

# Plan to Action: Transportation Electrification Strategy

REV Collaborative Planning Meeting

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Washington State  
Department of  
**Commerce**

# Transportation Electrification Strategy

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Vision: All Washingtonians and visitors can use an EV and have access to convenient, reliable, and affordable charging stations.

- Roadmap to show what policies and investments are needed to achieve maximum electrification through 2035
- Modeling to inform EV infrastructure investments (location, type, quantity, power level, costs, timeline)
- TES published Feb. 2024



# Regional modeling outputs

Electric vehicle adoption and charging plug targets



# Notes on the targets

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## Snapshot in time

If we ran the model again today, we'd likely have at least slightly different assumptions

**Example:** Slowdown in growth in Q1-2 of 2024 will make short-term targets challenging to meet

## Economically driven

EV conversion is based on Total Cost of Ownership applied to consumer behavior S-curve

**Cost savings needed to convert last adopters increased exponentially**

## Charging is highly residential leaning

We made a policy decision to maximize residential charging assumptions.

It is highly unlikely that we meet the residential assumption in short run, making it **essential to meet or exceed public charging targets.**

# EV Targets for King, Kitsap, Pierce, and Snohomish Counties – Light Duty Vehicles

County	2025	2030	2035
King	140,753	406,143	827,740
Kitsap	13,278	51,700	116,935
Pierce	40,050	161,266	356,859
Snohomish	43,300	159,313	349,410

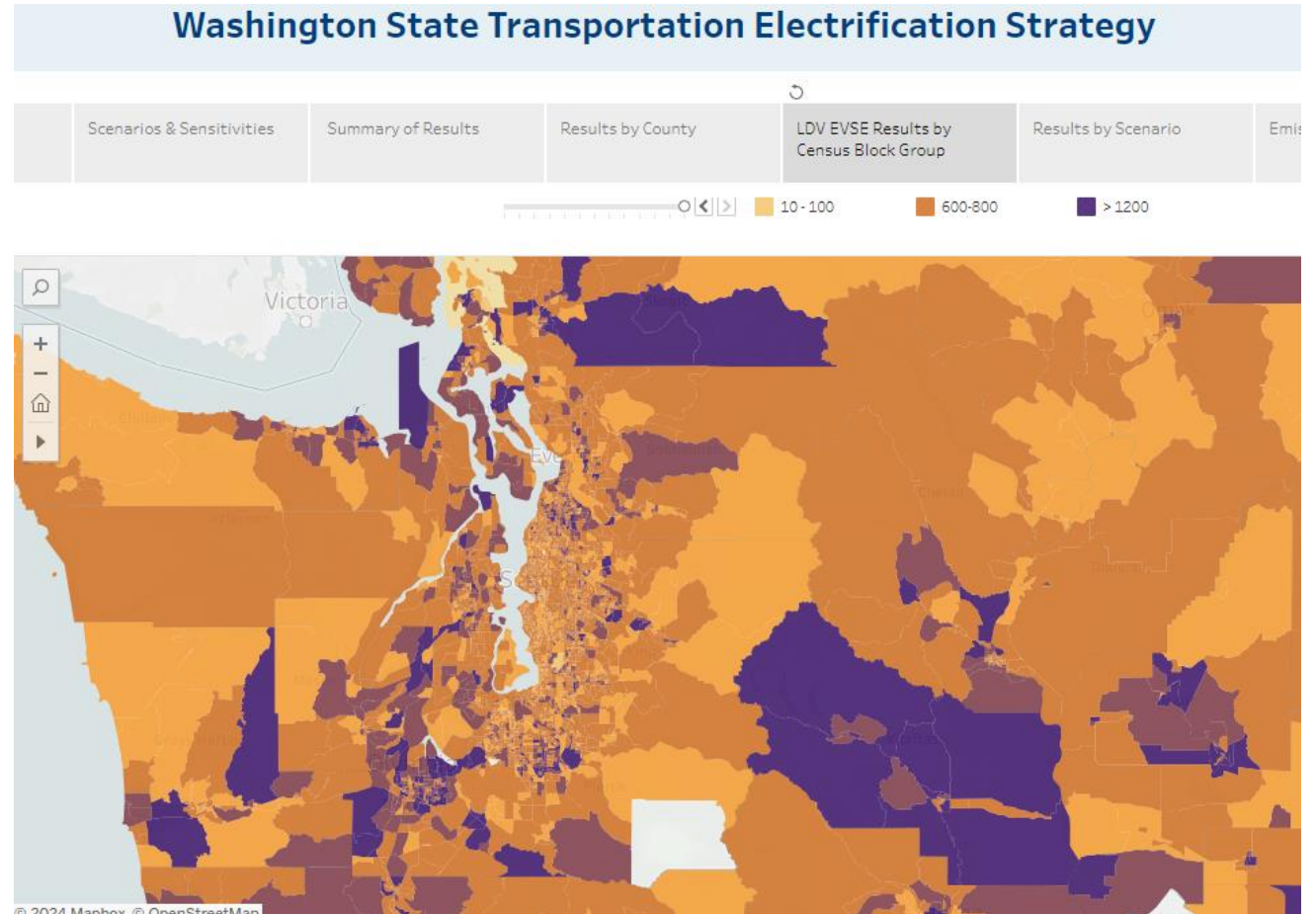
# Modeling results for King, Kitsap, Pierce, and Snohomish Counties – Charging plugs

