

# Washington State Plan For Electric Vehicle Infrastructure Deployment

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DRAFT

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## INTRODUCTION

Washington State’s Plan for Electric Vehicle Infrastructure Deployment is a blueprint for the planning, prioritization, and implementation of a statewide network of charging stations along state highways. The plan’s vision is a network where all Washingtonians can choose to drive or ride electric, with a goal of developing a convenient, reliable, affordable, and equitable charging experience for all. Washington State expects to invest about \$71 million from this program over five years, along with a 20% non-federal match of \$17.75 million. Washington will finalize and submit this document by August 1, 2022, for eligibility for federal funding. The state maintains a website (<https://wsdot.wa.gov/construction-planning/statewide-plans/national-electrical-vehicle-infrastructure-plan>) to provide updated information on the planning process and implementation.

Washington will identify investments in fast charging along the state’s existing Alternative Fuel Corridors (AFCs), beginning with interstates. The priority deployments will include completing the state’s north/south and east/west interstates, I-5 and I-90, respectively, to the federally defined built out standards. Secondary priorities for investments include completing the I-82/I-182 and US 395 Alternative Fuel Corridors, followed by US 101 and US 195. State funding of DC fast chargers will supplement corridors that may not receive federal funding in the initial years of NEVI funding. Through annual updates of the Washington State Plan for Electric Vehicle Infrastructure Deployment plan, the state will re-prioritize projects based on completed investments, as informed by the Mapping and Forecasting Tool, and as advised by the IEVCC.

### Dates of State Plan for Deployment, Development, and Adoption

The state will implement its plan within the 5-year funding cycle of the NEVI program. Table 1 below highlights the major milestones and deliverables of the plan. Upon the establishment of the coordinating council (see below) this schedule will be updated based on further identification of gaps and priorities for plan implementation.

Table 1. Major milestones of the Plan for Electric Vehicle Infrastructure Deployment

Anticipated Dates	Milestones
Year 1 – FY 2023	<ul style="list-style-type: none"> <li>• Convene Interagency Electric Vehicle Coordinating Council (IEVCC) – stood up in May-June (FY 2022), July (FY 2023).</li> <li>• Plan finalized in July.</li> <li>• Discussion of Plan adoption authority and process; IEVCC will direct development and implementation.</li> <li>• Prioritization of Alternative Fuel Corridors (AFCs) and projects; public outreach.</li> <li>• Issue RFP, select projects, award contracts.</li> <li>• Construction begins.</li> </ul>
Year 2 – FY 2024	<ul style="list-style-type: none"> <li>• Nominate additional AFCs.</li> <li>• Issue annual RFP, select projects, award contracts. Monitor and evaluate implementation progress.</li> </ul>
Year 3 – FY 2025	<ul style="list-style-type: none"> <li>• Issue annual RFP, select projects, award contracts. Monitor and evaluate implementation progress</li> </ul>

Anticipated Dates	Milestones
Year 4 – FY 2026	<ul style="list-style-type: none"> <li>• Issue annual RFP, select projects, award contracts. Monitor and evaluate implementation progress</li> </ul>
Year 5 – FY 2027	<ul style="list-style-type: none"> <li>• Conduct gap analysis to identify remaining network discontinuities.</li> </ul>
Ongoing efforts and activity	<ul style="list-style-type: none"> <li>• Regular IEVCC meetings.</li> <li>• State ZEVIP funding in biennial state budget.</li> <li>• Public engagement.</li> </ul>

After the Washington State Plan for Electric Vehicle Infrastructure Deployment is approved by the FHWA in September 2022, the project team will confirm the members of the Interagency Electric Vehicle Coordinating Council (IEVCC). The team will establish the IEVCC’s roles, responsibilities, and objectives.

The IEVCC will meet in May and June of FY 2022 and July of FY 2023. The Council will discuss the Plan adopted authority and process, and will begin directing development and implementation. Commerce and WSDOT will assign staff from each agency to lead the council’s coordination work and provide ongoing reports to the governor and legislative committee. The Council will finalize the Plan in July.

The IEVCC will undergo a prioritization process for Alternative Fuel Corridors (AFCs) and projects. This process will be informed by EV ownership, population, and traffic data, as well as input from public involvement efforts. The Council will then select projects, issue RFPs, and award contracts. Construction will begin in FY 2023.

In FY 2024, the Council will nominate additional AFCs. More projects will be selected and there will be another round of RFPs.

In FY 2025 and FY 2026, the Council will continue to select projects and issue RFOs. The Council will monitor and evaluate the implementation process.

In FY 2027, the Council will perform a gap analysis to identify gaps in the AFC charging network, address ongoing challenges, and identify future funding sources and opportunities for expansion.

Ongoing efforts throughout the 5-year period include quarterly IEVCC meetings, accounting for the State ZEVIP funding in the biennial state budget, and iterative public engagement. The council will update stakeholders and the public regularly on the planning and implementation process, and provide opportunities for feedback.

## STATE AGENCY COORDINATION

Washington State Legislature's Senate Bill 5974, Section 428, directs the creation of an Interagency EV Coordinating Council (IEVCC), jointly led by the Department of Commerce (Commerce) and WSDOT to implement the Washington State Plan for Electric Vehicle Infrastructure Deployment and oversee the strategy for meeting the state's Clean Cars 2030 target: that all passenger and light-duty vehicles of model year 2030 or later that are registered in Washington state be electric vehicles.

Commerce & WSDOT will assign staff from each agency to lead the council's coordination work and provide ongoing reports to the governor and legislative committees for transportation, energy, economic development.

The IEVCC responsibilities will include:

- Development of a statewide transportation electrification strategy to meet the Clean Cars 2030 target;
- Identification of all electric vehicle infrastructure grants related including state, federal, and other funds;
- Coordination of grant funding criteria across agency grant programs;
- Development of a robust public and private outreach plan;
- Creation of an industry EV advisory committee; and
- Ensuring the statewide transportation electrification strategy, grant distribution, programs, and activities associated with advancing transportation electrification benefit vulnerable and overburdened communities.

The IEVCC will also be responsible for drafting and circulating RFP materials and securing contracting for implementation. RFP materials will include provisions requiring use of U.S.-made equipment in accordance with FHWA guidelines.

Other state agencies on the IEVCC will include:

- Office of Financial Management (OFM)
- Department of Ecology (Ecology)
- Department of Enterprise Services (DES)
- State Efficiency and Environmental Performance Office (SEEP)
- Department of Agriculture
- Department of Health
- Utilities and Transportation Commission (UTC)
- Office of the Superintendent of Public Instruction (OSPI)
- Other agencies with key roles in electrifying the transportation sector.

## PUBLIC ENGAGEMENT

The state will execute several public engagement activities, including an online survey, two public listening sessions, stakeholder meetings, and the promotion of an interactive map, before the August 1, 2022, FHWA deadline for the plan. The public engagement objectives are outlined in the “Public involvement objectives” section below.

Ongoing public engagement will continue through the entire 5-year plan implementation. Annual online surveys and public listening sessions will assess customer satisfaction with plan implementation. The project team will schedule public meetings and presentations, as needed, to keep stakeholders informed. Customers will be able to continue to add suggested charging stations to the interactive map, which will inform project prioritization (see details on the interactive map under “Outreach Activities” below). After the 5-year plan implementation, the interactive map will remain active, and it will be used as a tool for EV drivers and businesses to identify Direct-Current Fast Chargers in the state.

The plan’s public engagement approach, including the public involvement objectives and strategies to reach underserved populations, align with WSDOT’s [Community Engagement Plan](#) (2016). The 2021 Legislature passed the Healthy Environment for All (HEAL) Act, which requires each covered agency, including WSDOT, to create and adopt a community engagement plan that describes how it will engage with overburdened communities and vulnerable populations. WSDOT is reviewing the Community Engagement Plan for compliance with the HEAL Act and expects to publish an update in July 2022. The plan’s public engagement efforts will be reviewed after the publication of WSDOT’s Community Engagement Plan update. The project team may hire a consultant to lead outreach efforts with underserved populations. The consultants provide expertise and assist with translation and interpretation and other needs.

### Public involvement objectives

- Identify and engage FHWA-mandated stakeholder groups in the plan’s development.
- Identify popular engagement methods.
- Collect feedback on preferred charging stations and other charging priorities.
- Engage stakeholders and the public to ensure that the Washington State Plan for Electric Vehicle Infrastructure Deployment will have equitable outcomes.
- Create opportunities for stakeholders and the public to provide feedback on the Plan.
- Ensure that the public is notified about public engagement activities in a timely manner.
- Ensure public participation opportunities are held in compliance with the Americans with Disabilities Act of 1990.
- Collect ongoing feedback on customer satisfaction after the Plan is finalized and approved.
- Establish strategies for seeking input from and considering the needs of those traditionally underrepresented by existing transportation systems as defined in Title VI of the Civil Rights Act of 1964 (Title VI), such as low income, minority, and non-English speaking households who may face challenges accessing employment and other services.
- Provide a contact to respond to public questions.

## Stakeholders Involved in Plan Development

Following the passage of the Bipartisan Infrastructure Bill in November 2021, WSDOT has been conducting ongoing outreach with a variety of stakeholders, including local agencies, private sector groups, utilities, advocacy groups, community-based organizations, and other interested parties. Information collected from this outreach has helped inform the Washington State Plan for Electric Vehicle Infrastructure Deployment.

WSDOT has presented to or is scheduled to present to the following. (Those that are **bold** will help address the goals of the Justice40 Initiative identified in Executive Order 14008)

- Metropolitan Planning Organizations (Executive Directors and Planning Staff)
- Regional Transportation Planning Organizations (Executive Directors and Planning Staff)
- Counties and cities, including coordination with existing EV charging programs.
- Transportation agencies in Washington, Oregon, and Idaho
- Governor's Commissions
- Public health agencies
- Washington State Association of Counties
- Association of Washington Cities
- Washington State Transportation Commission
- **Washington State Transit Association**
- State departments of energy, including Clean Cities Coalitions<sup>1</sup>, as applicable
- State environmental protection agencies
- State economic development agencies
- State public utility commissions
- State weights and measurement agencies (e.g. Dept. of Agriculture)
- State and Federal land management agencies
- State public transportation agencies
- State manufacturing extension partnerships
- Responsible emergency/disaster preparedness functions in the State
- **Tribal governments**
- **USDOT agencies**
- Electric utilities and transmission and distribution owners and regulators
- Port and freight authorities
- Washington Public Ports Association
- Washington State Ferries
- **Community-based organizations, small business associations, Chambers of Commerce, labor organizations, and private entities**

<sup>1</sup> <https://cleancities.energy.gov/>

- Private sector EV charging station owners and network operators
- Investors in EV charging infrastructure
- Vehicle manufacturers
- Unions and other labor organizations
- Utilities
- Real estate industry groups
- **Minority- and women-based organizations**
- Freight industry groups
- **Advocacy groups, including:**
  - **Active transportation.**
  - **Business interests**
  - **Civil rights**
  - **Disability rights**
  - **Freight movement**
  - **Growth management & land use**
  - **Local governments**
  - **Low income**
  - **Public ports**
- EV industry organizations and EV advocacy groups, as applicable
- Gas station owners and operators
- Ride-share drivers/taxi drivers
- Emergency management and public safety agencies
- WSDOT internal stakeholders
- Other appropriate parties

## Public outreach

The state project team has developed public engagement resources and activities for the Washington State Plan for Electric Vehicle Infrastructure Deployment. The state's team will maintain these resources as they implement the plan.

