

Advancing Electric Transportation Through Community Engagement



Executive Summary:

In May 2022, Forth was contracted to provide facilitation and community listening sessions with customers in Pacific Power's rural service territories. Forth conducted a series of in-person and virtual sessions to learn about the barriers that exist in their communities and their goals of electrifying transportation. The six communities involved were:

Douglas County- July 28th, 2022
Benton County- September 6th, 2022
Clatsop County- October 12th, 2022
Deschutes County- October 25th, 2022
Jackson County- November 8th, 2022
Umatilla County (virtual)- November 10th, 2022

The insights gained from these sessions will inform Pacific Power's comprehensive Transportation Electrification Plan (TEP), which will assist the utility in serving its customers' transition to electric vehicles. During the group discussions and mapping sessions, customers identified local barriers such as critical gaps in the existing network of charging stations. Surveys were shared with participants to capture vehicle ownership and usage trends as well as prior EV knowledge. The combination of sessions and survey results informed the following recommendations:

Recommended courses of action for PacifiCorp:

1. Increased promotion of Pacific Power's incentive programs, such as the Level 2 Residential/Commercial Charger Rebate, to gain improved rural service territory participation
2. Continued opportunities for community engagement and feedback. There was a strong appreciation for these sessions' cultivating a space to include customer and community perspectives
3. Incorporating equity-centered approaches that consider the different lived experiences of rural and under-resourced community members when designing charging infrastructure plans
4. Develop an equitably distributed network of DC fast chargers in rural Oregon to allow EV drivers to navigate high-usage travel corridors. Work with property owners and city organizations to establish Level 2 chargers in high-traffic areas, utilizing rebates and grants when possible
5. Support programs by directing grants that provide communities with shared electric transportation, such as carshare or micromobility programs. In specific sessions, there was considerable interest in electrifying medium and heavy-duty vehicles such as electric school buses and municipal transit

Recommended courses of action for PacifiCorp:

- Develop a stronger infrastructure of DC fast chargers in rural Oregon to allow EV drivers to explore the state with no range anxiety
- Work with property owners and city organizations to develop Level 2 chargers in appropriate areas, utilizing rebates and grants when possible
- Continue to promote and incentivize Pacific Power customers with funding support to achieve these charging stations
- Support carshare programs where necessary
- Financially support the transition to electric school buses in the country
- Support developing an infrastructure for micromobility, including collaboration with another organization or corporation

Benefits to achieving these courses of action:

- A more robust electric charging infrastructure will be developed, which will remove many of the barriers for consumers
- Strategically positioned carshare vehicles that benefit residents in the typically underserved communities and allow them to travel to areas downtown easily
- As more electric vehicles hit the market and the state mandates are enforced, the state of Oregon will be in a much better position than it currently is
- Pacific Power's service areas will have done their part to develop the infrastructure needed for residents to transition to transportation electrification

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A. INTRODUCTION

1. Background Information

Forth was contracted by Pacific Power in May 2022 to facilitate and engage individual and organizational stakeholders across Pacific Power's Oregon service territory. The goal was to better understand community-level interest, awareness and barriers to electric vehicle (EV) adoption. This information would be used to inform the design of a comprehensive Transportation Electrification Plan that incorporates community input over a period of three years.

Forth and Pacific Power collaborated to design, organize and host a series of six stakeholder engagement sessions throughout Oregon from July - November 2022. Forth's community-centered approach, informed by industry standards in equitable outreach such as [Greenlining Institute's Mobility Equity Framework](#), paired with electric vehicle and industry expertise, was an ideal match for the engagement and relationship-building Pacific Power was hoping to achieve with these sessions.

This report is presented to provide an overview of each of the sessions conducted, highlighting the top barriers identified by stakeholders to greater EV adoption in their community paired with suggested locations for charging station infrastructure investment. These barriers varied as much as the regions of Oregon vary geographically and emphasize that there is no one-size-fits-all approach to these investments.

In the sections that follow, we will list each session:

- An event summary
- Session specific information
- Key takeaways and barriers
- Results of the mapping exercise
- Survey Results

2. Approach

In collaboration with Pacific Power, Forth designed a stakeholder engagement plan. Our intention was to connect in six different locations throughout rural Oregon. We worked through June and July 2022 to finalize the six locations in which to host the stakeholder engagement sessions. We opted for in-person sessions and would work with Pacific Power's Regional Business Managers and Forth's existing contacts in each area to determine a suitable host location.

Each session took place between July - November 2022 and two virtual sessions were added at the end of the engagement period. The virtual sessions were conducted for participants that were unable to attend the live sessions but expressed interest in listening and contributing to the conversation. We utilized a combination of in-person and digital methods to collect input from attendees.

Each session had the following components:

- Introductions
 - Each session was attended by at least two Forth staff members and at least one Pacific Power representative; dinner was provided to attendees as these sessions took place in the evening
 - Participants received a \$50 gift card for their participation
- Overview of EV technology and Pacific Power's Transportation Electrification Program Offerings
 - Presentation slides are provided in Appendix A
- Open Floor Discussion with Guided Questions
 - Prepared questions were facilitated to allow for qualitative information to be shared casually and conversationally with attendees
 - Full feedback in Appendix D
- Mapping Exercise
 - The goal of this exercise was to allow attendees to provide input on specific locations in their community that lack sufficient EV charging stations and to supplement the NEVI charging stations planned throughout the state, which will run on most major highways throughout the state
- Survey Completion
 - The survey allowed us to collect situational information about vehicle ownership, transportation-specific information such as EV awareness and readiness and general awareness about Pacific Power's transportation electrification efforts
 - A list of survey questions is provided in Appendix B
 - Complete survey results are provided in Appendix C

3. Refinements and Learnings

Throughout the process, we made a few refinements based on learnings and feedback from each session. These are summarized as follows:

- Where possible, we sought to have local contacts send personalized invitations to each session. In some cases, this was the Regional Business Manager from Pacific Power and in others, it was a connection already established by Forth
- We leaned on local contacts to recommend community meeting spaces to host each session.
- As Forth was conducting Ride and Drive events in these areas during the same time frame, we leveraged these community engagements to spread the word about the engagement sessions and worked with public relations representatives to amplify efforts

In the sections that follow, we will list for each session:

- An event summary
- Session specific information
- Key takeaways and barriers
- Results of the mapping exercise
- Survey Results

4. Industry Acronym Glossary

EV = Electric Vehicles

EVSE = Electric Vehicle Supply Equipment

DCFC = Direct Current Fast Charging

B. STAKEHOLDER ENGAGEMENT SESSIONS

1. Douglas County

- July 28th, 2022
- Location: Aviva Health center in Roseburg, Oregon
- Attendees: 9
- Organizations Represented:
 - Smart Energy
 - Umpqua Public Transportation District
 - Umpqua Electrification Transportation Team
 - City of Sutherlin
 - Roseburg Disposal
 - Housing Authority of Douglas County
 - Aviva Health
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager
 - Local promotion by local EV group, Umpqua Electrification Transportation Team
 - Social media advertising (LinkedIn, Facebook, Twitter)

This session featured a mix of EV owners and community organization representatives. Key takeaways and barriers to EV adoption that were identified during the open floor discussion are highlighted below.

1.1 Key Takeaways

- Continued community exposure to electric mobility via increased marketing and promotion efforts such as live demonstrations for electric passenger vehicles or electric public vehicles will enable increased adoption and awareness overall
- The community would benefit from intentional efforts such as bill inserts to increase awareness of programs and incentives
- Larger financial incentives for public charging stations would encourage more installations of both Level 2 and DCFCs
- As market demand grows for the transition of medium to heavy-duty commercial vehicles to electrified options, incentives offered should follow
- There is a community interest in utilizing electric carshare as an additional affordable alternative to car ownership

1.2. Key Barriers

Insufficient Charging Infrastructure

Travel between Roseburg and the Coast or Bend in a shorter-range EV is challenging and impossible in some cases. Stakeholders suggested a combination of Level 2 and DCFCs along common routes to alleviate these challenges and build out a robust charging network. Specific locations suggested are

included in the outputs of the mapping exercise below. Stakeholders commenting on charging infrastructure within Roseburg and the Housing Authority of Roseburg highlighted the need for additional charging infrastructure at new multifamily housing sites under development with over 480+ units will easily strain the 8 DC Fast Chargers available in the county today. They also voiced eagerness for the community to support the buildout of infrastructure with sufficient funding support.

Insufficient safety & access for micro-mobility

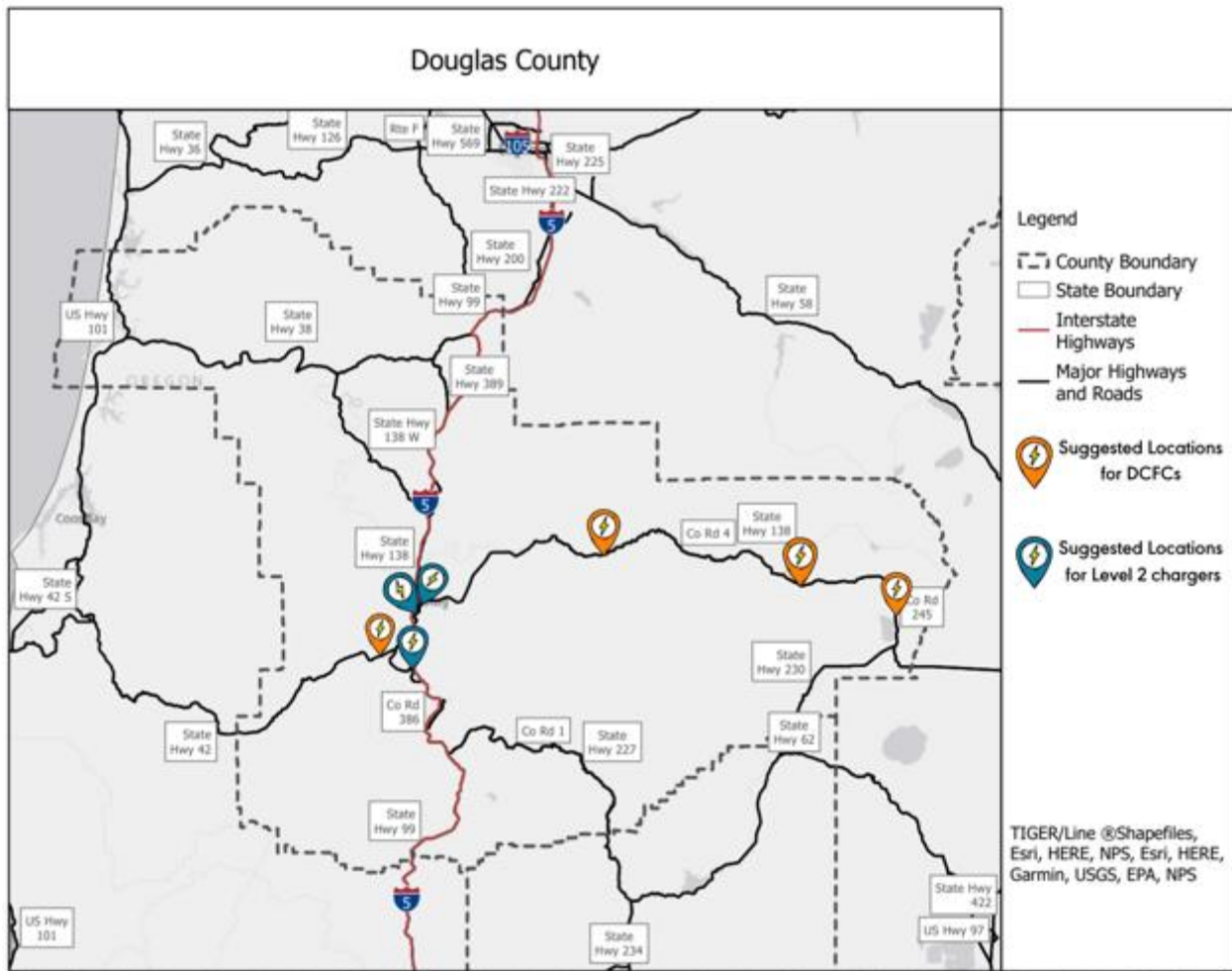
Stakeholders indicated that the area is lacking in safe spaces to park e-bikes and scooters. Further, safety trainings and courses are not available to educate the public on how to safely access micro-mobility options.

1.3. Mapping Exercise

The mapping exercise in this session focused on Douglas County and the conversations were generally centered around challenges that exist regarding travel in the region. Many participants expressed there was insufficient charging along Highway 138 from the Coast to Roseburg and between Bend and Roseburg. The group proposed charging stations every 50 miles going from east to west to accommodate the county residents and visitors traveling to Crater Lake and beyond. Based on the feedback given to us from participants, we are recommending the following placement of public charging. Those locations are illustrated below within the county map.

Suggested locations for charging stations:

- DCFC
 - Glide Community Center
 - Diamond Lake Lodge
 - Roseburg YMCA
- Level 2
 - Roseburg VA
 - Stewart Park
 - Multifamily Housing development, near Hwy 138



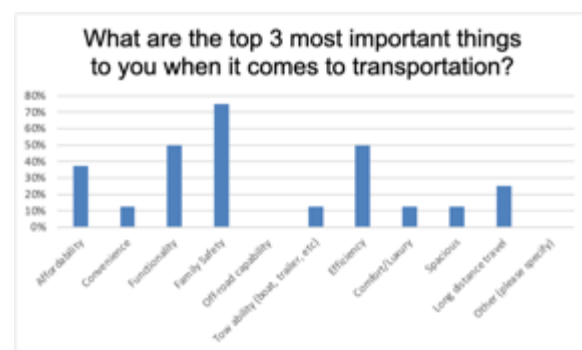
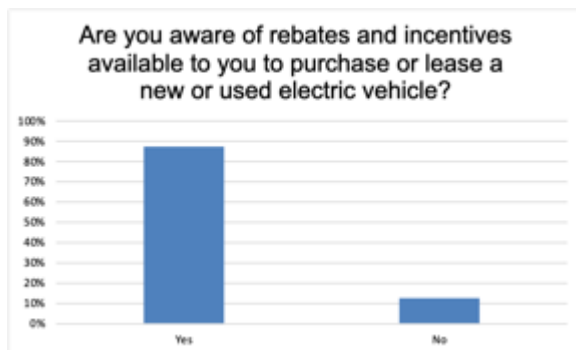
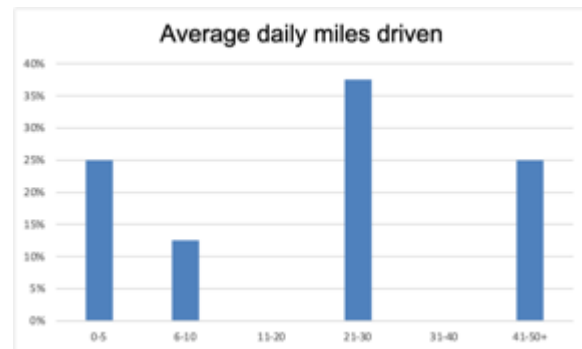
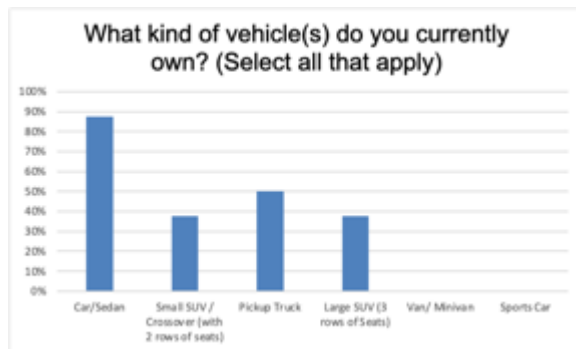
1.4. Survey Results

Note: Our original session design featured two surveys, one prior to the session and one provided via email following the session. Due to low participation in the post-session survey following the first session Forth shifted its approach to collecting all survey responses at the end of the in-person session. The Douglas County session's summary below includes pre- and post-survey responses.