<b>County</b>	<b>Residential (2023)</b>	<b>Residential (2035)</b>	<b>Non- Residential (2023)</b>	<b>Non- Residential (2035)</b>
King	55,288	721,426	3,814	16,739
Kitsap	5,014	107,877	322	2,549
Pierce	12,850	318,528	838	8,022
Snohomish	15,661	313,049	1,028	7,861

# Charging targets available at census block level

- Based on Replica trip data
- The estimates should be used as a directional guide and not as precise targets

**Commerce can send the census block data upon request**



# Statewide mapping tools

Commerce parcel-level scoring tool and WSDOT planner's tool



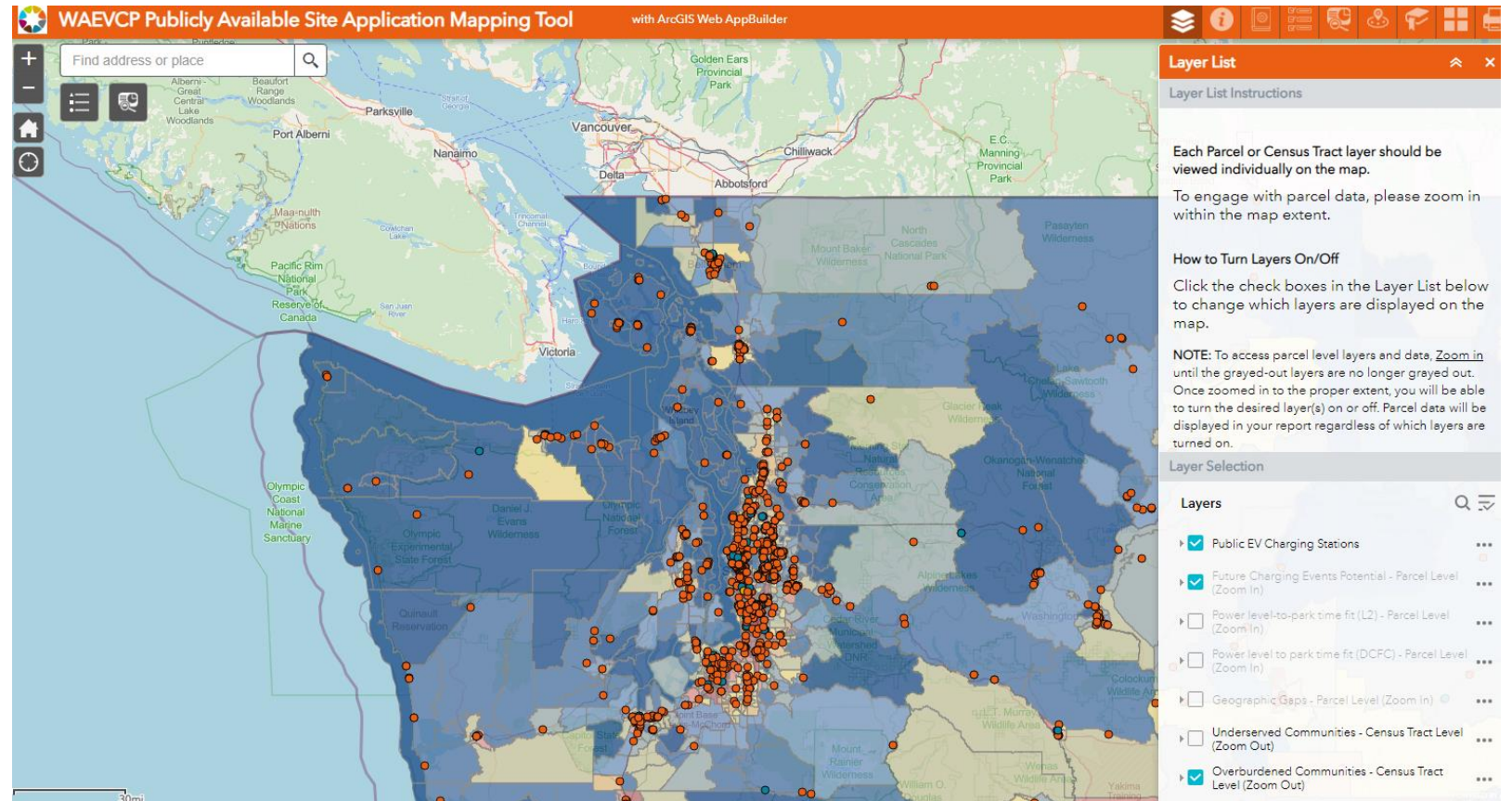


# Commerce charging program scoring tool

Developed Summer 2023, has not been updated since because of utilization for scoring criteria.

Can be used, cautiously, as **one data point** for site selection.

Likely to be updated by next Spring.

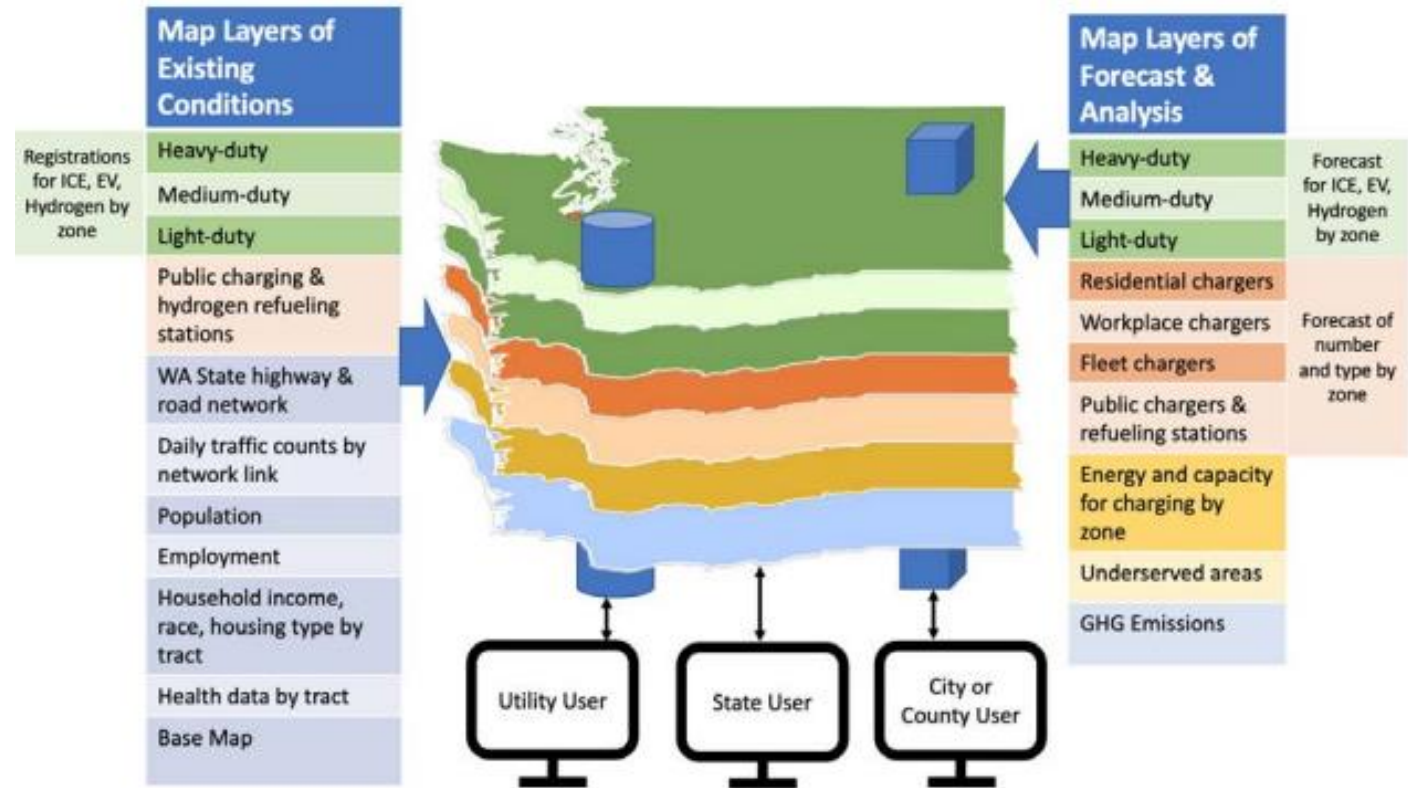


# Coming soon: WSDOT ZEV-MFT mapping tool

Intent is to create a comprehensive planning tool that matches current EV data with other transportation, energy and population data.