### Outreach activities

The public involvement process will use multiple strategies to involve stakeholders and community members. All outreach opportunities will be virtual.

#### Virtual Public Involvement and Comment Methods

[Washington State Plan for Electric Vehicle Infrastructure Deployment web page](#): The plan web page will be maintained by WSDOT to keep stakeholders involved in the planning process and to share opportunities to provide input. The fact sheet, interactive map, and survey, will be linked on the webpage.

**Online survey:** The project team is using an online survey through SurveyMonkey to collect feedback that will inform the plan. The survey will capture qualitative and quantitative data from survey respondents. The survey includes 22 questions that inquire about:

- Travel patterns.
- EV charging infrastructure priorities.
- Benefits and disadvantages of EV charging infrastructure to communities in Washington.
- Electric vehicle ownership.
- Survey respondent demographics.

All survey questions are optional.

With guidance from IEVCC, stakeholders, and public comment, the project team will develop additional customer satisfaction surveys every year during implementation.

**Virtual public listening sessions hosted on GoTo Webinar:** The project team shared information about the NEVI program, the draft plan, and opportunities to provide input, and administer a series of polls. During these sessions, the team asked targeted questions about the benefits and disadvantages of the deployment of charging infrastructure on attendees' communities. The listening sessions were held virtually on June 2 and June 8, 2022. During implementation, the team will host additional public listening sessions.

**Public listening sessions for marginalized communities:** The project team will collaborate with economic development/advocacy/human service organizations that service marginalized communities.

**Public presentations:** Public presentations inform stakeholders and the public about the plan development process and are also opportunities to collect feedback. Public presentations will be scheduled as needed through the implementation process to keep stakeholders informed and collect customer satisfaction feedback.

Presentations on the Washington State Plan for Electric Vehicle Infrastructure Deployment completed to date include the MPO/RTPO/WSDOT coordination meeting (2/2/22), the WSDOT Climate Change Team Meeting (3/16/2022), the Alternative Fuel Vehicle Technical Assistance Group Meeting (3/18/22), the Zero-Emission Vehicle Infrastructure Partnership Grant Webinar (3/25/22), and WSDOT Northwest Region Planning and Engineering Services meeting (3/29/22).

**Social media promotion of interactive map and survey the plan:** Promote the interactive map, public listening sessions, and online survey on social media.

**Email outreach to disadvantaged communities:** Sent email to promote survey, interactive map, and other comment methods, to list of underserved community contacts, which was developed by the WSDOT Statewide Planning Office and the WSDOT Office of Equal Opportunity.

### Public Engagement Resources

**Fact sheet:** The fact sheet includes plan information and a point of contact for questions and comments. The web version of the fact sheet has links to the online survey, webpage, and interactive mapping tool. The fact sheet will be updated throughout the planning and implementation process.

**Interactive map:** An interactive map<sup>2</sup>, hosted on ArcGIS Online, allows web visitors to view the existing Alternative Fuel Corridors, charging stations that meet FHWA NEVI requirements, and other charging stations. Visitors can also add the location of suggested charging stations and “like” other visitors’ suggestions. After the Plan is finalized and approved, map visitors will be able to continue to add charging stations and “like” charging stations. The map will continue to inform project prioritization. After the 5-year implementation plan is complete, the map will be used as a tool for potential and existing EV drivers and businesses to plan their trips and review the state’s Direct-Current Fast Charging network.

### Strategies for reaching Disadvantaged Communities

To reach the state’s Disadvantaged Communities, as defined by Justice40, the project team will:

- Utilize the US DOT and DOE Justice 40 mapping tool to identify Disadvantage Communities and design targeted outreach.
- Share the online survey with community-based organizations that represent communities of color and other disadvantaged communities.
  - Through our online survey and public listening sessions, we will ask targeted questions about the benefits and disadvantages of the deployment of charging infrastructure on communities in Washington.
- Host listening sessions in collaboration with economic development/advocacy/human service organizations that service marginalized communities.
  - Determine community meeting times that work best for the underserved communities.
- Analyze travel patterns of low-income users of alternative fuel corridors using Streetlight or Replica.
- Consider translating the survey into Spanish.
  - Note: 8% of Washington’s population is defined as LEP (Limited English Proficient) Of these, nearly 50% are Spanish speakers.<sup>3</sup>
- Consider creating a Spanish language version of interactive map.
- We will be using feedback from our community engagement activities, such as the public listening sessions and online survey, to continuously update the plan’s community outreach methods. We will inquire about what types of methods community members prefer to be engaged with.

<sup>2</sup> <https://wsdot.maps.arcgis.com/apps/CrowdsourcingReporter/index.html?appid=6d1e12ec58f842cbaf1b83e3d60e0f09>

<sup>3</sup> [Washington State University Vancouver.](https://www.washingtonstate.edu/research/center-for-urban-and-regional-studies/research-reports/washington-state-university-vancouver/)

## Timeline

Milestone	Date
Public engagement	May through July, 2022
Public Listening Session #1	June 2, 2022
First draft of NEVI Plan shared with stakeholders and public	June 6, 2022
Public Listening Session #2	June 8, 2022
EV Plan due to FHWA	August 1, 2022
FHWA Approval	September 30, 2022
Customer satisfaction outreach: <ul style="list-style-type: none"> <li>• Annual online survey.</li> <li>• Annual public listening sessions.</li> <li>• Public presentations.</li> <li>• Ongoing promotion of interactive map.</li> <li>• The outreach approach may be adjusted as the team reviews evaluation metrics and feedback.</li> </ul>	Year 1 - Year 4 (FY 2023- FY 2026)
Gap analysis outreach: <ul style="list-style-type: none"> <li>• Online survey.</li> <li>• Public presentations.</li> <li>• Public listening sessions.</li> </ul>	Year 5 (FY 2027)

## Evaluation

To evaluate the effectiveness of our public engagement efforts, the following items will be considered:

- Number of survey respondents.
- Unique webpage visitors.
- Webpages views.
- Interactive map views.
- Interactive map charging stations suggestions.
- Interactive map “likes.”
- Public listening session attendees.
- Public listening session comments.
- Emails to [partnerships@wsdot.wa.gov](mailto:partnerships@wsdot.wa.gov) regarding the plan.

## PLAN VISION AND GOALS

The state’s vision is for all Washingtonians and visitors to have the ability to use an EV and find convenient, affordable, and accessible fast-charging stations. This vision requires a statewide network for electric vehicle (EV) infrastructure that would site charging stations every 50 miles or less across the entire state highway network, including Washington State Ferries routes. Realizing this vision will eliminate “charging deserts” and remove a significant barrier to EV adoption. A statewide network of EV infrastructure may lower transportation costs and advance equity goals, as low-income households in rural areas pay a higher share of income on transportation costs. Furthermore, it would prepare the state for its goal that, beginning in 2030, all new private passenger vehicles will be electric.

Washington will prioritize implementation in designated Alternative Fuels Corridors, creating a reliable EVI network along the state’s busiest corridors. WSDOT will select station hardware with more plugs and higher charging capacities than required by current demand to accommodate greater EV adoption over time. Additionally, funding will be available for upgrading existing direct-current fast chargers (DCFCs) to support a robust and resilient statewide network.

### Goals

- **Continuity:** Fill gaps in the EV infrastructure network
  - Frequency of stations of no less than 50 miles along the selected corridor
  - Stations are within one travel mile from the corridor.
- **AFCs:** Certify existing and identify future roadways
- **Equitable Charging Infrastructure:** Prioritize economically disadvantaged and rural communities, and communities with poor air quality
- **Equity and Innovation in Contracting:**
  - Contracting will be conducted in a way to ensure resources are expended equitably and to award innovative approaches to implementation
- **Plan support:** State, local, regional, organizations and plans
  - Prioritize and build in collaboration with public organizations, in support of local/regional plans.
- **Resiliency & Reliability:**
  - Where possible, provide multiple charging options, with capacity to meet future demand for EV infrastructure
  - Establish plans for operations, maintenance, and emergency response
- **Accessibility:** Easy to locate and use EV infrastructure at any point along the corridor.
  - Clear and context-appropriate signage
  - ADA and Universal Design considerations
- **EV Adoption:** Reach 500,000 electric vehicle registrations by 2027.

## CONTRACTING

Contracting for the Washington State Plan for Electric Vehicle Infrastructure Deployment will be managed out of WSDOT's public-private partnerships office in combination with WSDOT's contracting office. Funds made available under the NEVI Formula Program will be used to contract with third-party entities for the acquisition, installation, and operation and maintenance of publicly accessible EV charging infrastructure to ensure maximal efficient use of federal funding. State funds allocated to the Zero-Emission Vehicle Infrastructure Partnership Program may be combined with the federal NEVI funds in order to expand the EV infrastructure deployments in a consistent framework throughout the state. Washington will implement an existing approved contract acquisition method, such as a Request for Proposal or Request for Quote and Qualifications, to ensure efficiency and consistency in deploying federal funds. Ownership of the EV charging infrastructure will not revert back to the State when contracting with private entities.

The statutory authority for the public-private partnerships office to procure contractors is located within Revised Code of Washington 47.04.350 and WSDOT's rules for selecting a contractor are located within Washington Administrative Code 468-602-050. The selection process will comply with all applicable state and federal laws that govern the procurement process. Solicitations will include, but are not limited to:

- Appointment of a procurement coordinator;
- A schedule of procurement activities;
- Bidder question and answer period;
- Public notification of apparently successful bidder;
- An optional bidder debrief; and
- Complaint and protest procedures.

Washington will ensure that EV charging infrastructure is delivered in a manner that leads to efficient and effective deployment by utilizing the resources of WSDOT's contracting office in the procurement process and through contract language. WSDOT's Small Business Enterprises (SBE) Participation Plan ensures small businesses are afforded equal and fair opportunities to participate in WSDOT contracting, consulting, and procurement opportunities. Washington will ensure that contractors are engaged in communities where EV charging is installed by requiring prospective bidders to outline their engagement strategy in their operations and maintenance plan.