In the survey, we first asked our stakeholder attendees to share some information about their transportation habits and living situation.

Out of the 9 attendees:

- 85% currently own a car/sedan and 100% own at least one vehicle
- 100% live in a single-family homes
- The majority of attendees drive over 21 miles a day



Moving on to questions about transportation needs and EV awareness, survey respondents reported that family safety, functionality and fuel efficiency are the three most important attributes they value regarding transportation and personal vehicle ownership.

1.4.1. Additional Survey Statistics

- Over 80% of stakeholders are familiar with carsharing and 60% would utilize an EV carshare program if one was initiated in their community
- It is a 50/50 split for stakeholders to purchase new or used vehicles
- 100% of the stakeholders believe Pacific Power's residential and commercial rebate program for EV charging stations will help reduce barriers to Transportation Electrification in their community
- 100% of the stakeholders believe that Pacific Power's Electric Mobility Grant Program will help reduce barriers to Transportation Electrification in their community
- 73.5% were confident that EVs could satisfy their lifestyle needs
- Over 85% of respondents reported familiarity with electric vehicles

2. Benton/Linn County

- September 6, 2022
- Location: LaSells Stewart Center at Oregon State University in Corvallis, Oregon
- Attendees: 5
- Organizations Represented:
 - Oregon State University (OSU)
 - The City of Corvallis
 - Benton Community Foundation
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager
 - Social media advertising (LinkedIn, Facebook, Twitter)

This session featured a mix of representatives from community organizations, including Oregon State University, where the session was held. There were no EV owners in the group. Key takeaways and barriers to EV adoption that were identified during the open floor discussion are highlighted below.

2.1. Key Takeaways

- Community involvement and input is important to stakeholders
- Partnerships centered around economic development could be a way to generate community-level support for EV and EVSE adoption
- Local government and public entities are not accustomed to providing investments that are beyond supplying basic services to the community. On-bill financing or other solutions might ease the pressure of investments by local organizations
- Community would benefit from greater awareness via increased marketing and promotion efforts such as bill inserts of programs and incentives offered by Pacific Power

2.2. Key Barriers

Insufficient charging infrastructure

Stakeholders shared that Downtown Corvallis has limited charging infrastructure; areas such as City parks and other public spaces are good places to add Level 2 charging stations. Additionally, Southtown is a particularly underserved area that could benefit from additional charging stations.

Upfront costs to install EV charging stations

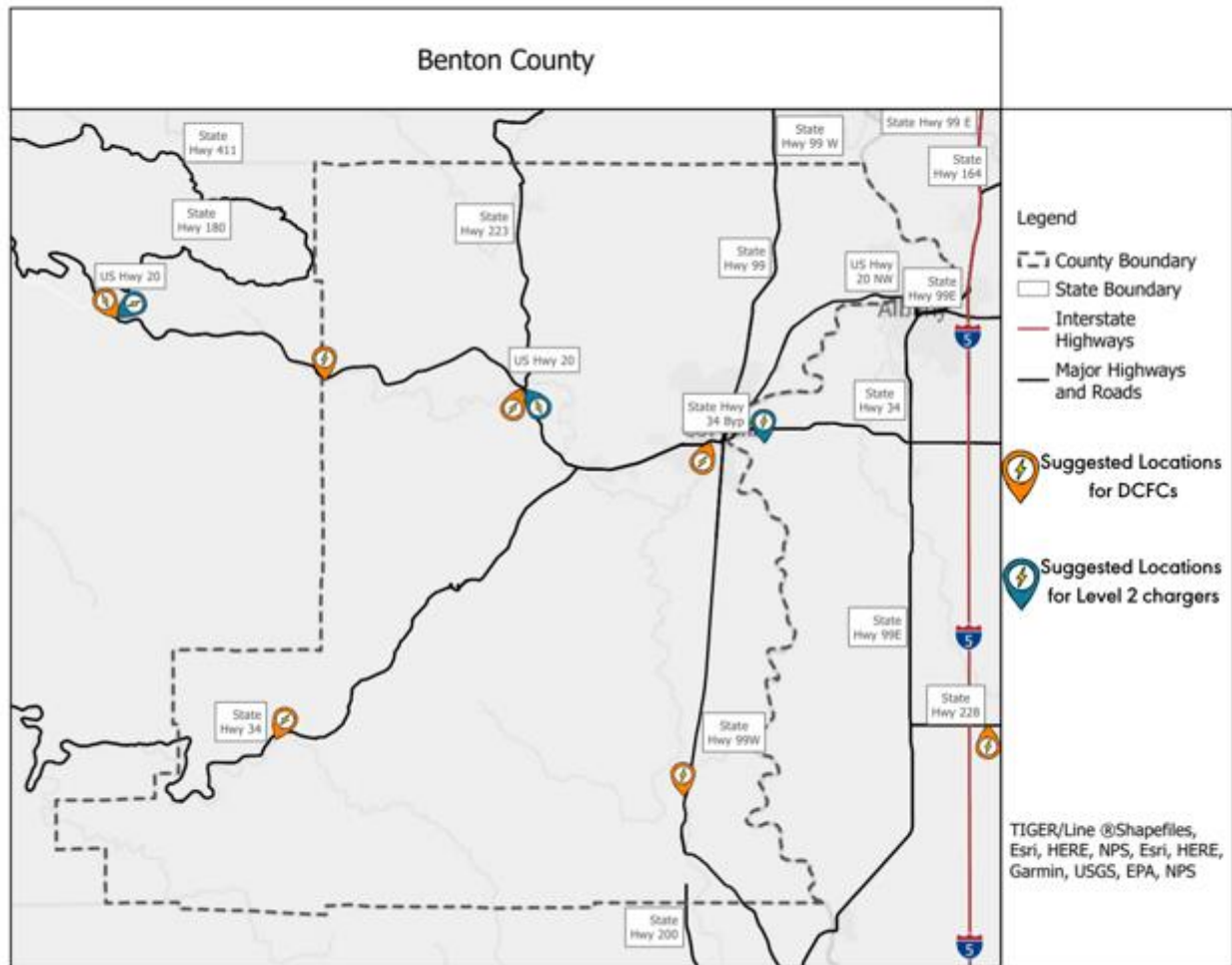
Organizations such as Corvallis Community Center and the Aquatic Center, have directly requested from local government charging stations but the city has been unable to accommodate the requests. Further, investments can best serve low-income customers when all costs are covered, as opposed to supplementing existing funding which is often more limited in underserved communities.

2.3. Mapping Exercise

The mapping exercise in this session focused on Benton County and the conversations were generally centered around the lack of infrastructure in the region. Many participants suggested charging locations in the county based on their experiences and proposed charging stations that would benefit the user considering their purpose for going to that location. This included DCFC in areas outside of the county boundary, which illustrates the need to charge quickly when traveling outside of Corvallis. Based on the feedback given to us from participants we are recommending the following placement of public charging. Those locations are illustrated below within the county map.

Suggested locations for charging stations:

- DCFC
 - Corvallis community center
 - Southside
 - Downtown Corvallis
 - 3rd Street
- Level 2
 - Aquatic center
 - Community gardens
 - South Corvallis Food Bank
 - City Parks
 - 3rd Street

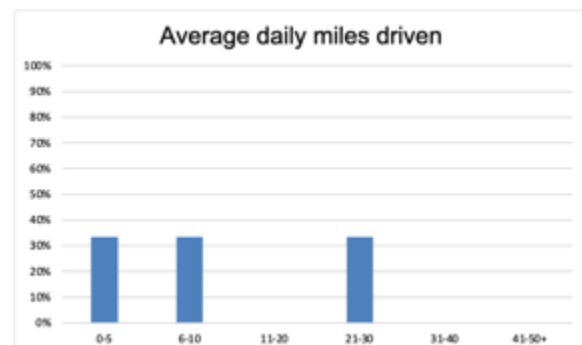
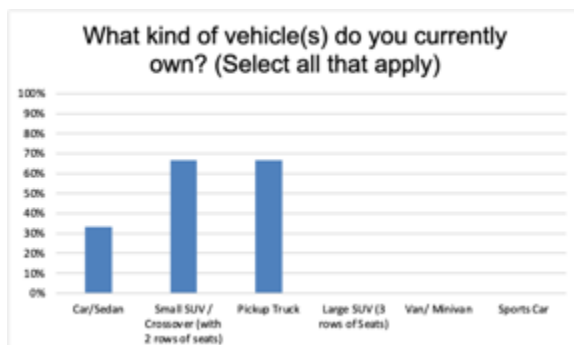


2.4. Survey results

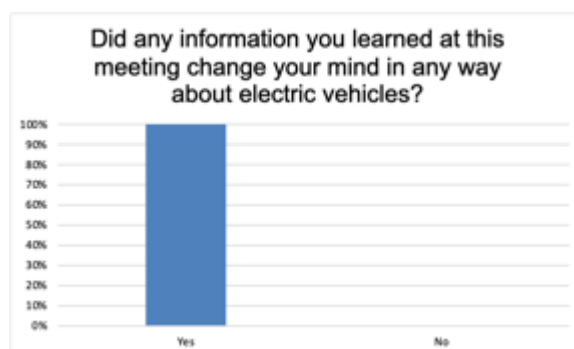
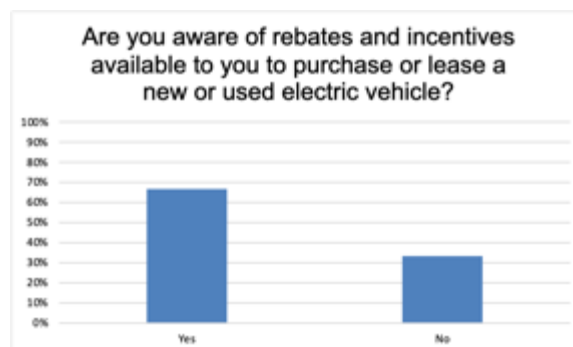
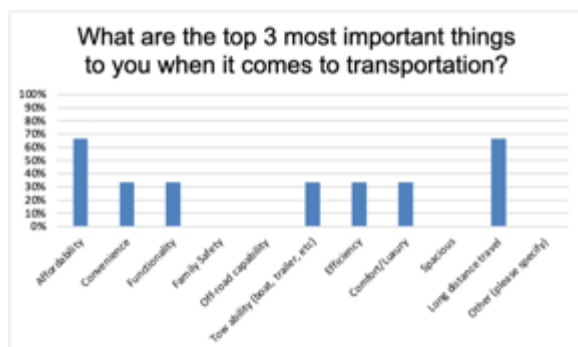
In the survey, we first asked our stakeholder attendees to share some information about their transportation habits and living situation.

Out of the 5 attendees:

- Over 65% currently own an SUV or pickup truck and 100% own at least one vehicle
- 100% live in a single-family home



For questions related to transportation needs and EV awareness, survey respondents reported that affordability and long-distance travel are the two most important attributes they value when it comes to transportation and personal vehicle ownership. This group of survey respondents also reported less awareness of financial incentives available when purchasing electric vehicles.



2.4.1 Additional Survey Statistics

- Roughly 50% of the present stakeholders feel electric vehicles would satisfy their needs
- 100% of attendees said what they learned at the meeting changed their minds about electric vehicles
- 100% of attendees said Pacific Power's Electric Mobility Grant Program will help reduce barriers to Transportation Electrification in their community
- When asked what other customer incentives or programs Pacific Power could offer to help reduce barriers to e-mobility respondents shared:
 - More incentives for electric bikes
 - Incentives for choosing electric public transportation options or electric commuting incentives (ie purchasing an electric vehicle for commuting purposes specifically)

3. Clatsop County

- October 12, 2022
- Location: Astoria Public Library, Oregon
- Attendees: 5
- Organizations Represented:

- Chamber of Commerce
- NW Natural
- Residents/Professionals
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager
 - Social media advertising (LinkedIn, Facebook, Twitter)
 - Chamber of commerce calendar input in Astoria, Cannon Beach and Seaside

This session featured a mix of EV owners and community organization representatives, including a representative from NW Natural. The majority of concerns expressed by this group were about the weather conditions and terrain being a limiting factor for EV adoption. Key takeaways and barriers to EV adoption that were identified during the open floor discussion are highlighted below.

3.1. Key Takeaways

- Greater education about electric vehicles, including light and medium/heavy duty, is needed to reduce barriers to adoption
- Shared transportation options such as electric vans, carshares, bikeshares and scooters could be viable solutions with ample education and infrastructure
- Electric vans for commuting from rural to oceanside communities, because many tourists visit from outside the city in their gas vehicles
- Electric car sharing would be welcomed for community members and tourists

3.2. Key Barriers

Insufficient charging infrastructure

Stakeholders contributed a number of suggestions for both Level 2 and DCFCs throughout the County including locations with longer dwell times such as grocery stores, bowling alleys and museums. Two areas in particular, Emerald Heights and Warrenton were identified as underserved areas with concentrated housing lacking in charging infrastructure.