Will not have:

- Parcel level guidance for site selection
- Power availability



# TES *policy* recommendations



# Building technical expertise

Recommendation	Implementation progress/options
<p><b>Develop a Transportation Electrification Education and Resource Center in coordination with Municipal Research and Services Center and WSU Energy Green Transportation.</b></p> <p><b>Key model:</b></p> <ul style="list-style-type: none"><li>• Colorado has six regional “ReCharge coaches” that help local planners with planning and grant applications.</li></ul>	<ul style="list-style-type: none"><li>• Commerce hired Center for Sustainable Energy and several subcontractors to provide technical assistance on community grant program, resulting in \$141 million in applications.</li><li>• WSU Energy’s Green Transportation team is expanding beyond previous work to support public fleets.</li></ul>

# Make electricity capacity information transparent

Recommendation	Implementation progress/options
<p><b>Require utilities to develop public-facing electric capacity maps: The state should pass legislation requiring consumer-owned electric utilities – and the UTC should require IOUs – to post public-facing hosting capacity maps.</b></p> <p><b>Key models:</b></p> <ul style="list-style-type: none"><li>• New York and Oregon Public Utility Commission</li></ul>	<ul style="list-style-type: none"><li>• State has not made this a priority in 2024</li><li>• Keeping data current is a huge challenge, and larger utilities may be moving in this direction without a requirement.</li><li>• Ultimately, the most current information will come from strong communication between planners and their utility.</li></ul>

# Identify “no regrets” electric grid improvements

Recommendation	Implementation progress/options
<p><b>Support planning and building necessary utility-side charging infrastructure. UTC and Commerce should enable utilities to develop “make-ready” infrastructure programs.</b></p> <p><b>Key models:</b></p> <ul style="list-style-type: none"><li>• New York</li><li>• California</li></ul>	<ul style="list-style-type: none"><li>• Commerce is assessing total system costs for distribution and transmission costs needed to deliver power to EVs estimated in TES.</li><li>• Seattle City Light worked with ICCT to publish paper on needed system improvements.</li><li>• Ecology is working to make fleet reporting data available to utilities to facilitate early communication.</li></ul>

# Develop community partnerships

Recommendations	Implementation progress/options
<p><b>Ensure community partnerships are in place for charging infrastructure, especially in overburdened communities.</b></p> <p><b>Agencies with charging funding programs should co-develop guidance for community-centered siting for EVSE infrastructure and require that utilities and EVSPs use the guidance through contract language.</b></p>	<ul style="list-style-type: none"><li>• Commerce has explored several options for implementing this recommendation, but has thus far not developed guidance or grant requirements.</li><li>• Commerce did create a “matchmaking” list of interested partners during grant application period, which got positive feedback.</li></ul>

# Develop model site designs

Recommendations	Implementation progress/options
<p><b>Commerce should pull together industry and accessibility experts and local planners to develop statewide model site designs for different types of EVSE deployments that can be used by local implementers.</b></p>	<ul style="list-style-type: none"><li>• Commerce has not been funded to do this work and does not currently have capacity to do so.</li><li>• The entity that ultimately leads the Resource Center should be tasked with this work, whether that is at Commerce or WSU Energy.</li></ul>



# Develop model ordinances/codes

Recommendations	Implementation progress/options
<p><b>Develop recommendations for building codes and corresponding parking and charging requirements.</b></p> <p><b>Develop model ordinances for EV charging project permitting and best practices for utility interconnection processes to accelerate timelines.</b></p>	<ul style="list-style-type: none"><li>• Commerce is requesting funding in the 2025-2027 budget cycle to implement this recommendation.</li></ul>

# How to use the TES

Uses	County-level or regional targets	Inform planning tools	Build subject matter expertise and determine your role
<p><b>Value:</b> What is needed for it to be useful?</p>	<ul style="list-style-type: none"> <li>• Make the case for funding and action</li> <li>• Prevent overbuild</li> </ul>	<ul style="list-style-type: none"> <li>• Parcel level</li> <li>• Data-informed prediction of utilization</li> <li>• Available power</li> </ul>	<ul style="list-style-type: none"> <li>• TES recommendations are intended for state action, but can signal where to spend time learning</li> </ul>
<p><b>Considerations</b></p>	<ul style="list-style-type: none"> <li>• TES targets are strong enough at county level to make the case for funding and action</li> <li>• Current risk of overbuild is low</li> </ul>	<ul style="list-style-type: none"> <li>• Costs to build and maintain</li> <li>• Still need to communicate with property owners and utilities</li> </ul>	<ul style="list-style-type: none"> <li>• Do local governments need to be involved in site selection, or should they empower community/private sector?</li> </ul>

# Thank you!



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