## EXISTING AND FUTURE CONDITIONS ANALYSIS

The State of Washington is the 18<sup>th</sup>-largest state by geography and the 13<sup>th</sup>-most populous state, with more than 7.7 million people. More than half (53 percent) of Washington residents live in the Seattle metropolitan area in the central Puget Sound, increasing rapidly between 2010 and 2020 (16.8 percent). The state’s population, as a whole, grew by 14.6 percent.

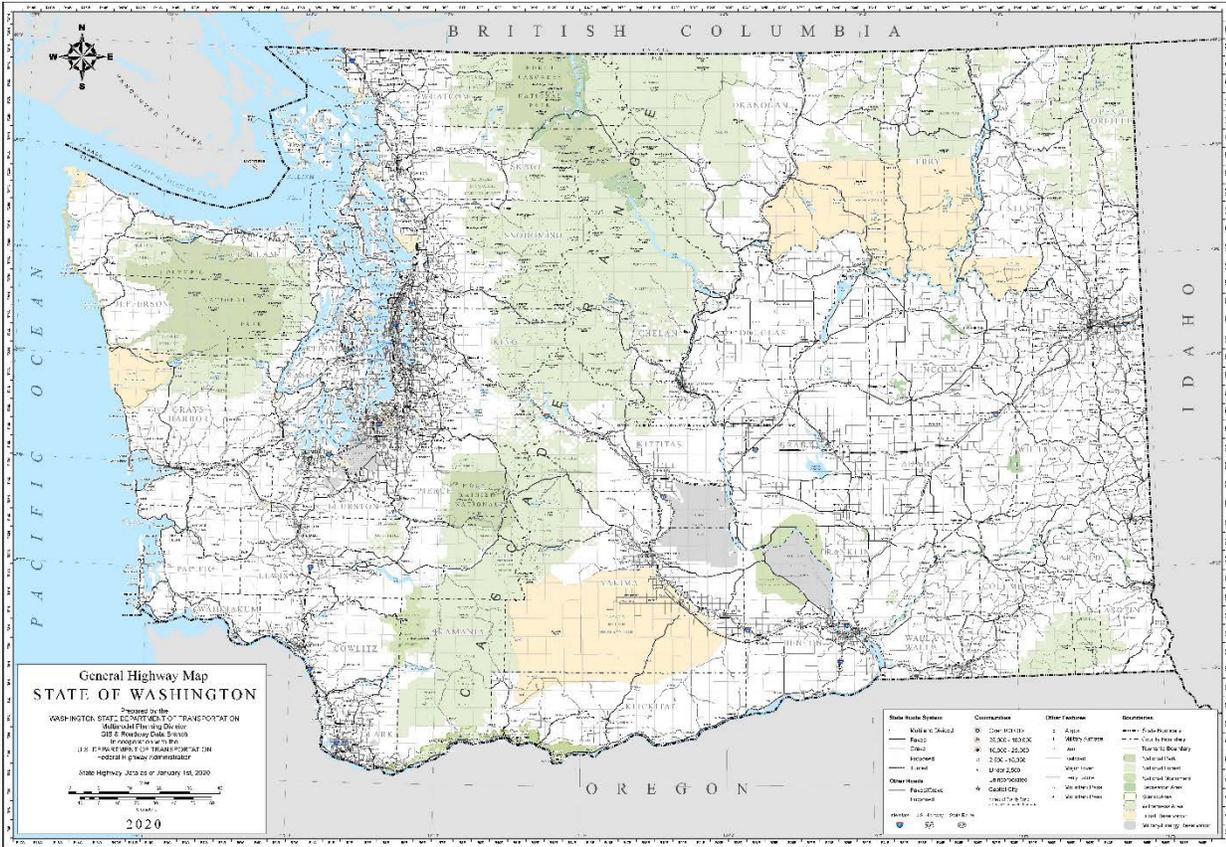


Figure 1. Map of the State of Washington

### Industry and market trends

Washington is a top EV market, ranking #2 for overall advanced technology vehicle market share and #3 for battery electric vehicles as of December 2021.<sup>4</sup> The Washington State Department of Licensing reports EV registration rising from 57,338 in December 2019 to 96, 961 in April 2022.<sup>5</sup>

<sup>4</sup> [Electric-vehicle-sales-dashboard \(autosinnovate.org\)](https://www.autosinnovate.org/electric-vehicle-sales-dashboard)

<sup>5</sup> [Electric Vehicle Population Counts | Data.WA | State of Washington](https://data.wa.gov/electric-vehicle-population-counts)

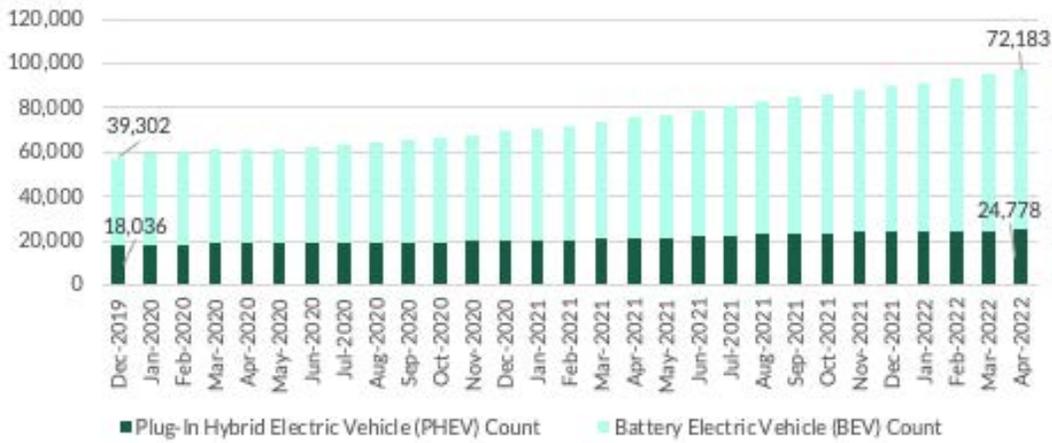


Figure 2. Current and Historical Electric Vehicle Population Chart.

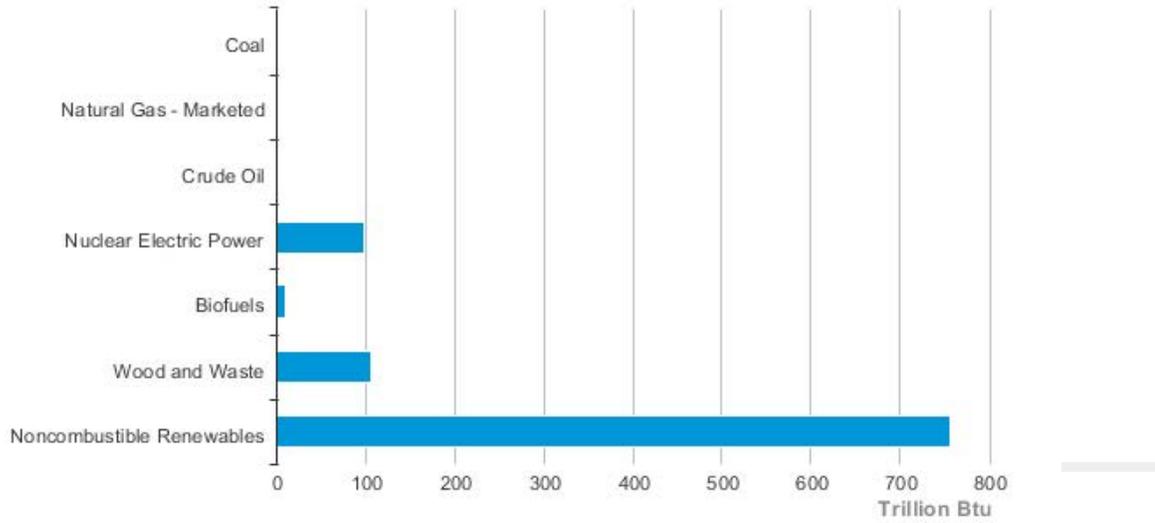
### Grid capacity and electric utilities that service the study area

On May 7, 2019, Governor Jay Inslee signed into law the Clean Energy Transformation Act (CETA) which commits Washington to an electricity supply free of greenhouse gas emissions by 2045. A component of CETA is an assessment of resource adequacy. The Department of Commerce and Washington Utilities and Transportation Commission hold annual meetings to discuss the current, short-term, and long-term adequacy of energy resources to serve the state’s electric needs. Topics covered include recent assessments of electricity demand and supply, the electric power industry’s progress in developing a coordinated resource adequacy program, and other actions utilities are taking to ensure resource adequacy. The [report to the Governor and legislature](#) after the 2021 meeting noted that more electric generation will be needed in the western region, both to meet load growth and replace retiring fossil fuel generating plants. The joint Commerce and UTC meeting for resource adequacy for 2022 is scheduled for June 17. Commerce and UTC invite public recommendations for improving resource adequacy prior to the meeting by publishing a resource adequacy pre-meeting survey. Topics may include recommendations to prevent blackouts, regulatory changes to improve resource adequacy, statutory changes to improve resource adequacy, and utility actions to improve resource adequacy.

The Department of Commerce’s 2021 State Energy Strategy outlines a blueprint for achieving CETA goals, including in the electricity sector. The strategy notes that the electric power system requires substantial alteration. New or expanded transmission capacity is required for access to the best renewable resources and to take full advantage of coordination opportunities across the West. The Strategy details three key needs for the sector, including accelerating investment in renewable generating resources and transmission, building a smart and flexible grid, and facilitating community deployment of renewable generation resources and grid services.

Electrical utility providers in Washington include both publicly owned utilities and investor-owned utilities. The Department of Labor and Industries [lists 61 electrical utility providers](#) in Washington, including Public Utility Districts. According to the [U.S. Energy Information Administration](#), Washington ranks 9<sup>th</sup> in the U.S. for electricity production and generated more electricity from hydropower than any other state. Washington produced nearly one-third of the nation’s hydroelectric generation in 2020. The Grand Coulee Dam on Washington’s Columbia River is the largest power plant by generation capacity in the United States, and the seventh-largest hydropower plant in the world. It typically supplies about 21 million megawatt-hours of electricity annually to eight western states and parts of Canada. The following charts display the state’s energy production estimates for 2020, consumption by sector, and sources of electricity.