Terrain and climate create concerns about vehicle performance and viability

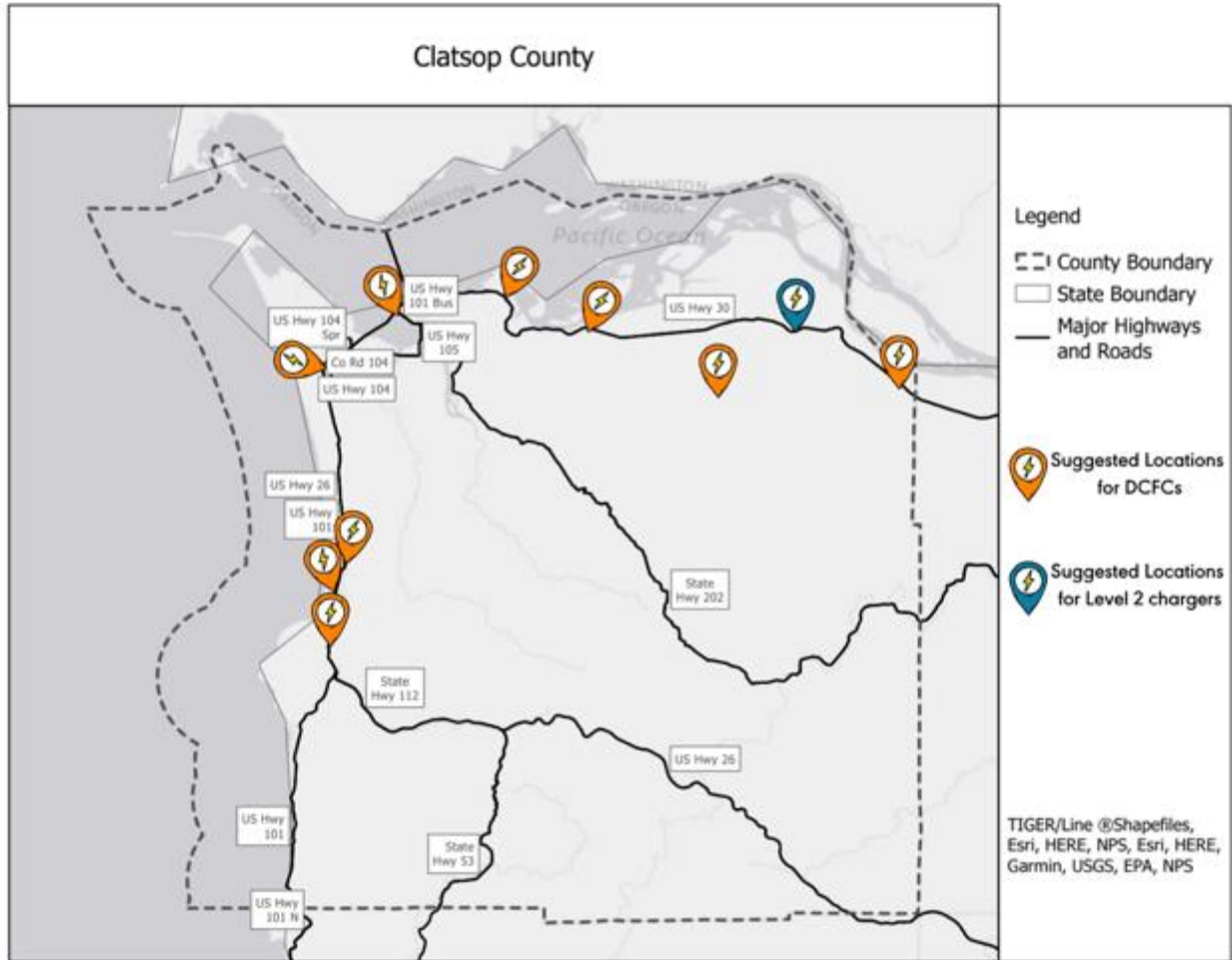
A consistent theme and concern related to EV adoption is the unique challenges presented by steep terrain in the area. One stakeholder commented about a retrofitted electric bus being unable to make it in one case. Additionally, stakeholders expressed concerns about vehicle performance due to weather patterns. Rain and colder temperatures were identified as deterrents for both electric vehicle and electric bike adoption.

3.3. Mapping Exercise

The mapping exercise in this session focused on Clatsop County and the conversations were generally centered around challenges that exist regarding travel in the region. Most of the suggested locations on the map were for DCFC. Those locations are illustrated below within the county map.

Many participants expressed Charging station recommendations:

- DCFCs
 - Seaside by cinema
 - Emerald Heights
 - Costco
 - New housing developments in Warrenton near Costco
 - U.S. Highway 101 by bowling alley
 - New housing developments near Seaside Airport
 - Seaside Civic and Convention Center
 - Fort George Brewery
 - Maritime Museum
 - Astoria/Clatsop County government buildings
 - Tongue Point
- Level 2
 - Hospitals
 - Costco
 - Logging and fishery
 - Community College
 - Maritime Museum

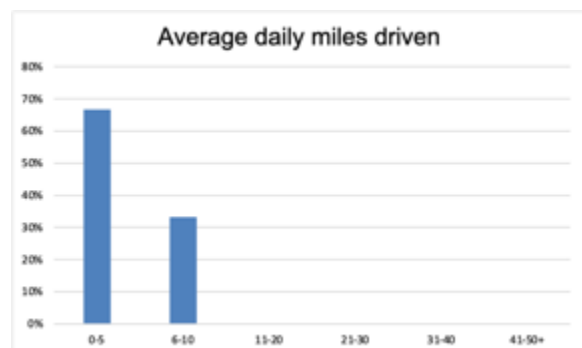
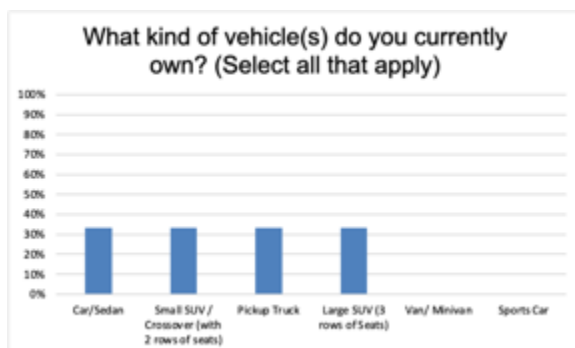


3.4. Survey Results

In the survey we asked our stakeholder attendees to share some demographic information around their transportation habits and living situation.

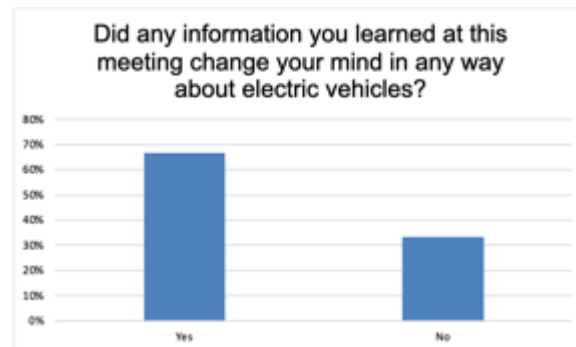
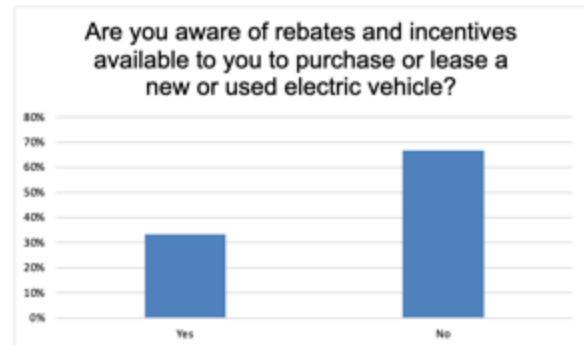
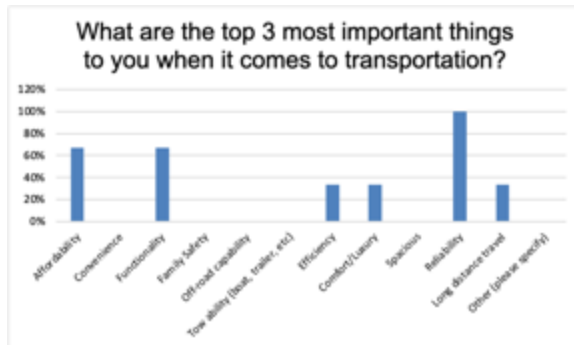
Out of the 5 attendees:

- There was equal ownership representation in the different vehicle types.
- 100% live in a single-family home
- On average each attendee drives 6.7 miles per day



Regarding transportation needs and EV awareness, survey respondents reported that **reliability, functionality and affordability** are the 3 most important attributes they value when it comes to transportation and personal vehicle ownership.

- 66% of attendees said what they learned at the meeting changed their minds about electric vehicles. 33% said it didn't.



3.4.1 Additional Survey Statistics

- 100% are of stakeholders are familiar with electric vehicles and 35% would utilize an EV carshare program if one was initiated in their community
- 33% of the stakeholders present drive their personal car for/to work, 66% do not.
- 66% were not familiar with what a carshare program is and, similarly, would not participate in a carshare program if one was available, 33% would participate.
- 66% buy used vehicles and 33% buy new
- 100% of attendees said Pacific Power's Electric Mobility Grant Program will help reduce barriers to Transportation Electrification in their community
- When asked what other customer incentives or programs Pacific Power could offer to help reduce barriers to e-mobility:
 - Electric bike rebates

3.4.2 Stakeholder Engagement Experience Feedback

- It is easier to install chargers than I had thought
- A multi-faceted approach could be a game changer for the rural NW coast area

4. Deschutes County

- October 25, 2023
- Location: Redmond Public Library, Oregon
- Attendees: 6
- Organizations Represented:
 - 350 Deschutes
 - The Environmental Center
 - OSU Cascades
 - Hiatus Homes
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager
 - Social media advertising (LinkedIn, Facebook, Twitter)
 - Chamber of commerce calendar input in Redmond

This session featured a mix of EV owners and community organization representatives, including The Environmental Center. The concerns in this group had more to do with developing a charging infrastructure people can rely on for their lifestyles in that area. Key takeaways and barriers to EV adoption that were identified during the open floor discussion are highlighted below.

4.1. Key Takeaways

- The Environmental Center discussed the need to design a system that monitors and maintains active charging stations which will establish more confidence in the community
- Charging grants for electric bikes are desired, particularly for customers living in multi-family dwellings. These grants will likely be extended to property owners/landlords to establish a charging infrastructure at their properties
- Substantial charging infrastructure needs to be established in this area and planning for investments should take into consideration the elevation gain and how this influences range in an electric vehicle

4.2. Key Barriers

Charging Station Reliability Concerns

Stakeholders shared that public information about charging stations in the area is limited and the information is not accurate. For example, many car dealerships are shown to have public charging but these stations are not actually accessible. Additionally, stakeholders expressed the need for consistently available, affordable, well distributed and well signed, reliable Level 2 chargers. To achieve this, infrastructure should be planned with reliability and longevity in mind and with solutions in place for servicing charging stations when issues arise.

Insufficient Charging Infrastructure

There is a large concern about establishing a thorough and functional charging infrastructure in Bend and the surrounding areas. Car share drivers need ample charging stations around busy areas like City Hall in downtown Bend.

Currently people rely on the public data that is available and the information is inaccurate. When you search for public charging stations, often a few of the car dealership chargers are shown and these are not typically available to the public.

4.3. Mapping Exercise

The mapping exercise in this session focused on Deschutes County and the conversations were generally centered around challenges that exist regarding travel in the region. The map below shows the Deschutes County boundary. Most of the suggested locations on the map were for highly traveled routes to Mt. Bachelor, Hoodoo Ski Area and Snow Parks. Many of those locations are illustrated below within the county map.

Charging station recommendations:

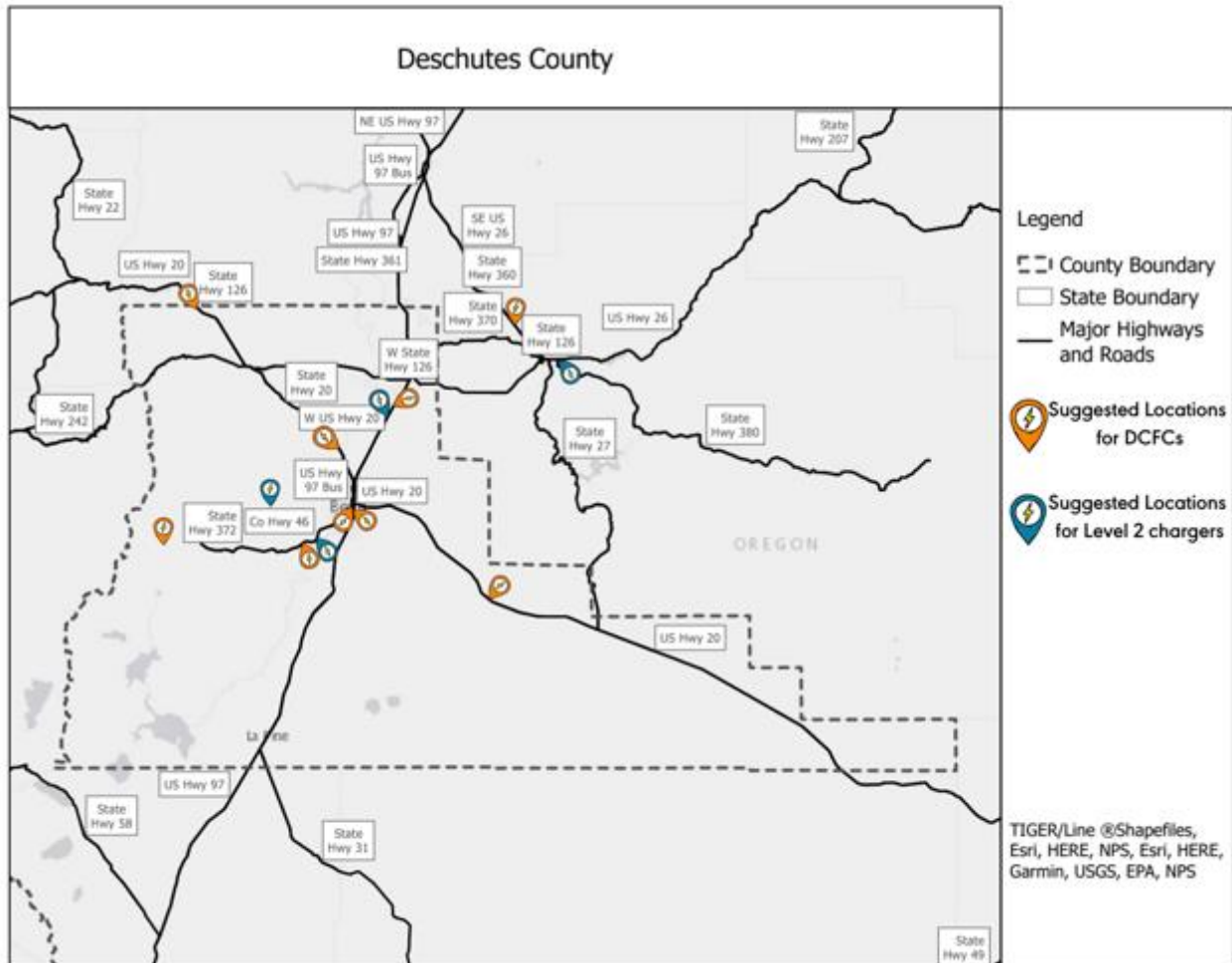
DCFC

- Hoodoo Ski Area
- Mt. Bachelor
- Crooked River Ranch
- Prineville
- Bend
 - City Hall
 - Deschutes County Building
- Redmond
 - Costco
 - Cascade village shopping center
 - Bi-Mart/Grocery Outlet
 - Hwy 97 (Fred Meyer)

