Agency
- Puget Sound Electrical JATC
- Puget Sound Energy
- Seattle City Light
- Sound Transit
- A southwest Washington resident
- Spokane Regional Transportation Council
- Washington State Auto Dealers Association
- A Yakima Valley resident

Appendix B: Clean Transportation Funding Summary

The tables below offer a snapshot of the programs and funding available for transportation electrification in the FY2023-2025 timeframe. Not all programs are limited to electrification - some fund other alternative fuel sources. Funding sources vary from state to federal sources.

Table 1 - Charging and Fueling Investments

Agency	Investment	23-25 Amount	Summary
Commerce	Community charging	\$138,000,000	Install Level 2 charging equipment at multi-family and fleet locations; Level 2 and 3 at public locations
Commerce	Clean Energy Fund	\$5,500,000	Level 2 and 3 rural and tribal charging projects (re-appropriated from FY23)
Commerce	EVSE mapping tool	\$17,000,000	Funding to implement zero-emission vehicle infrastructure mapping and forecasting tool (IAA with WSDOT)
Ecology	VW settlement – Level 2 and Level 3 charging	\$9,000,000	Funding for publicly available Level 2 and 3 charging in communities
State Fleet	EO 21-04 charging DES	\$11,300,000	Funding for charging at state agency facilities (\$5.3M operating; \$6M CCA)
State Fleet	EO 21-04 state agency staffing	\$1,700,000	Funding for state agency staff to plan fleet transition to electric vehicles
State Fleet	Parks and recreation vehicles and charging	\$2,000,000	Funding for electric vehicles and charging for agency fleet (CCA)
WSDOT	ZEVIP (state highway corridor charging/fueling)	\$30,746,000	Increase EV charging infrastructure within one driving mile of state highways
WSDOT	NEVI (federal highway corridor charging)	\$25,000,000	Increase EV charging infrastructure within one driving mile of federal highways
WSDOT	MHDV incentives	\$20,000,000	Funding for charging infrastructure to power medium- and heavy-duty electric vehicles
WSDOT	Hydrogen refueling stations	\$3,000,000	Funding for hydrogen refueling stations. (pending JTC study)
WSDOT	EV charging for Mount Vernon	\$2,100,000	Funding for electric vehicle charging at the Mount Vernon Library Commons project
WSDOT	Wenatchee charging and hydrogen fueling	\$1,500,000	Funding for fast charging and hydrogen refueling station in Wenatchee
Subtotal		\$266,846,000	

Table 2 - On-road Vehicle Incentives

Agency	Investment	23-25 Amount	Summary
Local agency	EPA Clean School Bus Grant	\$1,975,000	EPA Clean School Bus Grants to School Districts of Tekoa, Toppenish, South Whidbey (5 buses) Awarded 8/2022
Commerce	Electric vehicle incentives	\$50,000,000	Increase the adoption of light-duty battery electric vehicles through point-of-sale rebates and other incentives
Ecology	ZEV school buses and diesel emissions reduction	\$15,600,000	Electrify school buses and support idle reduction and other diesel equipment engine replacements

Agency	Investment	23-25 Amount	Summary
Ecology	VW settlement – medium-heavy duty	\$16,300,000	Funding to replace diesel with zero-emission refuse vehicles, street sweepers, freight switchers, and port cargo handling equipment
WSDOT	ZAP EV car share	\$3,200,000	Zero-emission car-share programs in underserved communities where access to public transportation is less available
WSDOT	Commercial vehicle incentives & charging	\$100,000,000	Funding for medium- and heavy-duty zero emission vehicle and charging incentives, with program design being developed by the JTC (pending JTC study)
WSDOT	Green Transit Capital Program	\$51,400,000	Funding for reducing carbon intensity of transit operations through clean vehicles and associated charging and fueling
WSDOT	E-bike Rebates and Micromobility	\$7,000,000	Funding for incentives of \$300-\$1,200 for e-bikes depending on income eligibility; to develop an e-bike lending library and ownership grant (\$5M rebates, \$2M lending library)
Subtotal		\$245,475,000	

Table 3 - Non-road Investments (Yard, Rail, Marine, Aviation)

Agency	Investment	23-25 Amount	Summary
Commerce	Hard-to-decarbonize project grants	\$50,000,000	Funding to create a “hard to decarbonize” grant program that funds decarbonization projects in aviation, marine, and industrial sectors.
Commerce	Port electrification – pass through	\$5,000,000	Pass-through funding to install shore power at Port of Everett
WSDOT	Clean off-road equipment	\$5,000,000	Funding for clean off-road equipment.(pending JTC study)
WSDOT	Clean cargo handling equipment	\$2,500,000	Funding for cargo handling equipment (pending JTC study)
WSDOT	Ferry electrification	\$169,977,000	Funding to convert ferries to hybrid electric
WSDOT	Port electrification - competitive	\$26,500,000	Competitive program for shore power at public ports
WSDOT	Port electrification – pass through	\$22,800,000	Pass-through funding for the Ports of Seattle and Tacoma of \$6.3M for electric drayage trucks; and funding for shore power \$14M Seattle and Tacoma, \$2M Bremerton, 0.5M Anacortes
WSDOT	Tacoma rail locomotive electrification	\$5,000,000	Pass-through funding to replace two Tacoma rail diesel-electric switcher locomotives with zero emission battery-electric switcher locomotives and to install on-site charging equipment at a Tacoma rail facility
WSDOT	Sustainable aviation projects	\$1,510,000	Projects to pursue cleaner airport operations and funding to design a grant program
Subtotal		\$288,287,000	

Table 4 - Studies and Program Development

Agency	Investment	23-25 Amount	Summary
Commerce	EV Council	\$2,100,000	Funding to staff the EV Council and develop/implement the Transportation Electrification Strategy
Commerce	Study utility-side EVSE costs	\$220,000	Funding to assess costs to update electric grid to deliver power to charging identified in the Transportation Electrification Strategy
Legislature	Studies on MHD vehicle programs and sales tax exemption	\$2,000,000	Funding for the JTC to design a medium- and heavy-duty ZEV and fueling incentive program, and assess possible updates to the passenger vehicle sales and use tax exemption for clean alternative fuel vehicles (Jan. 2024)
Legislature	Evaluation tools for CCA funded programs	\$1,000,000	Funding for the JTC to develop tools to evaluate emissions reductions from CCA investments
State Fleet	DNR charging study	\$2,200,000	Funding to plan transition to electric vehicles
WSDOT	Community capacity building for transportation carbon reduction	\$3,000,000	Develop and implement a community outreach, education, and technical assistance program for overburdened communities and their community partners in order to develop community-centered carbon reduction strategies to make meaningful impacts in a community, and to provide assistance in gaining access to available funding to implement these strategies
WSDOT	Sustainable aviation center	\$6,500,000	Pass through funding to the sustainable aviation evaluation center to research sustainable aviation fuels, hydrogen, and battery electric aviation.
WSU	WSU Green Transportation Program	\$1,055,000	Funding for the WSU Green Transportation Program to provide technical assistance to public fleets transitioning to ZEVs.
	Subtotal	\$18,075,000	
Total funding		\$818,683,000	

Table 5 - Utility Programs

Program Name	Program Information
Consumer-owned utility transportation electrification programs	Each consumer-owned utility initiates its own programs with their own budgets. Many of those programs can be found under the energy efficiency category at www.dsire.org
Investor-owned utility transportation electrification programs	Each investor-owned utility initiates its own programs with their own budgets. Many of those programs can be found on the individual utility websites: Avista , Pacific Power , Puget Sound Energy