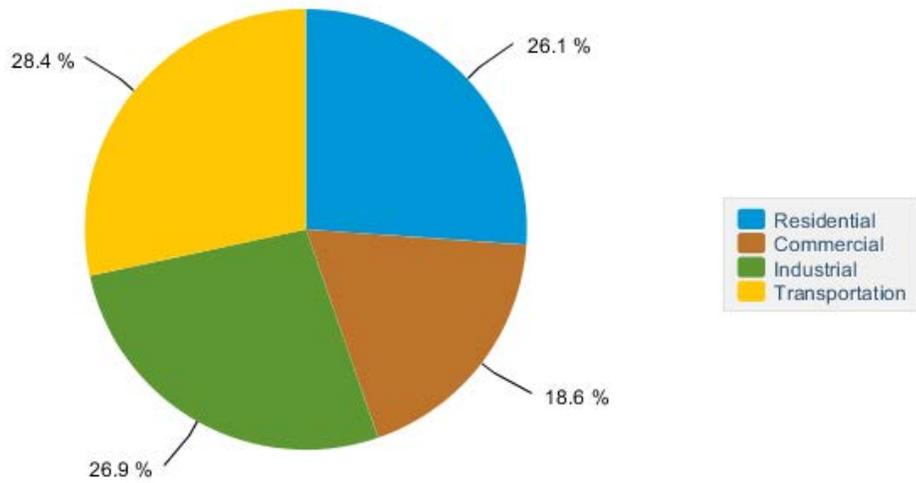
### Washington Energy Production Estimates, 2020



eia Source: Energy Information Administration, State Energy Data System

Figure 3. Washington Energy Production Estimates, 2020.

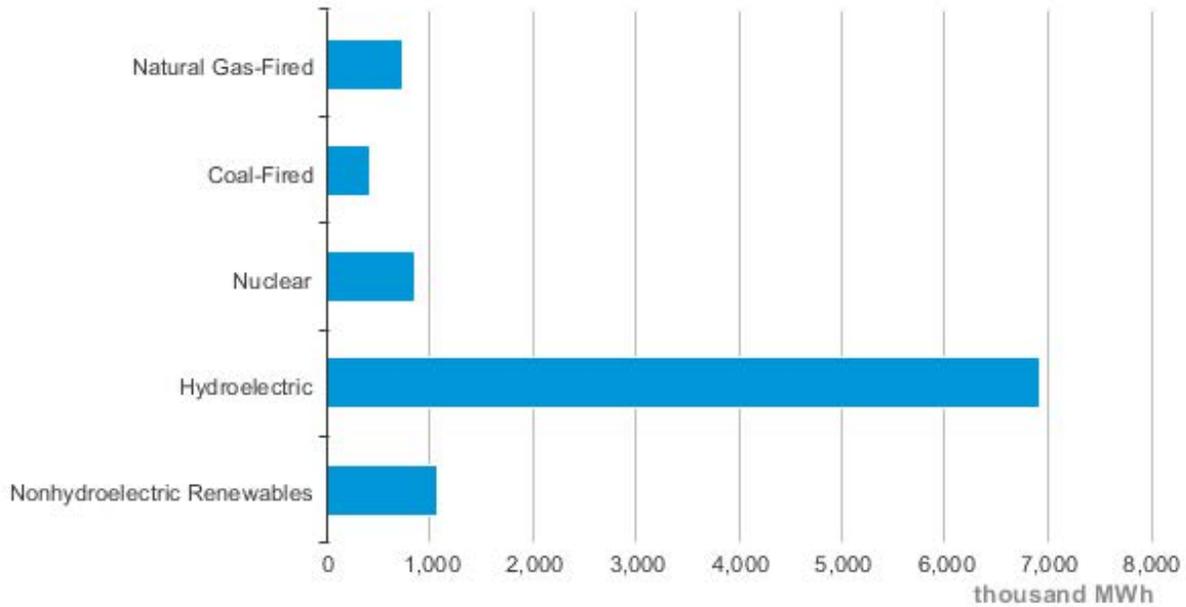
### Washington Energy Consumption by End-Use Sector, 2020



eia Source: Energy Information Administration, State Energy Data System

Figure 4. Washington Energy Consumption by End-Use Sector, 2020.

**Washington Net Electricity Generation by Source, Mar. 2022**



 Source: Energy Information Administration, Electric Power Monthly

Figure 5. Washington Net Electricity Generation by Source, Feb. 2022.

**Non-white and Hispanic population trends**

As of 2020, the non-white population in Washington is 27 percent of the population<sup>6</sup>. 43 percent of the non-white population lives in King County. After King County, Pierce and Snohomish have the highest non-white populations (8 and 7 percent of the state’s non-white population, respectively). Between 2010 and 2020, the state’s non-white population has increased significantly by 74.7 percent. In King County, the number of Asian Americans increased by 60 percent; Latinx (41 percent); Pacific Islanders (38 percent); African Americans (26 percent); and Indigenous Americans (18 percent). The white population declined by 4 percent, reducing this portion of the county’s population to 56 percent.

Despite the increase in people of color in the state, residents of historically underinvested communities in urban areas are continuing to be displaced. Two census tracts in Central District in Seattle that had been 90 percent Black in 1970 were 11 percent and 18 percent Black in 2020.<sup>7</sup> Working-class households continue to move south in King County. Southeast Seattle and the cities of south King County are home to communities of immigrants from Africa, Asia, and Latin America, along with modest income Whites, Blacks, and Latinos.

EV buyers are primarily high-income, highly educated, homeowners.<sup>8</sup> However, this will change over time as EVs fall in price and grow as a share in the used car market. Moreover, the disadvantaged communities that live near I-5 and I-90, two alternative fuel corridors with higher EV utilization levels, could disproportionately benefit from the air quality improvements of electric vehicles. Therefore, EVs could mitigate health impacts for those who don’t drive them.

<sup>6</sup> [Office of Financial Management. 2020.](#)

<sup>7</sup> [Office of Financial Management. 2020](#)

<sup>8</sup> [Hardman, S. et al. “A perspective on equity in the transition to electric vehicles.” MIT Science Policy Review.](#)

## State Geography, Terrain, Climate, and Land Use Patterns

Washington State is home to seven distinct physiographic regions, including the towering volcanic peaks of the Cascades, the agriculturally-rich Columbia River basin, and the rugged Pacific coastline. The Cascade Range presents unique challenges to the state's transportation network, with snow and ice accumulations common on mountain passes.

Washington faces serious impacts to its snowpack, infrastructure, and water supplies as the climate changes and temperatures climb. Protecting our state's fish, farms, and communities from the impacts of climate change is a priority.<sup>9</sup>

Increased temperatures driven by climate change can influence variables that contribute to flooding. Atmospheric rivers, storm surges, and sudden snowmelt can exacerbate flooding risks. In the United States, inland floods are occurring more often while flooding in coastal areas has doubled in the past 30 years. Washington's coastal areas are also vulnerable to sea level rise. Due to increased temperatures, decreasing snowpack, and drier summers in the Pacific Northwest, more frequent and intense wildfires are likely to become the new normal. More [droughts](#) and drier forests create conditions more conducive to ignite and spread severe wildfires.

The population in Washington State continues to trend upwards. In April 2020, the state's population was 7,656,200. It grew by 16.8 percent between 2010 and 2020. Almost 70 percent of the state's population growth is concentrated in the five largest metropolitan counties: Clark, King, Pierce, Snohomish, and Spokane. More than half (53%) of the population lives in the Seattle metropolitan area (King, Pierce, and Snohomish counties).

Since the end of World War II, development trends in Washington emphasized separating land uses and making driving the de facto mode to get from one place to another, resulting in urban sprawl.

Washington's Growth Management Act (RCW 36.70A), which requires fast-growing cities and counties to develop a comprehensive plan to manage their population growth, mitigates land development through these statewide goals (RCW 36.70A.020):

- a. Reducing the conversion of undeveloped land into low-density sprawl.
- b. Encouraging growth in urban areas.
- c. Developing efficient multimodal transportation systems.
- d. Increasing the availability of affordable housing.

## State Travel Patterns, Public Transportation Needs, Freight, and Other Supply Chain Needs

The population centers in Washington State, such as the Greater areas of Spokane, Vancouver, and Seattle, have the most driving demands. The interstates I-5 and I-90, which run through these centers, connect Washington to the rest of the United States. Tourism-based travel, where people are driving vehicles or renting vehicles to get around, usually occurs in:

- The state's cities.
- Areas surrounding the state's national parks, which include Mount Rainier National Park, North Cascades National Park, and Olympic National Park.
- Destinations at our mountains and mountain passes (e.g., hiking, ski tourism).
- Destinations at the state's beaches and lakes.
- Ferry-served communities.

<sup>9</sup> <https://ecology.wa.gov/Air-Climate/Climate-change>

Tourists and residents primarily arrive and depart by airplane at Sea-Tac International Airport, while others use other airports, such as Portland International Airport, and other smaller airports in our state. The Northwest Seaport Alliance (Ports of Seattle and Tacoma) are the third-largest cargo port in the United States by container volume.<sup>10</sup> There are direct rail connections from the ports to areas in the Pacific Northwest and the Midwest. Besides I-5 and I-90, SR 167, and SR 509 are important road connections to the Ports of Seattle and Tacoma. Warehouses that facilitate e-commerce deliveries are popping up around the state. During the COVID-19 pandemic, there was a sharp uptick in e-commerce and other online shopping services. This poses a new challenge in accommodating last-mile delivery services. As e-commerce continues to grow, congestion may increase, and the efficient use of curb space becomes more important.

Washington State has 39 federally-recognized transit agencies. The Washington State legislature provides funding to transit agencies to fund capital projects to reduce the carbon intensity of the sector through WSDOT's Green Transportation Capital program. A total of \$21,210,000 was appropriated in the 2021-2023 biennium for the Green Transportation Capital program. Funding went towards projects such as procuring battery-electric buses, installing charging infrastructure, and electrifying bus routes. In addition, The Federal Transit Administration provides transit agencies funding through their Low or No Emissions grants.

Many transit agencies are rapidly transitioning to electric fleets. For example, King County Metro was an early adopter of battery-electric buses and is moving to a 100% zero-emissions fleet powered by renewable energy with a target of 2035. Pierce Transit began its commitment to clean energy first by converting most of its bus fleet to compressed natural gas. Now Low-No grants are being utilized to purchase all-electric buses and related infrastructure. The Spokane Transit Authority recently acquired the first zero-emission battery-electric bus to support the agency's City Line project. Washington State University's Green Transportation Program published [Milestones for Electrifying Public Fleets](#) in 2021 as a guide to help public entities plan and implement steps to add electric vehicles (EVs) to their fleets now and in the future.