Level 2

- Smith Rock
- Pine Nursery Park
- Sisters
- Hoodoo Ski Area
- Snowparks: Skyliner Snow Park and Wanoga Snow Play Area
- Downtown Tumalo
- Bend
 - Saint Charles Hospital
 - North side, East side
 - Old Mill shopping center
 - OSU Cascades

- Central Oregon Community College
- Redmond
 - Redmond High School
 - Costco

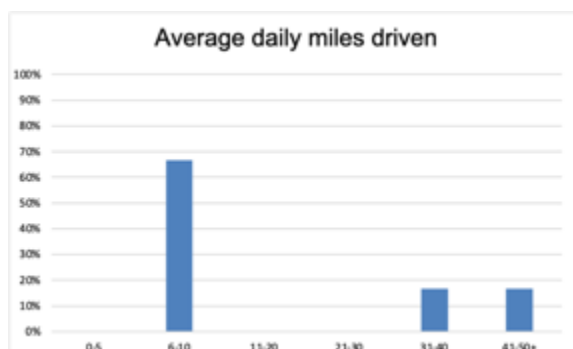
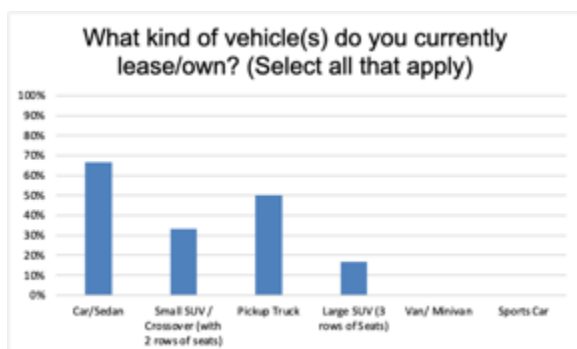


4.4. Survey Results

In the survey, we asked our stakeholder attendees to share some demographic information around their transportation habits and living situation.

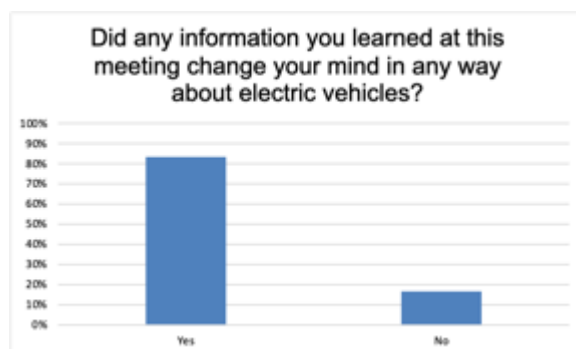
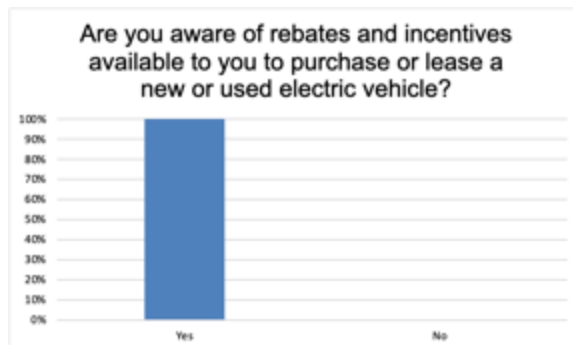
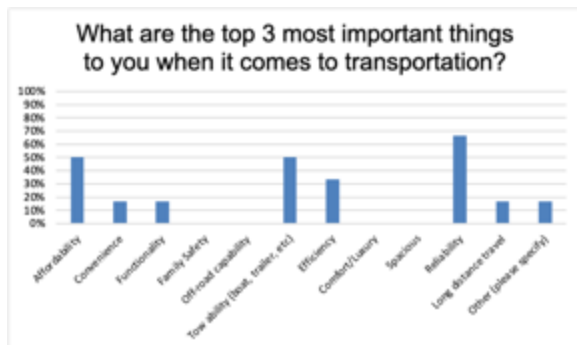
Out of the 6 attendees:

- 66% own a Car/Sedan and 66% own multiple vehicles
- 100% live in a single family home
- Most drive only between 6-10 miles per day



Transportation and EV Awareness

Survey respondents reported that **reliability, tow ability and affordability** are the 3 most important attributes they value when it comes to transportation and personal vehicle ownership.



4.4.1. Additional Survey Statistics/Information

- 100% of respondents typically purchase used vehicles only
- 100% of attendees said Pacific Power's Electric Mobility Grant Program will help reduce barriers to Transportation Electrification in their community
- 66% of respondents would participate in an EV carshare program if one were initiated in their community

When asked what other customer incentive programs could be offered to help reduce barriers to e-mobility, respondents shared:

- E-bike rebates
- Preferred pricing at public charging stations for renters and low-income drivers

4.4.2. Stakeholder Engagement Experience Feedback (direct quotes in italics)

- *Schools may consider using smaller electric vehicles (electric vans) to transport students in near term pilot*
- *Partner with rideshare companies to provide DCFC for drivers*
- *Add affordable EV car share for folks to try it out for longer trips*

5. Jackson County

- October 8, 2022
- Location: Mercy Flights Medford, Oregon
- Attendees: 5
- Organizations Represented:
 - AdventEMO, LLC
 - Virginia Integrative Medicine
 - Grant's Pass Electric Vehicles
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager
 - Social media advertising (LinkedIn, Facebook, Twitter)

Every stakeholder that attended this session arrived in an electric vehicle. There were a mixture of community organization representatives and early EV adopters in the room and this group was very engaged in the conversation. The concerns in this group had more to do with developing a charging infrastructure people can rely on for their lifestyles. Key takeaways and barriers to EV adoption that were identified during the open floor discussion are highlighted below.

5.1. Key Takeaways

- Substantial investment in infrastructure is needed to allow travel in and out of region, to the Coast and Nevada in particular
- A key consideration of some stakeholders for the adoption of electric vehicles is the carbon intensity of the electric grid. They will avoid charging stations if they know it was powered by coal.
- As the utility prepares for a major transition to electric vehicles, they should engage with their customers on how transportation electrification is aligned with the switch to electric household appliances as well; time of use rates and other program offerings should support one another

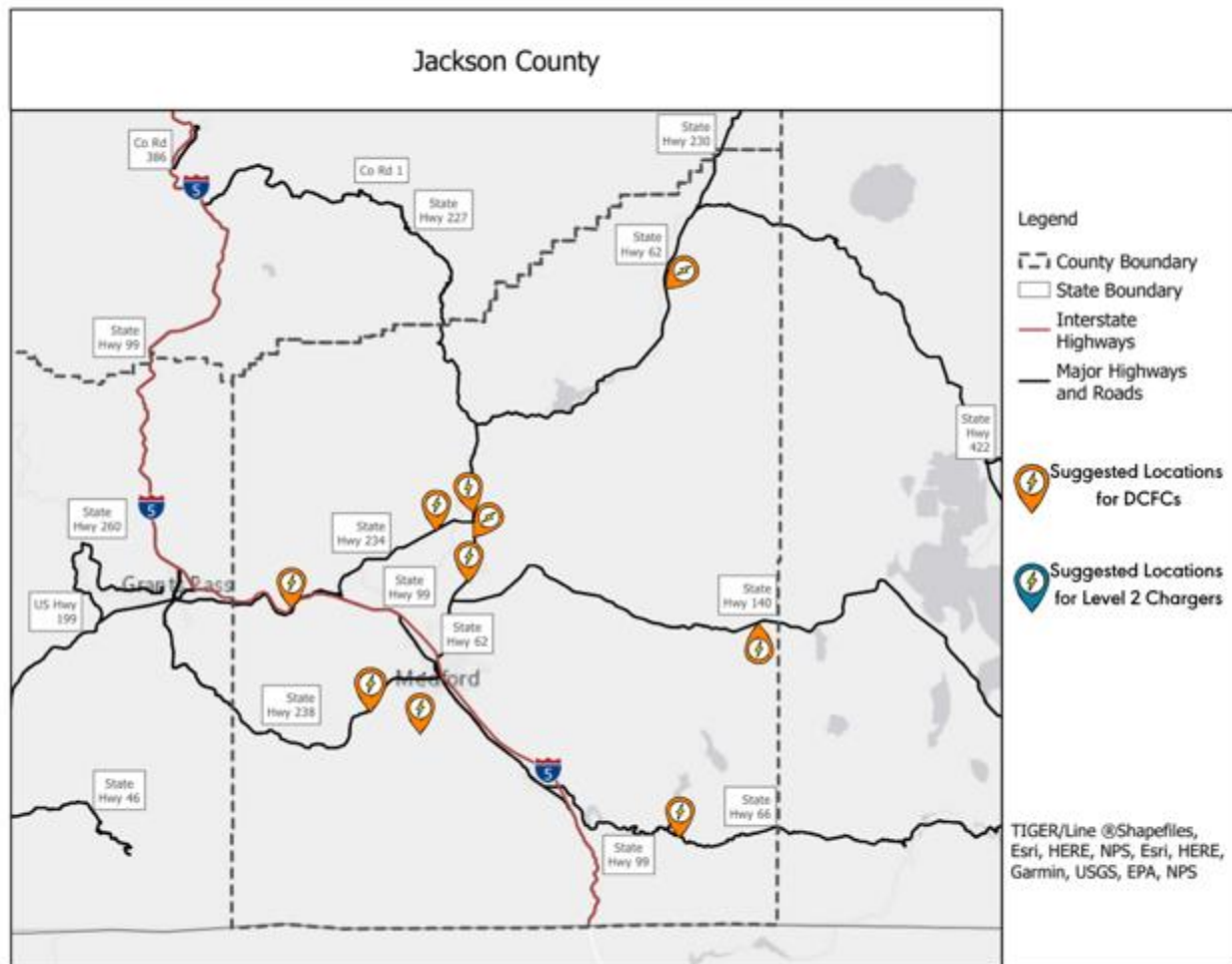
5.2. Key Barriers

Insufficient Charging Infrastructure

Stakeholders mostly commented on charging infrastructure that would enable travel throughout the region and called for greater investments overall to make this feasible in an EV. There are currently severe gaps that limit the ability to use electric cars for inter-city travel and outside of the I-5 corridor, stakeholders expressed that state highways lack sufficient DCFS. A comment was made that chargers between all routes to the coast and at the coast are necessary, and currently there are not many and the ones that are available are unreliable.

5.3. Mapping Exercise

The mapping exercise in this session focused on Jackson County and the conversations were generally centered around infrastructure that will allow EVs to travel to and from the county. It was suggested that chargers are needed every 50 miles from Medford to Winnemucca, Nevada along state Hwy 140 to fill a charging void that currently requires a six hour longer alternative route. The map below shows the Jackson County boundary. As all of the participants in this session were experienced with driving electric vehicles, their suggestions were pretty specific. Most of the suggested locations on the map were for DCFC. Those locations are illustrated below within the county map.



Charging station recommendations:

DCFC

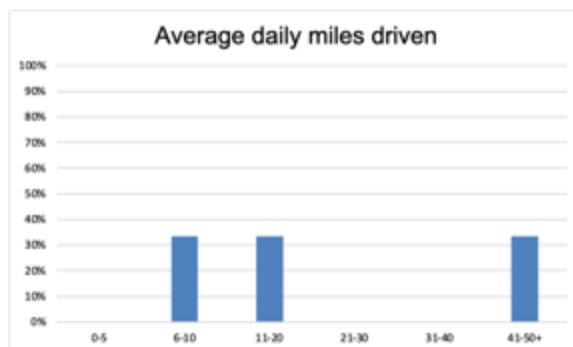
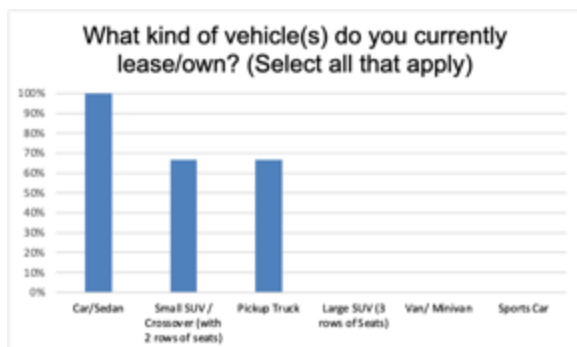
- Becky's in Union Creek.
- Chemult, en route to Bend
- Stations throughout the Medford city limits
- Four Corners
- Lakeview
- Oregon Route 66 en route to Klamath Falls
- Klamath Falls

5.4. Survey Results

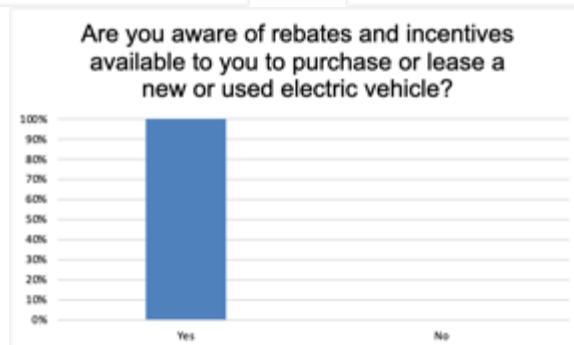
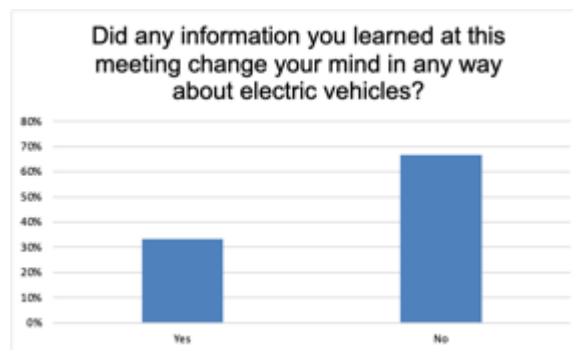
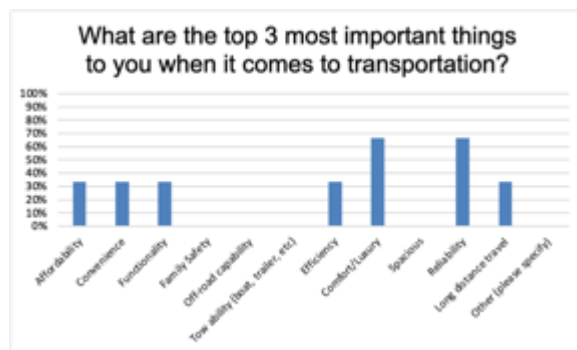
In the survey, we asked our stakeholder attendees to share some demographic information around their transportation habits and living situation.