Washington State Ferries operates the largest ferry system in the United States. WSF has 21 ferries that travel across Puget Sound and the greater Salish Sea, carrying nearly 24 million people annually to 20 different ports of call: 19 ferry terminals in Washington and one stop in Sidney, British Columbia. WSF's nine ferry service routes from Tacoma, Washington, to Sidney, British Columbia, act as a marine highway for businesses, tourists, and daily commuters. The San Juan Islands and Vashon Island are ferry-dependent, accessible only by boat or air.

WSDOT has identified places where people access public transportation via their car (e.g., Park and Rides) as public charging locations, although not part of the national network. There is generally not a demand for fast charging at Park and Ride stations. However, there is a need for fast charging at or near our ferry terminals.

One of the ways WSDOT is working to meet climate action goals is to partner with local agencies to reduce vehicle miles traveled (VMT) (RCW 47.01.078 and RCW 47.01.440). The number of vehicles recorded along central Puget Sound's five major freeways, Interstate 5, I-405, State Route 520, I-90, and SR 167, has grown 1.9 percent in recent years. Compared to other states, this growth is low. The state's population increased 12 percent from 2010 to 2018, and VMT grew nine percent.

<sup>10</sup> EPA. "EPA and Tacoma Power grants help Northwest Seaport Alliance to install first permanent fleet of electric cargo-handling equipment." December 17, 2020.

## AFC – Corridor Networks

The nationally designated Alternative Fuel Corridors in Washington, shown in Figure 6, include:

- US 101
- I-90
- I-82
- I-5
- US 395 (south of Spokane)
- US 195

As mentioned in the Introduction, Washington will identify investments in fast charging along the state’s existing Alternative Fuel Corridors (AFCs), beginning with interstates. The priority deployments will include completing the state’s north/south and east/west interstates, I-5 and I-90, respectively, to the federally defined built out standards. Secondary priorities for investments include completing the I-82/I-182 and US 395 Alternative Fuel Corridors, followed by US 101 and US 195.

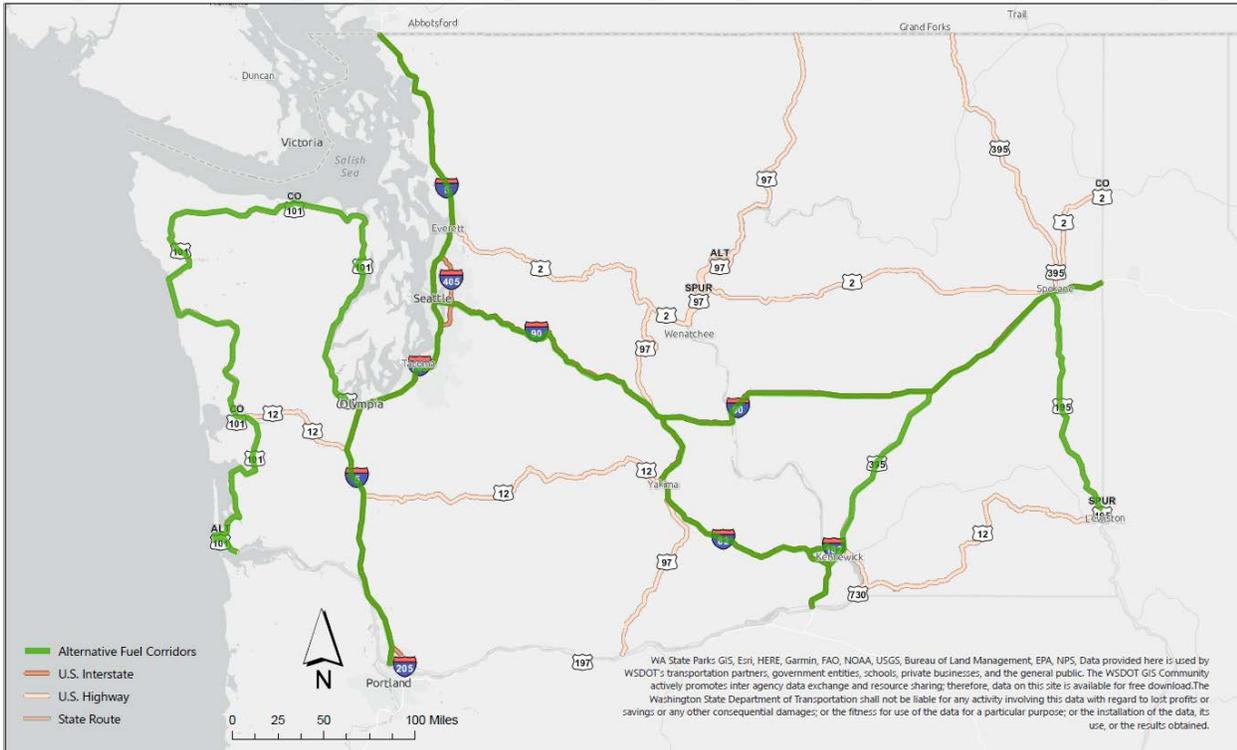


Figure 6. Alternative Fuel Corridors in Washington State

**Corridor Pending Corridors:** US 101, I-90 (Ellensburg to Moses Lake), US 195 (Pullman to Idaho border)

**Corridor Ready Corridors:** I-5, I-90, I-82, I-182, US 195, US 39

The existing locations of charging infrastructure along AFCs are outlined in Table 3 below. Please see the [WA Interactive Electric Vehicle Charging Map](#) to review existing locations of DCFC (meets minimum FHWA NEVI requirements).

**Existing Locations of Charging Infrastructure Along AFCs**

Table 3. Existing Charging Infrastructure along Alternative Fuel Corridors.

State EV Charging Location Unique ID*	Charger Level	Route	Location	# of EV Connectors	EV Network (if known)
121703	DCFC	I-90	Spokane	8	Electrify America
121709	DCFC	I-90	North Bend	6	Electrify America
123004	DCFC	I-5	Vancouver	4	Electrify America
123479	DCFC	I-5	Mount Vernon	6	Electrify America
124683	DCFC	I-5	Tulalip	4	Electrify America
124684	DCFC	I-5	Kelso	4	Electrify America
136697	DCFC	I-82	Yakima	4	Electrify America
143970	DCFC	I-5	Everett	10	Electrify America
145684	DCFC	SR-9	Lake Stevens	6	Electrify America
147131	DCFC	I-5, I-405	Tukwilla	5	Electrify America
163338	DCFC	I-205	Vancouver	4	Electrify America
164163	DCFC	US-101, I-5	Olympia	4	Electrify America
168088	DCFC	I-5	Bellingham	4	Electrify America
170297	DCFC	SR-512	Puyallup	4	Electrify America
170316	DCFC	I-405	Woodinville	4	Electrify America
170358	DCFC	I-90	Ellensburg	4	Electrify America
170404	DCFC	I-5	Seattle	4	Electrify America
184914	DCFC	I-405	Bellevue	5	Electrify America
187906	DCFC	I-5	Seattle	4	Electrify America
188130	DCFC	I-5	Seattle	4	Electrify America
189391	DCFC	SR-18, SR-167	Auburn	4	Electrify America
190877	DCFC	US-101	Port Angeles	4	Electrify America
191770	DCFC	US-101, US 12	Aberdeen	4	Electrify America
192747	DCFC	US-2	Leavenworth	4	Electrify America

State EV Charging Location Unique ID*	Charger Level	Route	Location	# of EV Connectors	EV Network (if known)
199190	DCFC	I-5	Seattle	4	Electrify America
201423	DCFC	SR-16	Gig Harbor	4	Electrify America
201629	DCFC	I-5	Lacey	4	Electrify America
206453	DCFC	I-405	Redmond	4	Electrify America
206987	DCFC	SR-3	Poulsbo	4	Electrify America
207526	DCFC	I-5	Seattle	4	Electrify America

\*Defined by the State – this should match the unique ID in the State’s applicable GIS databases.

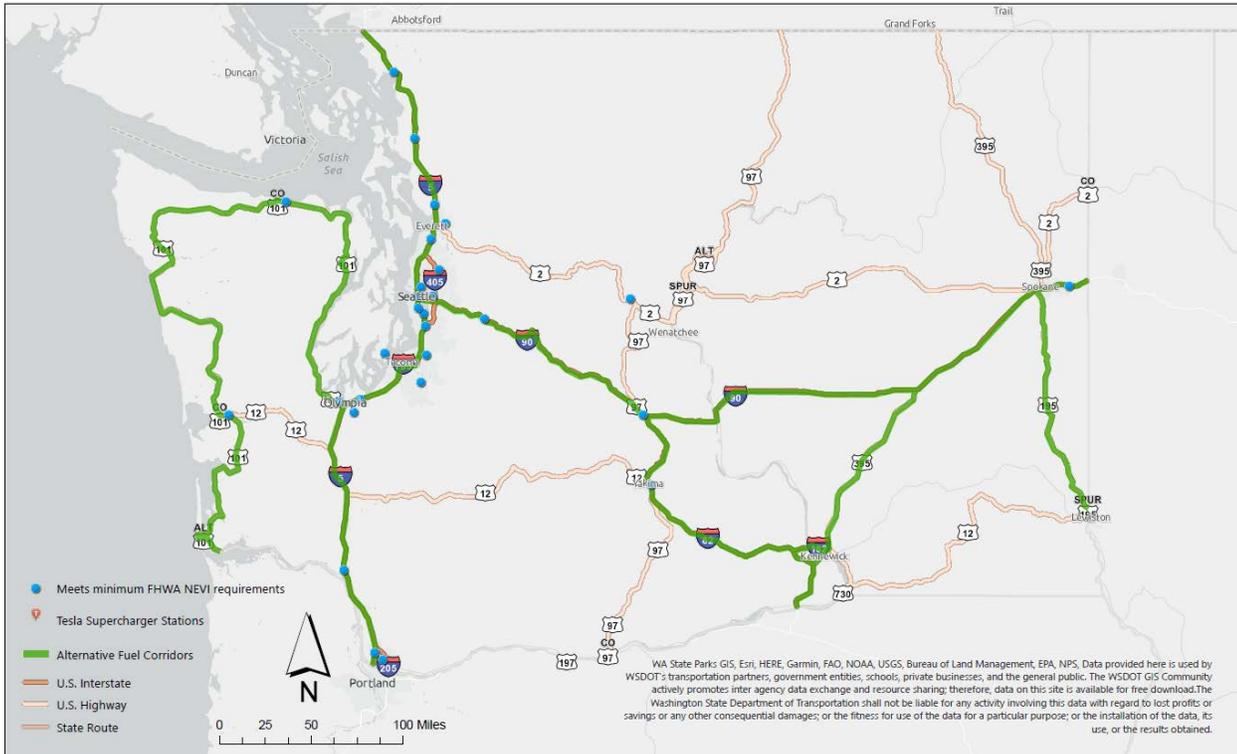


Figure 7. Alternative Fuel Corridors, charging stations that meet minimum FHWA NEVI requirements, and other charging stations.

## Known Risks and Challenges

Some risks may include legal requirements, economics, and environmental conditions. Technology changes fast, so electric vehicle charging infrastructure may become obsolete in a number of years. Market competition may also make more proprietary investments instead of equitable state investments. Investment in charging infrastructure on federal highways is intended to reach all geographic areas. However, these investments are largely private sector. It will be important for WSDOT to work with the private sector to select designs, technologies, and charging locations that will generate durable, long-term benefits for all Washingtonians, including disadvantaged communities.

Electric vehicles will not solve all our health, access, and environmental problems related to surface transportation. For instance, electric vehicles do not address traffic congestion, improving access for people who cannot or choose not to drive. Electric vehicles typically have a smaller carbon footprint than gasoline cars, even when accounting for the electricity used for charging, but they will not eliminate GHG emissions from the transportation sector.<sup>11</sup>

Another challenge is that the Tesla charging network is already robust but is not available to other electric vehicle users.

Supply chain disruptions for charging infrastructure represent another known risk and challenge to implementation of this plan. Delays are being caused by some of the same issues affecting other sectors, including semiconductor availability, port congestion, strained steel supplies, and labor shortages.

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<sup>11</sup> EPA. "Electric Vehicle Myths." <https://www.epa.gov/greenvehicles/electric-vehicle-myths>

## EV CHARGING INFRASTRUCTURE DEPLOYMENT

The overarching strategy for EV charging infrastructure installations is to first complete all interstates. The priority deployments will include completing the state's north/south and east/west interstates, I-5 and I-90, respectively. Secondary priorities for investments include completing the I-82/I-182 and US 395 Alternative Fuel Corridors, followed by US 101 and US 195. State funding of DC fast chargers will supplement corridors that may not receive federal funding in the initial years of NEVI funding. The state will utilize annual updates of its plan to re-prioritize based on completed investments, as advised by the IEVCC, and as informed by the state's Mapping and Forecasting Tool.

### Funding Sources

The source of match to the NEVI federal funding is toll credits. Toll credits were first enacted in Section 1044 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and later modified and codified in Section 111(c) of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). 23 USC 120(j) allows certain toll revenue expenditures to count as credit toward the local matching share of highway projects authorized under Title 23. Washington earns toll credits when capital investments are made in federally approved tolled facilities including toll roads and bridges. These credits can then be used as a 'soft match,' meaning do not provide additional money for the project but reduces or eliminates the amount of funding the state contributes. This allows the state's EV infrastructure program to be funded with 100 percent federal funds as opposed to the traditional 80/20 percent split between federal and state/local funding sources. The use of toll credits is initiated at the time Federal funds are authorized for a project.

### 2022 Infrastructure Deployments/Upgrades

Washington is in the process of developing the 2022 infrastructure deployment list. WSDOT's Zero-Emission Vehicle Infrastructure Partnership (ZEVIP) program is funded through a state appropriation in the 2021-2023 biennium for \$11,900,000 as outlined in Section 215 of Engrossed Substitute Senate Bill 5689, Chapter 186, Laws of 2022. ZEVIP grant guidelines for the 2021-2023 biennium include a minimum requirement of four 150kW direct-current fast chargers with the ability to simultaneously charge each station. ZEVIP seeks to fund projects that complete corridors, fill gaps in existing corridors, and complement projects undertaken by NEVI funding. Priority corridors including interstates, U.S. routes, and state highways. ZEVIP's Notice of Proposed Awards will be posted in the summer of 2022.

The Revised Code of Washington (RCW) 47.04.350 grants WSDOT's public-private partnership office the authority to develop and maintain the ZEVIP program to support the deployment of clean alternative fuel vehicle charging and refueling infrastructure that is supported by private financing. Further, Washington Administrative Code (WAC) 468-602-010 defines the purpose of ZEVIP to consist solely of projects that benefit the public through development, demonstration, deployment, maintenance, and operation of clean energy technologies that save energy and reduce energy costs, reduce harmful air emissions or otherwise increase energy independence for the state.

WAC 468-602-010 codifies that ZEVIP funds shall be invested in the deployment of electric vehicle charging and hydrogen refueling stations at key intervals along state and federal highway corridors to support interurban, interstate, and interregional travel for clean alternative fuel vehicles. WAC 468-602-010 also specifies that ZEVIP funds may be used as match to leverage federal funds for the sole purpose of installing, maintaining, and operating electric vehicle charging and hydrogen refueling infrastructure.

## Planned Investments

The following information represents the state's planned investments for EV charging infrastructure and program implementation in the 2021-2023 biennium, organized by department. Each appropriation includes the funding amount, program description, legislation reference, and funding source. Washington State typically adopts three budgets on a biennial budget cycle. The Legislature authorizes expenditures for operating, capital, and transportation purposes for a two-year period. The budget for the 2021-2023 biennium covers the period from July 1, 2021 through June 30, 2023. Typically, the primary two-year budget is enacted in the odd-numbered years, and a supplemental budget making adjustments to the two-year budget is often enacted during the even-numbered years.

### Department of Agriculture

- \$152,000 to support access to EVSE (implementing SSSB 5192) and adopt rules for EVSE
  - ESSB 5092 (Sec 311) (17); General Fund (State)
- \$9,000 to implement ESSB 5974 (transportation resources), coordinate with IEVCC
  - ESSB 5693 (Sec 311) (26); General Fund (State)

### Department of Commerce

- \$69,000,000 towards a grant program for the development of EV charging infrastructure in rural areas, office buildings, multifamily housing, ports, schools and school districts, and state and local government offices. Eligible applicants include local governments, tribal governments, or public and private electrical utilities. Grant funding must be used for level 2 charging or higher and preference will be given to projects that provide level 3 charging.
  - ESSB 5693 (Sec 128) (226); General Fund (State)
- \$25,000,000 to implement programs and incentives that promote the purchase or conversion to alternative fuel vehicles. Funding will be prioritized by projects that serve overburdened communities, those with the greatest needs, low-income communities, communities with the greatest health disparities, and communities of color that are most likely to receive the greatest health benefits,
  - ESSB 5693 (Sec 128) (198); EV Incentive Account (State)
- \$8,500,000 to build a mapping and forecasting tool that provides locations and information on charging and refueling infrastructure, in collaboration with the IEVCC.
  - ESSB 5693 (Sec 128) (225); General Fund (State)
- \$5,550,000 towards a grant program that demonstrates innovative approaches to electrification of transportation services. Funding will prioritize projects that demonstrate meaningful and enduring benefits to communities and populations disproportionately burdened by air pollution, climate change, or lack of investments; beneficially integrate demand-side manage technologies; accelerate the electrification market; develop EV charging and hydrogen fueling infrastructure to support long-distance travel. Eligible applicants include local governments, tribal governments, and public and private electrical utilities. \$2,000,000 is provided solely for tribal governments and local governments in rural communities.
  - SHB 1080 (Sec 1064) (11) (a); State Building Construction Account (State)
- \$4,000,000 for a grant to the city of Mount Vernon for the Mount Vernon Library Commons project to install 75 electric vehicle charging stations.
  - SSB 5651 (Sec 1026) (8); State Building Construction Account (State)

- \$2,550,000 for a grant to the Lewis Public Transportation Benefit Area to construct a hydrogen fueling station near Chehalis
  - SHB 1080 (1064) (11) (b); State Building Construction Account (State)
- \$1,054,000 for staff and consulting support to the IEVCC.
  - ESSB 5693 (Sec 128) (231); General Fund (State)
- \$350,000 for staff support for the IEVCC
  - SSB 5975 (Sec 203) (2); Multimodal Transportation Account (Federal)
- \$103,000 for a grant to the city of Lacey to install 12 electric vehicle charging stations in parks and other public spaces.
  - SSB 5651 (Sec 1026) (8); State Building Construction Account (State)
- \$50,000 for a grant to the town of Steilacoom to install electric vehicle charging stations at the town's public works facility.
  - SSB 5651 (Sec 1026) (8); State Building Construction Account (State)

**Department of Ecology**

- \$ 41,400,000 remaining to implement Volkswagen settlement projects
  - \$12,600,000 committed to light duty EVSE
  - \$28,800,000 to be committed
- \$146,000 to implement ESSB 5974 (transportation resources), coordinate with IEVCC
  - ESSB 5693 (Sec 302) (55); Model Toxic Control Operating Account (State)

**Department of Enterprise Services / SEEP**

- \$2,952,000 for EVSE infrastructure at state-owned facilities to accommodate charging station installations. Locations will be prioritized based on SEEP location priorities, at least where ZEV fleet vehicles are scheduled to be purchased.
  - ESSB 5693 (Sec 148) (12); General Fund (State)
- \$654,000 for DES to prepare a ZEV implementation strategy, in collaboration with the SEEP program, for the state fleet passenger vehicle fleet; identify barriers to EV replacement strategies; identify optimal hub locations; estimate fiscal impacts.
  - ESSB 5693 (Sec148) (11); General Fund (State)
- \$540,000 for staffing at SEEP to implement Executive Order 21-04.
  - ESSB 5693 (Sec 130); General Fund (State)

**Department of Health**

- \$39,000 to implement ESSB 5974 (transportation resources), coordinate with IEVCC
  - ESSB 5693 (Sec 222) (82); General Fund (State)

**Joint Transportation Committee**

- \$450,000 to conduct a study to assess opportunities to encourage high-consumption fuel users, including users of diesel fuel and gasoline, as well as in consideration to fleet usage, to switch to zero-emission vehicles. The study will evaluate dynamics impacting consumer decisions and potential policies to encourage the transitions.
  - ESSB 5689 (Sec 204) (13); Motor Vehicle Account (State)

**Department of Licensing**

- \$425,000 from the Electric Vehicle Account; maintaining and publishing a list of all vehicle models qualifying the clean vehicle tax exemptions; granting tax exemptions at the time of ownership transfers; providing data to the state treasurer on exemption use; maintaining EV population and transaction data sets.
  - ESSB 5689 (Sec 208); Electric Vehicle Account

**Department of Revenue**

- \$268,000 for the implementation of ESSB 5000, the hydrogen fuel cell electric vehicle sales and use tax exemption; collect and provide number of claimed exemptions
  - ESSB 5693 (Sec 136) (5); General Fund (State)