Out of the 5 attendees:

- The most common type of vehicle owned was a car/sedan with a large percentage of respondents also owning either a pickup truck or a small SUV
- 100% live in a single-family home
- Average miles driven varied between 6 and 50+ miles for this group of respondents



Regarding transportation needs and EV awareness, survey respondents reported that **comfort and reliability** are the two most important attributes they value regarding transportation and personal vehicle ownership. All survey respondents reported awareness of rebates and incentives available for EV purchases and 33% reported having learned something at the meeting that changed their mind about electric vehicles.



5.4.1. Stakeholder Engagement Experience Feedback (direct quotes in italics)

- *The success of EVs is tightly linked with the availability of safe, fast charging stations throughout the state's highways, not just on I-5.*

6. Umatilla County – Virtual Event

The Umatilla County session was the sixth stakeholder engagement session organized and conducted with Pacific Power by Forth. This session was originally planned to be conducted in person in Pendleton in conjunction with the Sustainable Northwest Fall Symposium. Due to some schedule miscommunications, the in-person session did not occur and was rescheduled to take place virtually. It was well attended and notable in that, unlike most other sessions, none of the attendees owned an electric vehicle. Participation during the session was limited but some useful insights were shared in the post event survey. A county map was shared but was not utilized for charging station suggestions by the participants.

- Location: Virtual
- Attendees: 12
- Organizations Represented:
 - Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
 - City of Pendleton
 - City of Stanfield
 - Business Oregon
- Promotion Strategies:
 - Personalized email invitations from Forth and from Pacific Power Regional Business Manager

6.1. Key Takeaways

- Incentives and grants specifically for micro-mobility would encourage adoption of this mobility option
- Electrification of transit buses and commercial vehicles such as garbage trucks are a welcome strategy
- Education about electric vehicles via increased marketing and promotion efforts such as bill inserts, live demonstrations and ride and drives, would be a benefit to this community

6.2. Key Barriers

Charging infrastructure needs to be developed

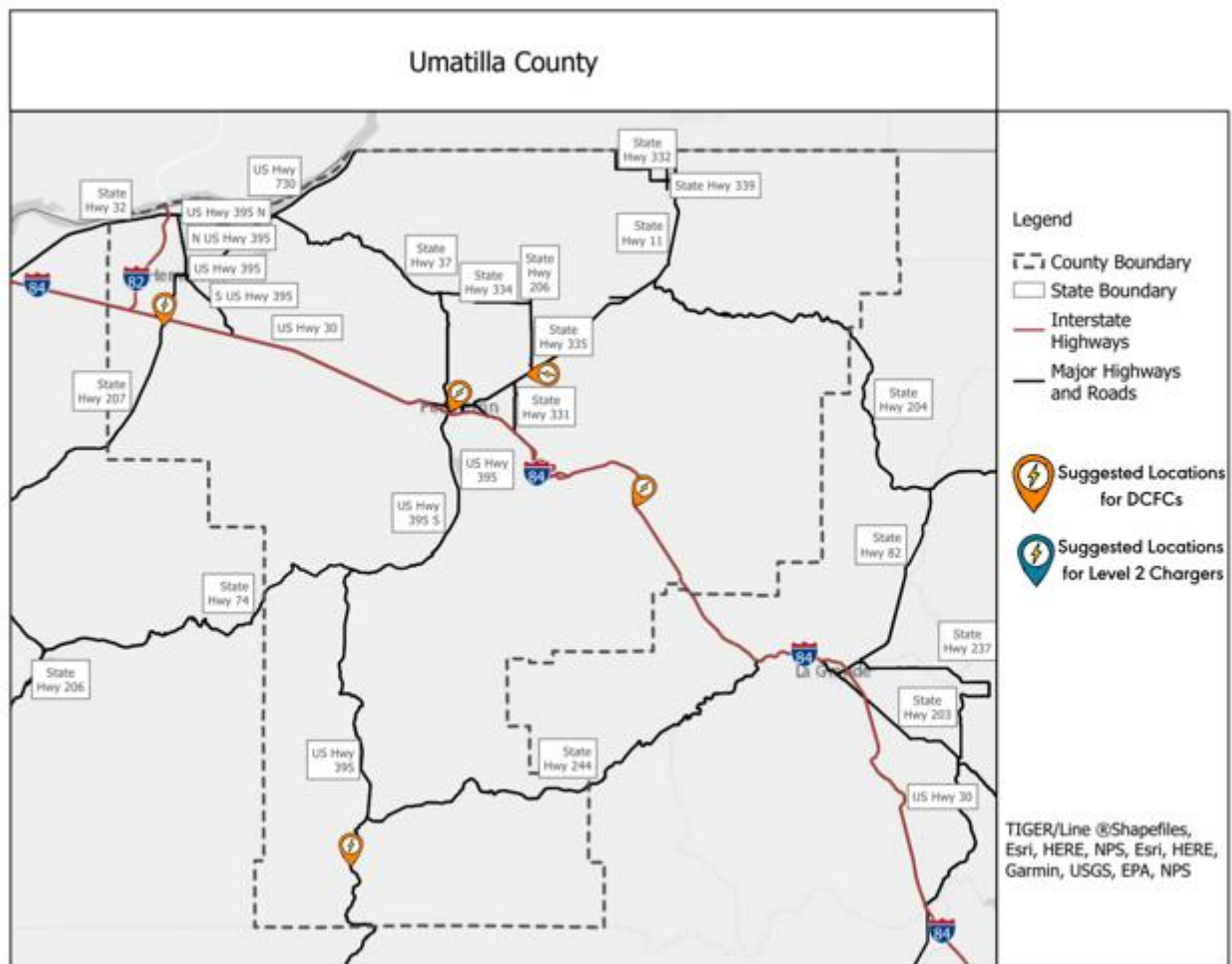
Examples of lack of awareness about the industry

- *After the presentation, one participant wrote about the cost of replacing EV batteries and the environmental concerns of battery creation and disposal as the major barriers.*

- The same participant also spoke about *high vehicle acquisition costs and the lack of funding for vehicle purchases*

6.3. Mapping Exercise

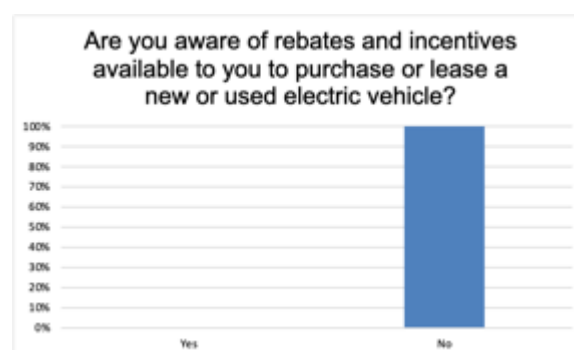
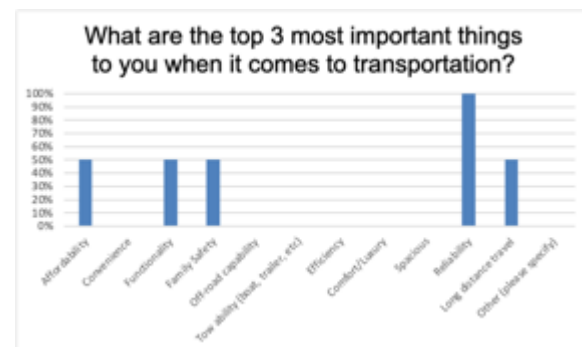
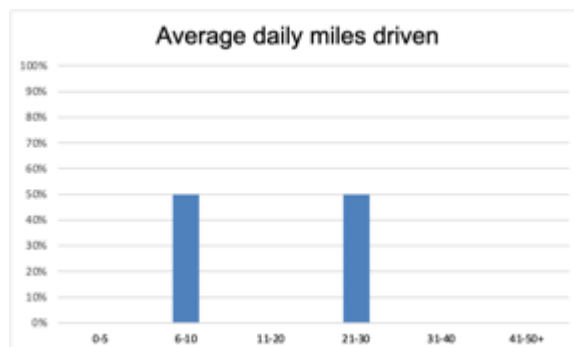
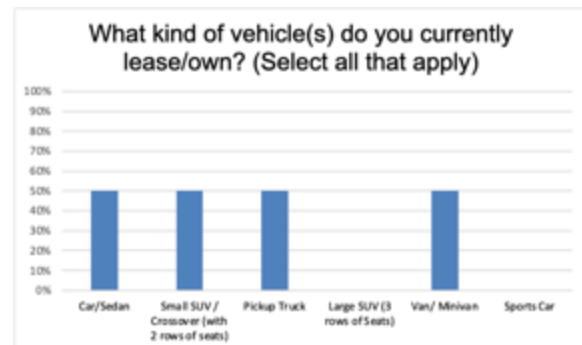
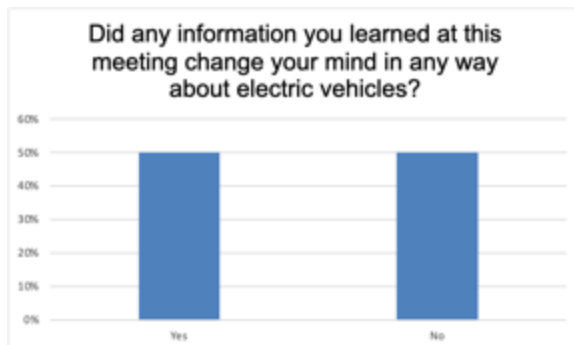
Because this was a virtual session the maps were shared digitally and participants were given access to mark them up. However, none of the participants took advantage of this. The only recommendations made were for micro-mobility. For example, e-bike share was suggested from the North end of town to the South end of town for the people in the underserved communities.



Charging station recommendations: Based on the conversations we have had with people in this area, we recommend the general locations shown above on the map of Umatilla County in Eastern Oregon.

6.4. Survey Results

Despite this being a virtual session with 12 attendees, only 2 of the participants filled out the survey.



6.4.1. Stakeholder Engagement Experience Feedback (direct quotes in italics)

- Rental communities like the new Patriot Height subdivision in Stanfield, need eBike rentals to connect residents to shopping and eating areas easier.

C. Conclusion

The stakeholder engagement sessions were conducted in diverse geographies across Oregon, which brought about varying perspectives and knowledge levels regarding electric vehicles. From these sessions, several themes emerged, such as the need for increased outreach for existing incentives, a lack of comprehensive charging networks (DCFC and L2) and the benefits of having more consumer engagement events with a focus on test drives and education on available market options.

This opportunity to engage with rural service territories provided Forth and Pacific Power with direct feedback on what consumers need to feel empowered in their transition to an electric vehicle. Here are the key recommendations derived from Forth's experience engaging with Pacific Powers service territory members:

- Increase dissemination of Pacific Power's incentive programs, such as rebates/grants. This could look like posting ads on highway billboards or targeted outreach via Facebook/social media
- Continue to provide additional opportunities for community engagement and feedback. There was a strong appreciation for these sessions' ability to include customer and community member voices in Pac Power's decision-making
- In designing the charging infrastructure plan, we recommend incorporating equity-centered approaches that consider the different lived experiences of rural and under-resourced community members
- Develop an equitably distributed network of DC fast chargers in rural Oregon to allow EV drivers to navigate high-usage travel corridors. Work with property owners and city organizations to establish Level 2 chargers in high-traffic areas, utilizing rebates and grants when possible
- Directing grants and other funding opportunities to create shared electric transportation to provide affordable options to communities besides ownership.

APPENDIX A: Presentation Slides

Oregon Transportation Electrification Plan

Jackson County Stakeholder Engagement

November 8th, 2022



Agenda

Agenda Item	Time
Attendee Check-in/Refreshments	5:45-6:00
Welcome & Introduction Brief EV 101- Forth Overview of current Pacific Power program offerings (5-10 minutes each) EV basics + Rebates	6:00 - 6:30
Open Q&A about current offerings + guided questions	6:30 - 7:00
Mapping Exercise	7:00 - 7:45
Wrap Up + Close	7:45 - 8:00



Stakeholder Engagement Overview



Goal

To develop a **robust, equitable, innovative, iterative, and customer-centric transportation electrification plan (TEP)**

Objectives

- Engage underserved communities throughout our service area to support the development of an equitable TEP
- Identify localized market barriers and strategies related to advancing TE within our service area
- Identify and prioritize TE program initiatives that are supported by our stakeholders and will be integrated into the TEP

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Stakeholder Engagement Components

Large Forums

- Series of virtual workshops
- National audience
- Led by Pacific Power

Localized Engagement

- In person workshops in Pacific Power service territory
- Led by Forth

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WELCOME!

Pacific Power
Transportation
Electrification
Stakeholder
Engagement Session

*Jackson County
November 8th, 2022*



Our Mission

Forth's mission is to electrify transportation by bringing people together to create solutions that reduce pollution and barriers to access.

What's an electric vehicle?