**Department of Transportation**

- \$10,900,000 to the public-private office for the clean alternative fuel vehicle charging and refueling infrastructure program, known as the Zero-Emission Vehicle Infrastructure Partnership (ZEVIP) grant program. Grant prioritizes projects that install DC fast chargers along priority corridors.
  - ESSB 5689 (Sec 215) (3); Electric Vehicle Account (State)
- \$9,822,000 to implement the national electric vehicle program, established in the federal infrastructure investment and jobs act, as directed by the IEVCC, including staff support.
  - SSB 5975 (Sec 205); Multimodal Transportation Account (Federal)
- \$4,710,000 for newly selected green transportation capital grants; grants are for transit agencies to fund capital projects to reduce the carbon intensity of the Washington transportation system. \$16,500,000 was previously awarded this biennium to this grant program,
  - SSB 5975 (Sec 211) (3); Climate Transit Programs (State)
- \$2,400,000 to develop a pilot program to provide clean alternative fuel vehicle use opportunities to underserved communities and low to moderate income members of the workforce not readily served by transit or located in transportation corridors that exceed emission standards.
  - ESSB 5689 (Sec 215) (2); Electric Vehicle Account (State)
- \$1,500,000 for a co-located DC fast charging and hydrogen fueling station near the Wenatchee or East Wenatchee area to serve passenger, light-duty, and heavy-duty vehicles. Funds may be used for one or more hydrogen fuel cell vehicles.
  - ESSB 5689 (Sec 215) (4); Electric Vehicle Account (State) and Multimodal Transportation Account (State)
- \$300,000 to study maximizing walk on ferry ridership, including EV rentals at ferry terminals
  - ESSB 5689; Puget Sound Ferry Operations Account (State)
- \$250,000 to fund the design of an electric charging mega-site project at Mount Vernon library commons.

- ESSB 5689 (Sec 215) (6); Multimodal Transportation Account (State)
- \$140,000 to conduct assessment of options for a publicly available mapping and forecasting tool that provides locations and essential information of charging and fueling infrastructure.
  - ESSB 5689 (Sec 215) (5); Multimodal Transportation Account (State)

### **Utilities and Transportation Commission**

- \$68,000 to implement ESSB 5974 (transportation resources), coordinate with IEVCC
  - ESSB 5693 (Sec 142) (9); Public Service Revolving Account (State)

### **Increases of Capacity/Redundancy along Existing AFC**

To build resiliency in the system, Washington will consider additional chargers on the highest-volume corridors, and in higher-dependency areas. Other private and public investments in EV infrastructure will also focus on high-usage corridors and centers, bolstering redundancy and increased frequency.

In later phases, the state will conduct analysis of usage data to identify areas where further redundancies would provide public value. The ZEV Mapping and Forecasting Tool will inform this analysis.

### **Electric Vehicle Freight Considerations**

Through a memorandum of understanding, 17 states (including Washington State), the District of Columbia, and the Canadian province of Quebec are working collaboratively to advance and accelerate the market for electric medium- and heavy-duty vehicles, including large pickup trucks and vans, delivery trucks, box trucks, school and transit buses, and long-haul delivery trucks. The goal is to ensure that 100 percent of all new truck and bus sales are zero-emission vehicles (ZEVs) by 2050, with an interim target of at least 30 percent by 2030.

To provide a framework for meeting these goals, the signatory jurisdictions are working through the Multi-State ZEV Task Force facilitated by Northeast State for Coordinated Air Use Management (NESCAUM) to develop a MHD ZEV Action Plan. NESCAUM currently has a call for public comment on the Draft Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Action Plan.

In addition, Washington has adopted the California Advanced Clean Trucks requirements specified in Title 13 of the California Code of Regulations, requiring manufacturers to meet California's ZEV production and sales requirements. Beginning with model year 2025, manufacturers will be required to sell zero-emission trucks as an increasing percentage of their annual sales for Class 2b through Class 8 vehicles in Washington. ZEVs include all-electric and fuel cell electric vehicles.

Through Revised Code of Washington 82.16.0496 and 88.04.4496, businesses in Washington are eligible to receive tax credits for purchasing new or used medium- and heavy-duty AFVs and medium- and heavy-duty vehicles converted to alternative fuels, and installing alternative fueling infrastructure. Eligible alternative fuels are natural gas, propane, hydrogen, dimethyl ether, and electricity. Tax credits for qualified alternative fueling infrastructure are for up to 50% of the cost to purchase and install the infrastructure.

### **Public Transportation Considerations**

In general, public transportation infrastructure for charging electric transit vehicles are installed for the express purposes of the transit agency. This charging infrastructure is typically funded in conjunction with the acquisition of the electric transit vehicles. Most of this infrastructure is not co-located with public charging or available as public

charging. However, future EV charging infrastructure deployments will be examined at areas where both transit and the public may charge, such as park and ride facilities and ferry terminals. This assessment will be aided by the state's development of the Zero-Emission Vehicle Mapping and Forecasting Tool.

## FY23-26 Infrastructure Deployments

Washington will begin deploying NEVI formula funding in 2023, following the implementation goals as outlined in Plan Goals and Vision section and procurement strategy as outlined in the Contracting section. Future infrastructure deployments will be guided by the state's Zero-Emission Vehicle Mapping and Forecasting Tool (ZEV-MFT) which is under development. The state's IEVCC will assist with oversight and priorities of infrastructure deployment.

In addition to implementing the projects identified in the plan, the state anticipates future state appropriations to further the goals of DC fast charging along priority corridors. These state funding sources include the Volkswagen settlement funds, Zero-Emission Vehicle Infrastructure Partnership, Clean Energy Grants, and Green Transportation Grants.

## State, Regional, and Local Policy

The U.S. Department of Energy maintains an extensive database for all applicable [Washington Laws and Incentives](#). NEVI Formula Funding will be deployed in coordination with and in consideration of the following policies, including, but not limited to:

- Healthy Environment for All Act
  - Reducing environmental and health disparities and improving the health of all Washington state residents by implementing the recommendations of the environmental justice task force
- Clean Energy Transformation Act
  - Commits Washington to an electricity supply free of greenhouse gas emissions by 2045
- Clean Fuels Program
  - Program that reduces the overall carbon intensity of transportation fuels used in the state by 20% below 2017 levels by 2035
- Climate Commitment Act
  - Caps and reduces greenhouse gas emissions from the state's largest emitting sources and industries
- ZEV Mapping and Forecasting Tool
  - A publicly available mapping and forecasting tool that locates and provides information on electric vehicle charging and refueling infrastructure
  - Electric utilities with more than 25,000 customers must analyze how their resource plans support and account for anticipated levels of ZEV use, relevant infrastructure forecasts and associated energy impacts, and information from the utilities' transportation electrification plans.
- EV Charging Signage and Parking Regulations
  - Signage consistent with Manual on Uniform Traffic Control Devices
  - By 2023, all public EV charging stations must display charges and fees associated with operation; service providers must meet interoperability standards and payment method standards; service providers must report inventory and payment information to the National Renewable Energy Laboratory annually

- EV Infrastructure: A guide for local governments in Washington State
  - Model ordinance, model development regulations, and guidance related to EV infrastructures and batteries per RCW 47.080.090 and 43.31.970
- EV Charging Station Fees
  - EV charging station ports are subject to annual registration fees as adopted by the Washington State Department of Agriculture
- Mandatory EV Charging Station Building Standards
  - At least one parking space, or 10% of parking spaces, must be made ready for Level 2 EV Charging at all new buildings
- EV Promotion and Infrastructure Development
  - Any regional transportation planning organization containing a county with a population of greater than one million must collaborate with state and local governments to promote EV use, invest in EV charging infrastructure, and seek federal or private funding for these efforts
- State EV Charging Infrastructure Availability
  - Publicly and privately owned EVs may charge at state office locations if the vehicles are used for state business, conducting business with the state, or as commuter vehicles
- Alternative Fuel Vehicle Retail Sales and Use Tax Exemption
  - The sale or lease of new or used passenger vehicles, light-duty trucks, and medium-duty passenger AFVs is exempt from the state retail sales and use tax
- EV Infrastructure Support
  - Washington utilities joined the National Electric Highway Coalition (NEHC), committing to create a network of direct current fast charging (DCFC) charging stations connecting major highway systems from the Atlantic Coast to the Pacific of the United States
- Clean Cities Coalitions
  - Washington is home to the Columbia-Willamette Clean Cities and Western Washington Clean Cities coalitions. These coalitions works with vehicle fleets, fuel providers, community leaders, and other stakeholders to save energy and promote the use of domestic fuels and advanced vehicle technologies in transportation
- Alternative Fuel Vehicle Technical Assistance and Education Program
  - The Washington State University Energy Program administers a technical assistance and education program on the use of AFVs for public agencies, including state and local governments

## IMPLEMENTATION

The state's implementation plan includes strategies to address ongoing operations and maintenance of EV charging infrastructure, identification of service providers and station owners, procedures for EVSE data collection and sharing, addressing resilience and climate risks, and promoting strong labor, safety, training, and installation standards.

The state's public-private partnership contracting strategy will ensure the long-term sustainability of the stations. The contract with awardee(s) of NEVI funding will stipulate the Operations and Maintenance Plan for each station, which shall include, at a minimum: ADA compliance, MUTCD compatible signage, workforce training requirements, interoperability requirements, minimum reliability standards, and minimum time-of-day accessibility requirements. WSDOT will maintain a database to ensure an update to date list of all station owners and service providers. The contract will also stipulate that all ownership and EVSE providers are accurately reflected in the U.S. Department of Energy's Alternative Fueling Stations Locator tool.

Contract provisions will also stipulate the mandatory EVSE data collection and sharing requirements, which will include, at a minimum, real-time data sharing protocols, publicly available location and station information sharing protocols, and data to support reliability and usage analysis, displaying pricing information, reliability monitoring, remote diagnosis and problem resolution, and smart charge management. Resilience will be addressed by allowing redundancy in EVSE deployments. Seasonality will be addressed by mandating the use of equipment that is certified to operate outdoors in extreme weather conditions.

Washington will consider the station site's vulnerability and risk to planning and existing EV charging stations through the station ranking process. Preference will be given to sites that will not be impacted by potential impacts of climate change, extreme weather events, and flooding. USDOT tools and resources will be utilized to assess the long-term viability of each project site. Project site assessments will include potential impacts from climate change, extreme weather events, flooding, terrain, and snow removal. The state will not exclude projects that add redundancy and improve the overall resilience of the national network of EV charging stations.

Strategies to promote strong labor, safety, training, and installation standards will be addressed through a mandatory training requirement as outlined in the Labor and Workforce section of this plan. In addition, WSDOT offers the following programs to help diverse businesses contractors as part of the department's commitment to equal opportunity in contracting. These include:

- Disadvantaged Business Enterprise: businesses certified as DBE by the Washington State Office of Minority and Women's Business Enterprises can contact the Office of Equal Opportunity for immediate, free business counseling and technical assistance.
- Federal Small Business Enterprise: WSDOT developed a SBE Participation Plan to ensure small businesses are afforded equal and fair opportunities to participate on WSDOT contracting, consulting, and procurement opportunities.
- Minority, Small, Veteran and Women's Business Enterprises: WSDOT developed a MSVWBE Participation Plan Guidelines to address projects with M/S/V/WBE goals
- Small and Veteran's Business Enterprises: WSDOT is currently implementing a Small & Veteran's Business Program in the construction program, a full program is planned to be launched later this year.

In addition, WSDOT will favor contractors who show credible evidence that they can:

- Deliver more stations and charging capacity per NEVI program dollar than their competitors
- Deliver stations and charging capacity sooner than their competitors
- Make guarantees about project delivery times and long-term station performance
- Provide integration into existing national charging networks
- Show ownership or formal site control of any proposed charging sites
- Comply with all state and federal NEVI program requirements

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## CIVIL RIGHTS

WSDOT is an existing direct recipient of Federal financial assistance and therefore can ensure compliance with State and Federal civil rights laws by following existing program plans for Title VI of the Civil Rights Act and accompanying USDOT regulations, the Americans with Disabilities Act, and Section 504 of the Rehabilitation Act.

WSDOT's [Title VI Policy](#) assures that no person shall, on the grounds of race, color, or national origin, including people with Limited English Proficiency (LEP), as provided by Title VI of the Civil Rights Act of 1964 be excluded from participation in, be denied the benefits of, or otherwise discriminated against under any of its programs and activities. WSDOT's [Title VI Plan](#) outlines the agency's commitments, including:

- Adopting policies and procedures that support the development and implementation of a functional Title VI program.
- Ensuring meaningful public participation in transportation decision-making, consistent with the guiding principles/strategies outlined in WSDOT's Community Engagement Plan (CEP).
- Preventing, minimizing, mitigating, or correcting high and adverse impacts resulting from WSDOT's programs or activities.
- Monitoring the activities of local public agencies and other subrecipients by conducting annual desk reviews and periodic onsite reviews to ensure their compliance with all Title VI requirements.
- Ensuring that our operations, services, and programs, are accessible to all WSDOT's customers.
- Providing meaningful language access services, as appropriate, to LEP individuals.
- Incorporating the principles of Environmental Justice (EJ) into its programs, policies, and activities.
- Conducting department federal program area reviews to collect and analyze data that may be useful in identifying and addressing any trends or patterns of discrimination.
- Processing Title VI complaints in a timely manner.

In compliance with Title II of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, it is the policy of WSDOT to assure that no person with a disability shall be excluded from participation in, be denied the benefits of, or otherwise discriminated against under any of its programs, services or activities solely based on that disability. WSDOT is committed to providing equal access to its facilities, programs and services for persons with disabilities. In accordance with Title II of the Americans with Disabilities Act, WSDOT created an [ADA Transition Plan](#). The Plan identifies actions taken and sets forth actions that WSDOT will take to remove barriers, create strategies for agency wide participation, identify the ADA compliance manager, and outline grievance procedures.

## EQUITY CONSIDERATIONS

### Identification and Outreach to Disadvantaged Communities (DACs) in the State

The state has identified a number of vulnerable communities, which experience a disproportionate cumulative risk from environmental burdens due to adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation and of sensitivity factors, such as low birth weight and higher rates of hospitalization. Washington’s HEAL Act of 2021 requires a coordinated, interagency approach to reduce environmental and health disparities across the state.

For the purposes of the Washington State Plan for Electric Vehicle Infrastructure Deployment, the state is relying on guidance from federal agencies to identify DACs. Interim guidance from Department of Transportation and Department of Energy includes an identification methodology which relies on composite indicators of a census tract’s transportation disadvantage, which include transportation access disadvantage, health disadvantage, environmental disadvantage, economic disadvantage, resilience disadvantage, and equity disadvantage.

A mapping tool from Argonne National Laboratory highlights DACs identified using this methodology (see Figure below)

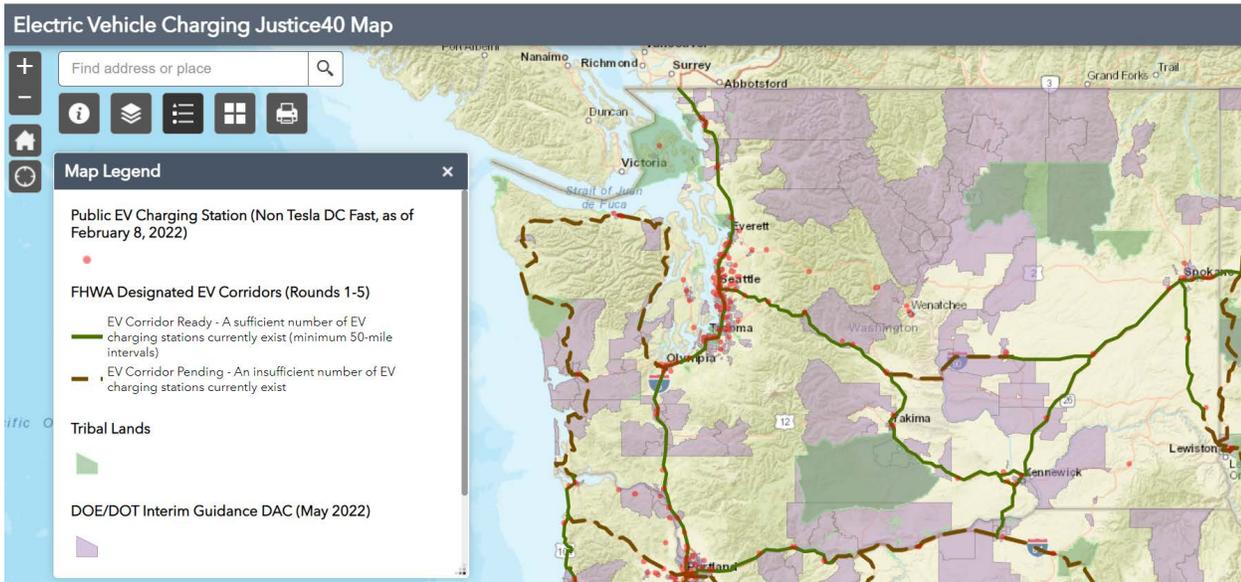


Figure 8. Disadvantaged communities in Washington include both remote rural locations as well as dense urban areas.

### Process to Identify, Quantify, and Measure Benefits to DACs

This section is under development pursuant to additional technical guidance from USDOT and other federal sources.

### Benefits to DACs through this Plan

This section is under development pursuant to additional technical guidance from USDOT and other federal sources.

Additional state resources have been directed to support EV adoption by reducing the cost barrier. These include:

- \$25 million in funding to support EV adoption among low-income households
- State sales tax exemptions on new and used EV purchases, and
- \$2.2 million in grant funding for zero-emissions carshare pilot programs

In addition to the above benefits and resources, the state will look to guidance from federal agencies on further delineating benefits to DACs, as well as how to quantify and measure those benefits. The state's goal in analyzing benefits to DACs is to meet Justice40 targets as well as considerations under the HEAL Act of Washington.

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## LABOR AND WORKFORCE CONSIDERATIONS

Washington's labor and workforce considerations center around providing a convenient, reliable, affordable, and equitable charging experience for all Washingtonians. To ensure safety and high-quality delivery of stations, Washington will require that electrical contractors involved in the installation, operation, and maintenance of stations be trained in the Electric Vehicle Infrastructure Training Program (EVITP).<sup>12</sup>

The state will build off existing relationships with labor unions and workforce boards to ensure that all appropriate steps are taken to grow and diversify the local workforce, including geographic, economic, or other hiring preferences to maximize job creation and economic benefits. WSDOT will specifically refine standards in association with the Certified Electrical Workers of Washington, the International Brotherhood of Electrical Workers, and the Washington Workforce Training and Education Coordinating Board.

Talent and Prosperity for All (TAP) is the state's strategic plan for workforce development. It is the successor to High Skills, High Wages, and folds in the federal Workforce Innovation and Opportunity Act, while also bringing together the state's multifaceted workforce system, ensuring the system works for the benefit of all Washingtonians. The Workforce Board includes 16 educational and training programs. WSDOT will also be working closely with the Department of Labor and Industries to identify and address any needs around timely reviews of electrical permitting.

To address the need for a highly skilled electric power workforce, the U.S. Department of Energy's Office of Electricity funded and established the Pacific Northwest Regional Center of Excellence for Clean Energy within Washington's Centralia College. This collaboration of consumer- and investor-owned utilities, the Bonneville Power Administration, the Pacific Northwest National Lab, community colleges and universities designs and delivers educational programs for: instrument control and relay specialists; generation, load and substation operators; line workers, substation wiremen and mechanics; meter technicians, and, secondarily, energy conservation program administrators and resource conservation managers. The Center's mission is to liaison between partners and the state's education system to: drive the energy economy, create a highly skilled workforce, provide consistent curriculum, meet industry needs, and provide state-wide coordination.

### Cybersecurity

All services implemented in the state of Washington on State computer systems and networks must be compliant with [the security policy and standards of the Office of the Chief Information Officer \(OCIO\)](#). Contractors will be required to represent and warrant that they will comply with all applicable elements of the OCIO Security Standards in their performance of any Services awarded under a Contract.

1. WSDOT will complete a security design review of the plan.
2. WSDOT will review and assess cybersecurity needs for EV infrastructure.
3. WSDOT will require that payment card industry (PCI) standards are met as part of the plan, if credit cards will be used.

<sup>12</sup> In accordance with FHWA regulations, contractors can also meet this training requirement through another Registered Electrical Apprenticeship program that includes EVSE specific training.

WSDOT provides funding but will not own or operate equipment. The Electric Vehicle Supply Equipment (EVSE) service provider will be responsible for the networked services, electricity, internet or cellular service, and reporting. WSDOT will not monitor the internet connection, and instead will provide cyber security requirements for contracted vendor agreements/EVSE service provider.

## **PROGRAM EVALUATION**

**This section is under development pursuant to additional technical guidance from USDOT and other federal sources.**

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## APPENDIX A: SUPPORTING MATERIALS

- Placeholder for Appendix A

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**Americans with Disabilities Act (ADA) Information:** This material can be made available in an alternate format by emailing the Office of Equal Opportunity at [wsdotada@wsdot.wa.gov](mailto:wsdotada@wsdot.wa.gov) or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

**Title VI Notice to Public:** It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, or national origin, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.