Battery Electric Vehicle (BEV):

- 100% electric, completely battery powered
- Plug-in to recharge
- Examples: Chevy Bolt EV (pictured), Ford Mustang Mach-E, Hyundai Kona, Tesla Model X/Y/3/S, Volkswagen ID.4, and more

Plug-in Hybrid Vehicle (PHEV):

- Both electric and gasoline powered
- Varying sizes of battery packs
- Most have an "Electric only" mode
- Plug-in to recharge, fill tank when needed
- Ex: RAV4 Prime (pictured), Hyundai Sonata PHEV, BMW i3 Rex, Honda Clarity PHEV, Chevy Volt, Mitsubishi Outlander PHEV



Why electric vehicles?

- Cleaner air
- Fight Climate Change
- Battery technology continues to improve
- More environmental regulations on the way
- OEMs are committing to electric
- Energy dollars stay local
- Lower total cost of ownership

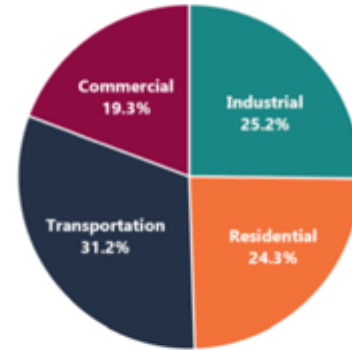
Energy Use in Oregon

Consumption by Sector

Energy consumption is also tracked by how it is used among four main end-use sectors: Residential, Commercial, Transportation, and Industrial.

In Oregon in 2018, those four sectors combined consumed 1,015 trillion Btu of energy, not including waste energy, as discussed early in Oregon's Energy Story.¹

Oregon Department of Energy

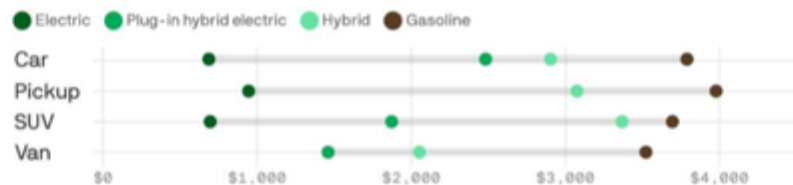


Source - Oregon Department of Energy

EVs are Cheaper to Drive Than Gasoline Vehicles

Average annual fuel cost for 2022 vehicles

Estimate from 427 new vehicle models



Data: U.S. Department of Energy and U.S. Environmental Protection Agency, [Fuel Economy data](#), accessed May 5, 2022; Chart: Kavya Beheraj/Axios

New in town...the Electric Pickup Truck

Pickup trucks accounted for 20.1% of the new car market in 2020, up from 18.3% in 2019.

Source: Motor Intelligence

Rivian R1T



GMC Electric Hummer Truck



Ford F-150 Electric



Tesla Cybertruck

Medium and Heavy Duty



New Flyer
Excelsior
CHARGE,
Portland, OR

Freightliner
eCascadia
Production 2022



Rivian produced
Amazon delivery
truck, San
Francisco

Mack Electric LR
Production 2021

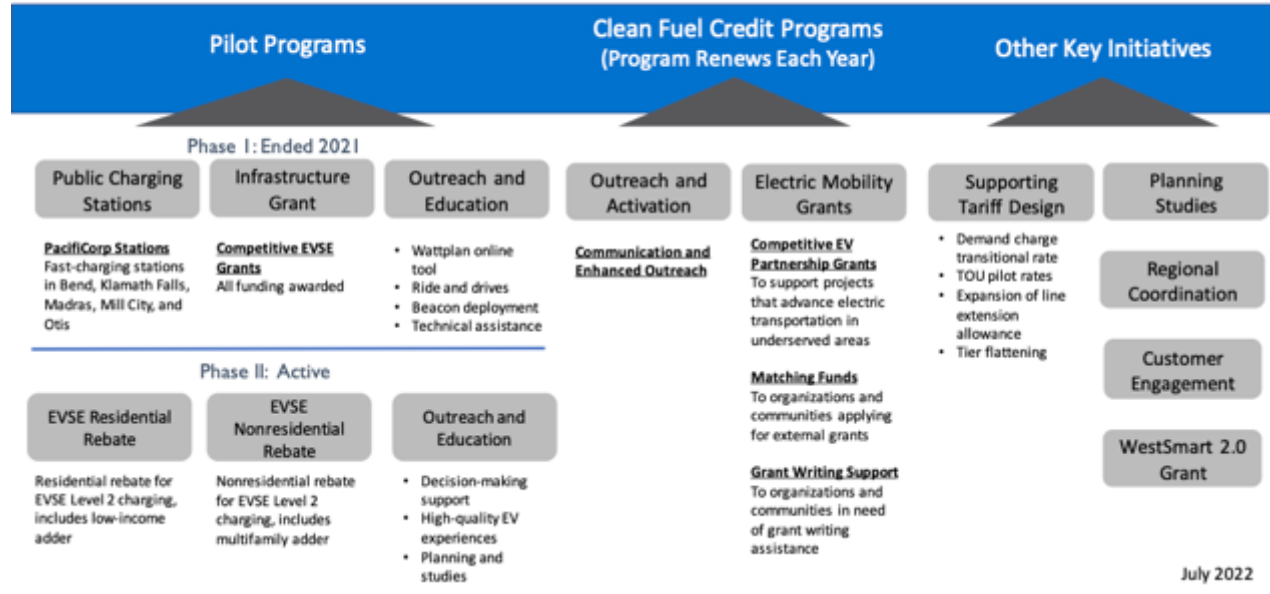


Types of Electric Vehicle Charging

Slow —————→ Fastest			
	Home Work Public		Public Charging
	Level 1 (120V) (<2 kW) 3-5 miles / hr	Level 2 (240V) (3.3-20kW) 20-40 miles/ hr	DC Fast Charging (480V) 50kW-350kW (more for heavy duty) 80% charge in 30 mins-40 mins
Plug Shape (Into Vehicle)			
Outlet Shape			Electric Vehicle Supply Equipment (EVSE)



Oregon Transportation Electrification Portfolio



New EV charger rebates!

Level 2 charger rebates for Oregon homes and businesses



This pilot is available over the next 3 years and currently only is available in Oregon

Clean Fuels Program Offerings

Grant Funding

- E-Mobility Grant Fund
- Grant Matching Fund
- Grant Writing Assistance

Outreach & Education

- Statewide Marketing Campaign
- Dealership Engagement
- Technical Assistance
- Quarterly Roundtables

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Customer Programs Draft Roadmap 2023–2025

	2023	2024	2025
Residential		Residential EVSE Rebate Pilot Program	
		Residential Time-of-Use Rate	
	+	Residential Managed Charging Pilot Program	
Commercial & Multifamily		Commercial & Multifamily Technical Assistance Program	
		Non-residential EVSE Rebate Program	
		Commercial Time-of-Use Rate	
	+	Public Infrastructure Utility-Owned Program	
		Support EV Code Ready Enhancement	
Fleet & Medium/Heavy Duty		Fleet Technical Assistance Program	
	+	Fleet Make-Ready Pilot Program	
	+	Public Infrastructure Utility-Owned Program	
Grant Initiatives		E-Mobility Grant Program	
		Matching Grant Program	
		Grant Writing Microgrants	
		+	Municipal and Community Grant Program
Outreach		Outreach & Education Pilot Program	

+ New Activity

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National EV Infrastructure Program (NEVI)

- ODOT will receive \$52 million over 5 years, plus 20% match
- Funds must be spent on fast charging along Oregon's 11 electric Alternative Fuel Corridors
- Stations must be every 50 miles, and no more than 1 mile from corridor
- ODOT completed a State Plan outlining spending strategy for Year 1
- Next Steps (Fall 2022):
 - Develop Request for Proposal (RFP) to solicit private sector partner
 - Regional Workshops: extensive outreach within communities along Year 1 corridors





Discussion Questions (Please spend 2-3 minutes on each prompt)

- **Prompt:** Think about all types of transportation that can be impacted by electrification (single occupancy vehicles, commercial vehicles, transit buses, school buses, garbage trucks) – what do you see as having the biggest impact for your community? (List your top 3)
- What types of incentives would encourage EV adoption in your community?
- **Prompt:** What micro-mobility needs does your community have and what incentives do you think would help encourage electric micro-mobility?
- Does your community experience any barriers to electric micro-mobility?



Mapping Exercise

Understanding PacifiCorp's Service Area Characteristics

- **Objective:**
 - Understand how communities in PacifiCorp service area are serviced by current EVSE infrastructure
- **Process:**
 - Map EVSE locations by Tesla and non-Tesla
 - Create composite index to create a single factor to represent HB 2165 "Underserved Communities"
 - Overlay current infrastructure, driving considerations and underserved communities to develop an index of need



House Bill 2165 Underserved Community Definitions



Source: UM 2165, Public Utility Commission of Oregon Staff Report/Special Public Meeting December 14, 2021, December 7, 2021; <https://edocs.puc.state.or.us/efdocs/HALUum2165haw181610.pdf>

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Underserved Community Identification

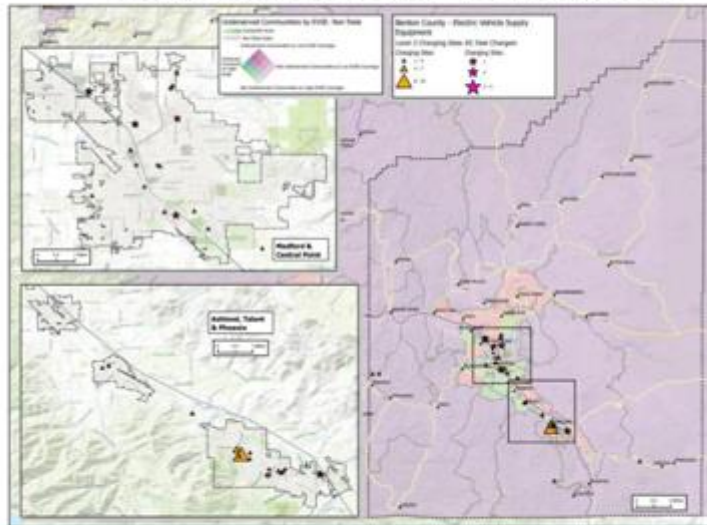


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Mapping Exercise Instructions

- Count off from 1-6
- Find your number partner or partners
- Find your map
- Take 1 or 2 minutes to discuss with your group per map
- Record your notes on the paper next to you or use a sticky note to leave notes on maps



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Mapping Guiding Questions

Access to Charging

- Do these maps look accurate and reflective of your community?
- Do you think that access to electric vehicle charging stations are a barrier to electric vehicle adoption in your community?
- Based on these maps where do you think DCFC EV chargers are needed most?
- What about level 2 AC chargers?

Access to Mobility

- What areas do you think would benefit from micro-mobility options such as e-bike and scooter shares or customer incentive programs?
- Are there areas in your community that you think resources should be focused on to equitably improve access for all Douglas County residents?
- Are there areas in your community that are challenging to travel to in an EV?
- Are there areas in your community where additional transportation options are needed in general?

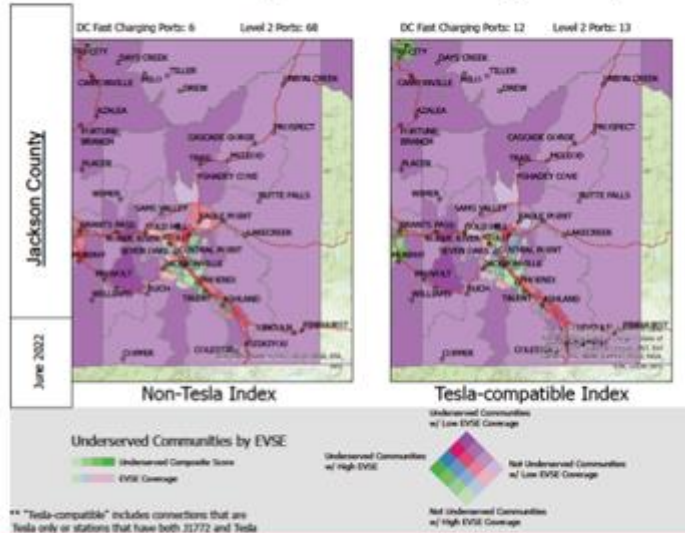
28

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Jackson County EVSE Coverage Map

Please take a moment to review to the draft maps and confirm if you agree with the layers shown on each map.

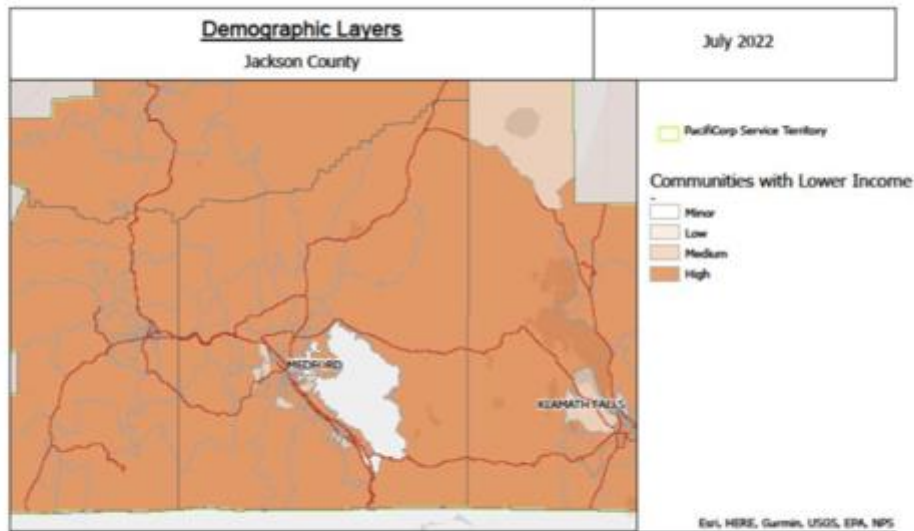
Please feel free to mark up or write comments on any of the maps!



29

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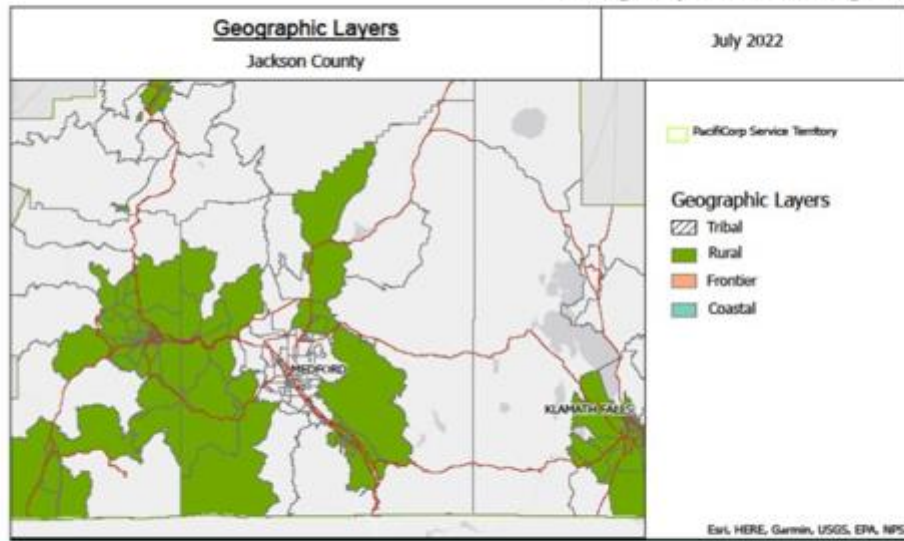
Income Qualified



30

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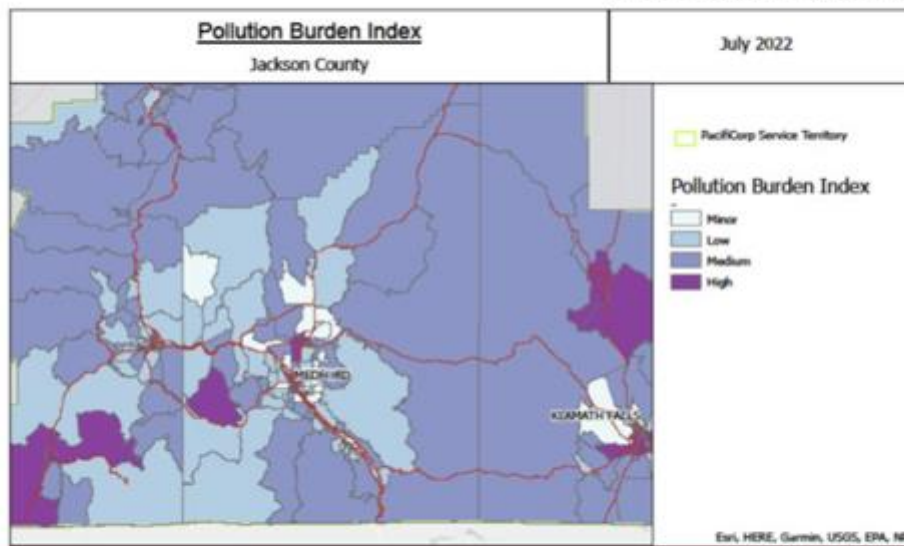
Geographic designation



31

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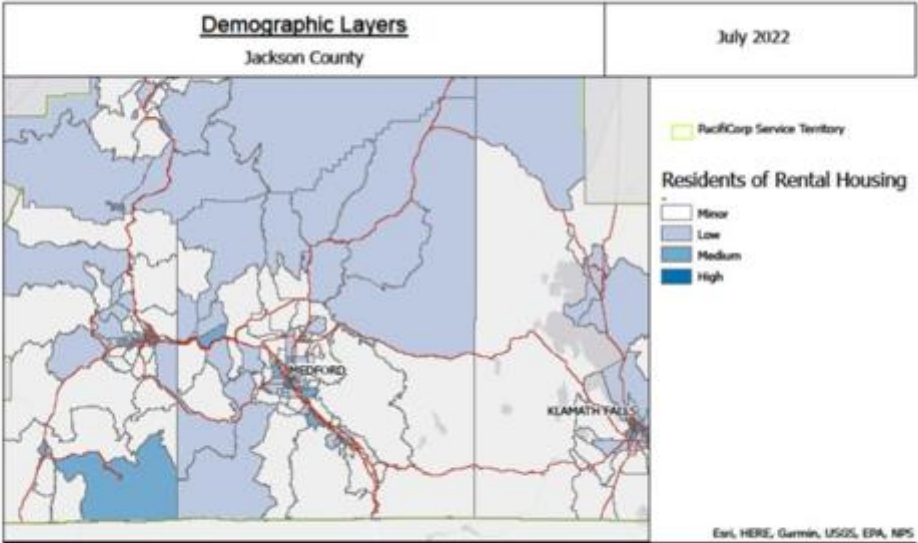
Pollution index



32

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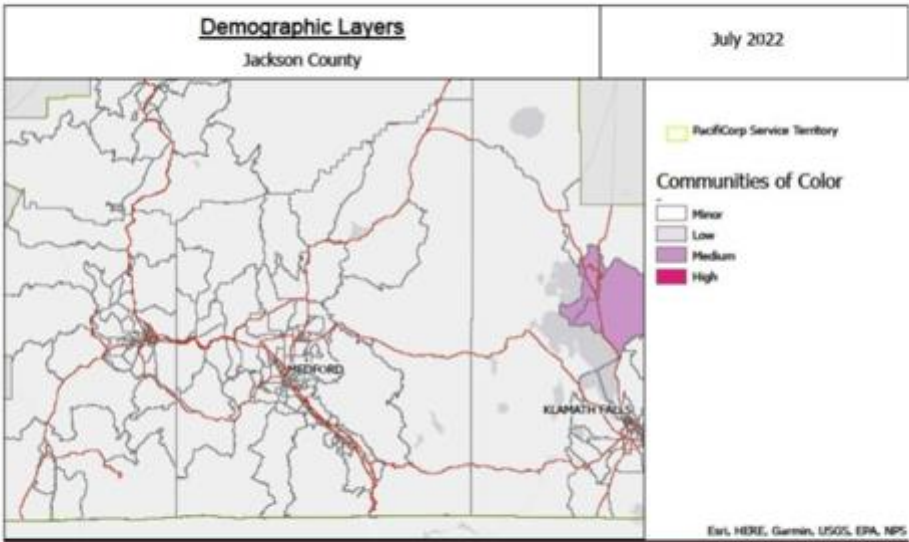
Rental Housing



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Communities of color



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Questions?



Thank you!

Appendix B: Complete Survey Questionnaire

Q1. Your contact information:

Q2. Do you currently have a valid driver's license or an enhanced driver's license?

Q3. How many vehicles, in total, does your household own/lease?

Q4. What kind of vehicle(s) do you currently lease/own?

Q5. Do you or your family currently lease/own an EV?

- Car/Sedan
- Small SUV/Crossover (with 2 rows of seats)
- Pickup Truck
- Large SUV (3 rows of seats)
- Van/Minivan
- Sports Car
- Other (please specify)

Q6. What type of residence do you live in?

- Single family home
- Apartment Building
- Apartment in a multi-unit dwelling
- Other (please specify)

Q7. Average daily miles driven

- 0-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41-50+

Q8. Do you drive your personal car for work?

Q9. What are the top 3 most important things to you when it comes to transportation?

- Affordability
- Convenience
- Functionality
- Family Safety
- Off-road capability
- Tow ability (boat, trailer, etc)
- Efficiency
- Comfort/Luxury
- Spacious
- Reliability
- Long distance travel
- Other (please specify)

Q10. Are you familiar with electric vehicles?

Q11. Based on your current understanding of EVs, how confident are you in an EV's ability to meet the needs of your current hobbies and lifestyle?

Q12. Are you familiar with carsharing? (If no, skip to dealership question)

Q13. Would you participate if a carsharing program was initiated where you live?

Q14. Are electric vehicles available at your local dealerships?

Q15. Do you typically buy new or used vehicles?

Q16. Are you aware of rebates and incentives available to you to purchase or lease a new or used electric vehicle?

Q17. Do you think Pacific Power’s Electric Mobility Grant Program will help reduce barriers to transportation electrification in your community?

Q18. Do you think Pacific Power’s residential or commercial rebate program for EV charging stations will help reduce barriers to transportation electrification in your community?

Q19. What other customer incentives or programs could Pacific Power offer to help reduce barriers to e-mobility in your community?

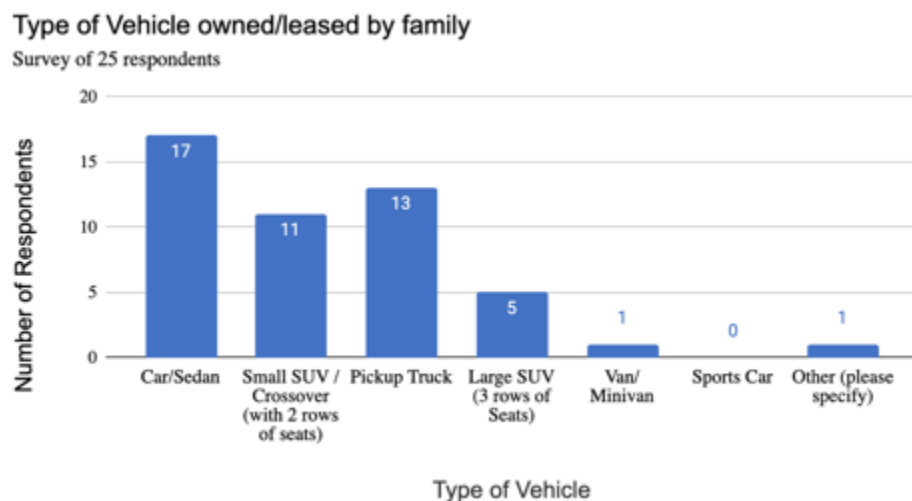
Q20. What additional comments would you like to share with us about transportation electrification efforts in your community?

Q21. Did any information you learned at this meeting change your mind in any way about electric vehicles?

Appendix C: Combined Survey Graphs

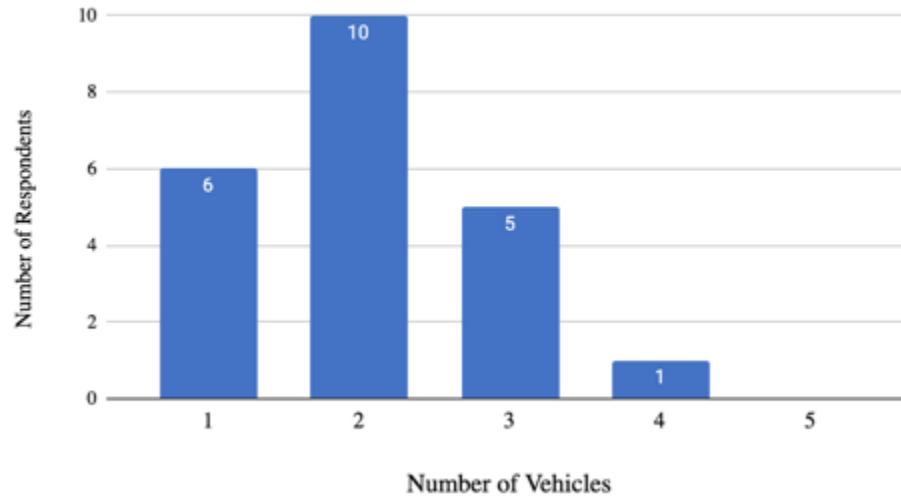
Combined S.E.S. Graphs

The graphs below show the data from the combined survey answers.

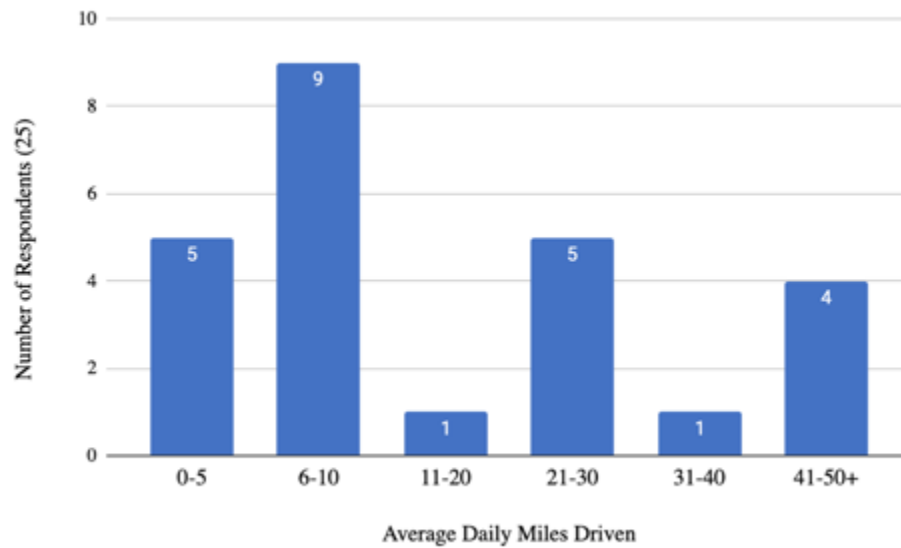


- 68% of respondents own a Car/Sedan. Following that was Pickup truck ownership at 52%

How many vehicles does your household own/lease?

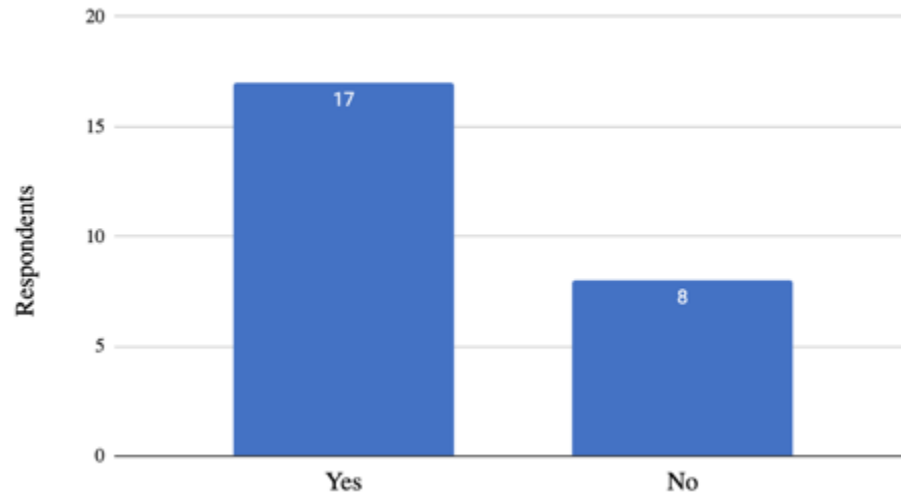


- 40% of respondents own 2 cars in their household



- 36% of respondents drive 6-10 miles daily, 0-5 miles and 21-30 miles followed with 20% of total respondents

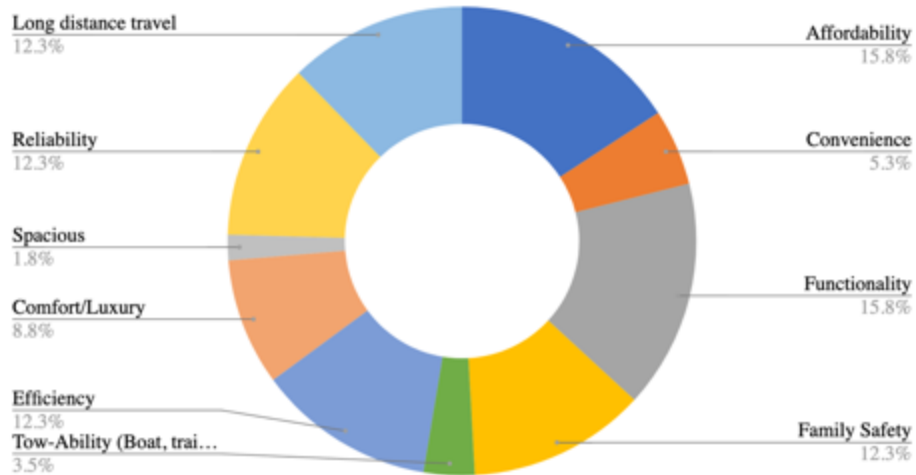
Do you drive your personal car for work?



- 68% of respondents drive their personal car for work

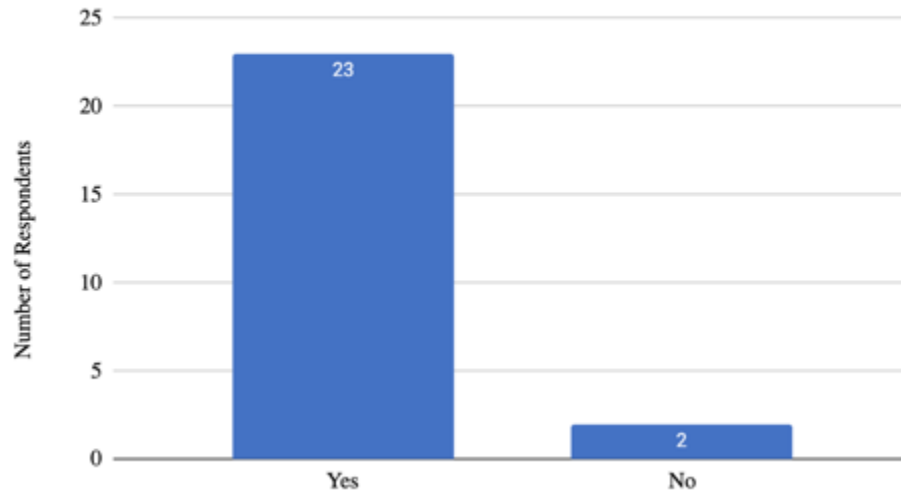
What are the top 3 most important things to you when it comes to transportation?

25 respondents



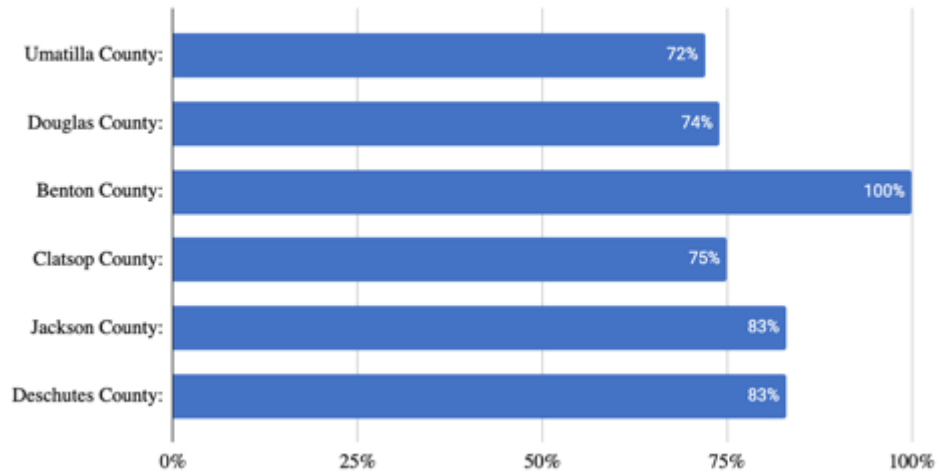
- Functionality and Affordability lead the graph, followed by Family Safety, Efficiency, and Long distance travel

Are you familiar with electric vehicles?



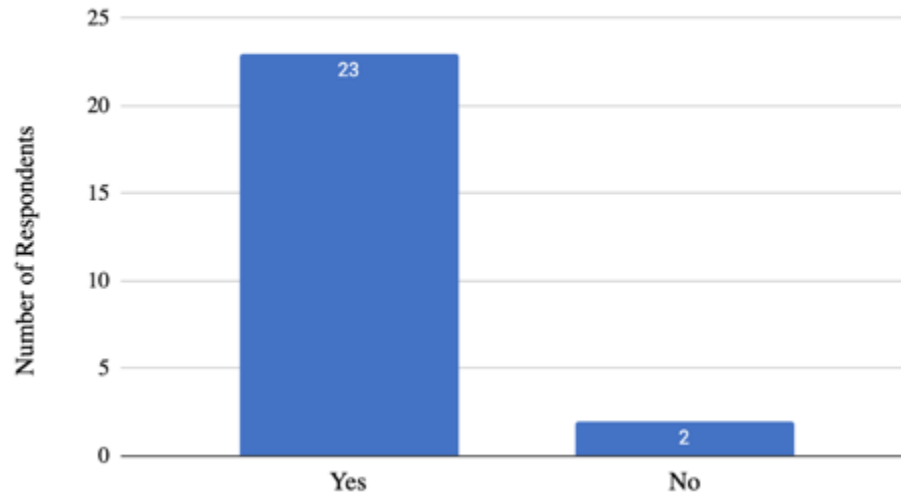
- 92% of respondents were familiar with electric vehicles

Based on your current understanding of EVs, how confident are you in an EV's ability to meet the needs of your current hobbies and lifestyle?



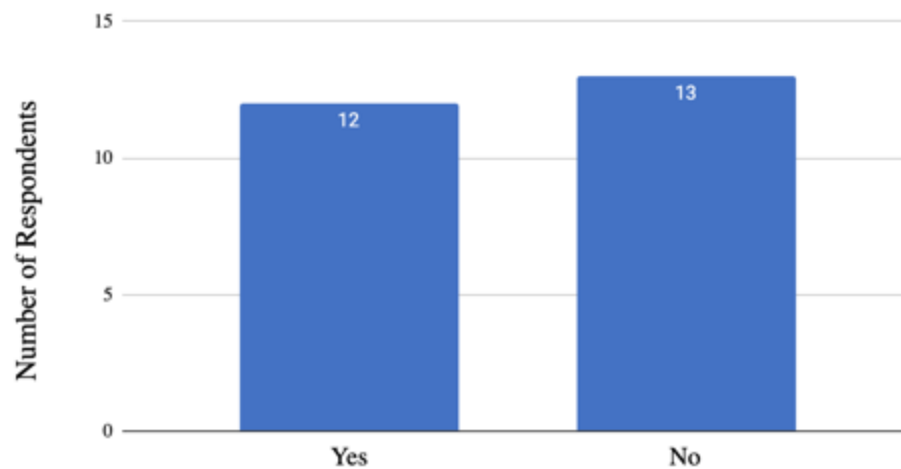
- 72-100% of respondents were confident in an EV's ability to meet their lifestyle needs

Are you familiar with carsharing?



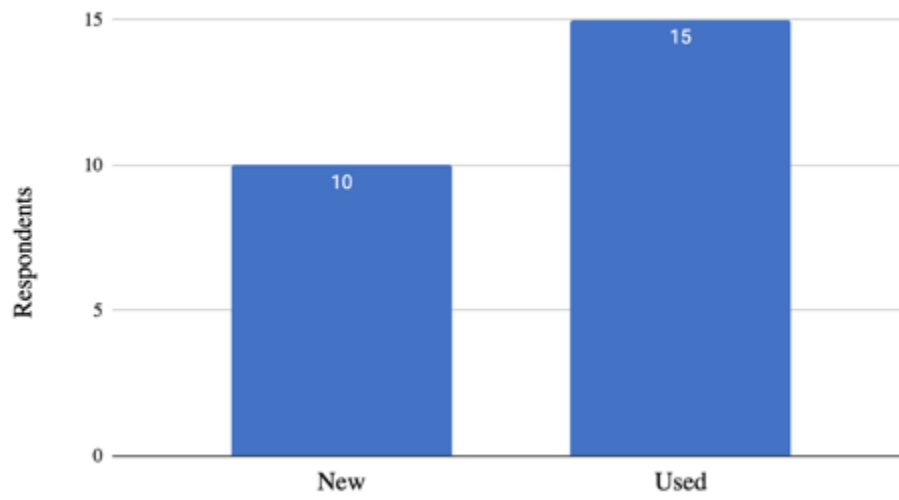
- 92% of respondents are familiar with carsharing

Would you participate in a carshare program if one was initiated where you live?



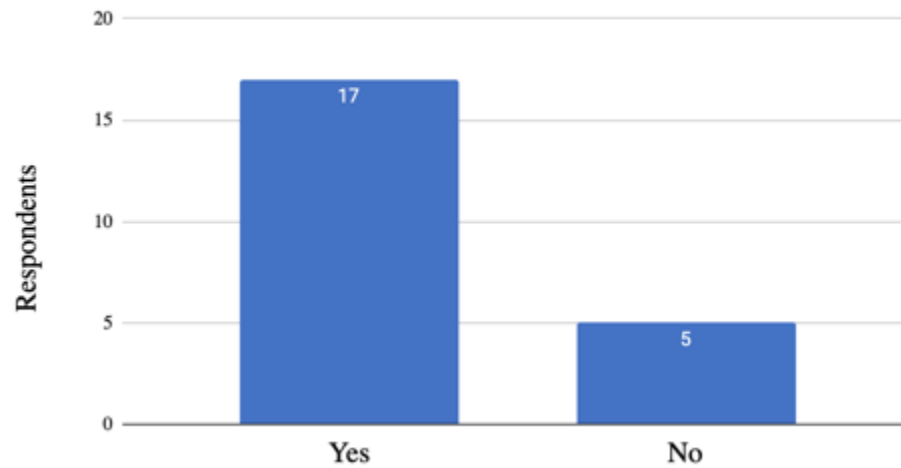
- 52% of respondents would not participate in a carshare program. 48% would participate

Do you typically buy new or used vehicles?



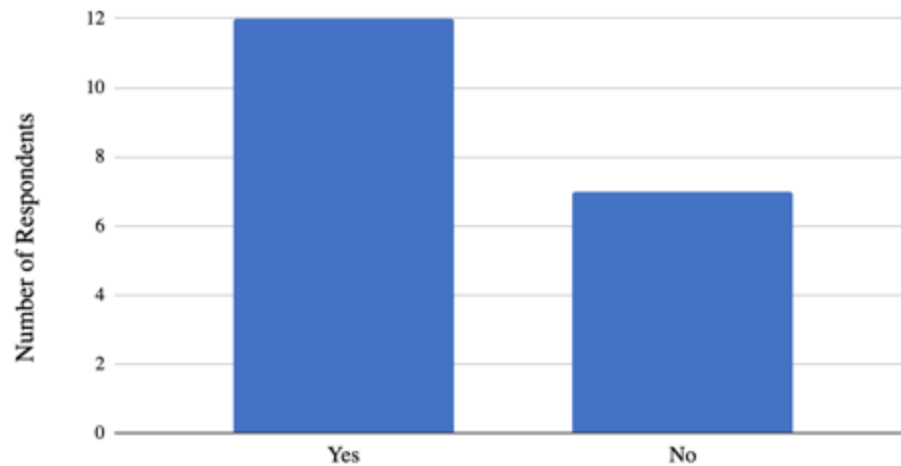
- 60% of respondents purchase used vehicles and 40% purchase new vehicles

Are you aware of rebates/incentives available to you to purchase a new/used vehicle?



- Here is an example of the percentage of respondents that are aware to the incentives available to them.

Did any information you learned at this meeting change your mind in any way about electric vehicles?



- 63% of the respondents felt the information they learned at the session changed their mind about electric vehicles

Appendix D: Additional Session Notes

Session 1:

- Continued community exposure to electric mobility via increased marketing and promotion efforts for electric passenger vehicles or electric public vehicles, such as school buses, may lead to increased adoption and awareness overall
- Community would benefit from greater awareness of vehicles being developed

- Community would benefit from greater awareness of programs and incentives (including bill inserts and demonstrations)
- Students who will drive EV adoption in the future are a key audience for education and outreach
- Community would benefit from greater awareness for mid-sized and large trucking industries
- Larger financial incentives for public chargers would encourage more installations
- Offer grants specifically around DCFC so community organizations and businesses can add to the fast-charging infrastructure
- Near-term incentives should focus on single occupancy vehicles since it is a more attainable goal and long-term incentives should focus on public vehicles such as mail delivery vehicles, garbage trucks, public transit and school buses. Public electric vehicles should be clearly and brightly branded as electric
- Fleet vehicles of all kinds should be electrified
- Electric carsharing could be a great option for folks that need access to affordable transportation, but don't feel comfortable taking public transit
- Carshares or larger 3-wheeled highway-capable shared vehicles would be a safer option for Roseburg than e-scooters
- New housing developments under construction should feature EV charging onsite or nearby
- A participant who works at Roseburg disposal was delighted to find out grant matching can potentially double their electric waste removal truck fleet as they prepare to purchase electric garbage trucks.
- Another participant commented that the grants for Pacific Power chargers could be higher and that would allow host organizations to charge less per Kilowatt.

Session 2:

- Charging investments can also come from major employers such as Good Sam Hospital, HP Campus and OSU.
- Additional funding is needed to transition bus fleets to electric.
- City parks are a great opportunity around which to develop public charging infrastructure
- Investments can best serve low-income customers when all costs are covered, as opposed to supplementing existing funding which is often more limited in underserved communities.
- Carsharing could be a great solution to serve community transportation needs through an affordable option; ideal locations are public spaces.
- Community input and involvement is important to stakeholders
- Increasing the use of micromobility is important to stakeholders
- Local government and public entities are not accustomed to providing investments that are beyond supplying basic services to the community.

Session 3

- Tourism is an important element of the community's economy but brings with it its own set of challenges with transportation electrification. Greater EV adoption in the region will compound benefits and awareness locally.
- Continued/increased education about electric vehicles, for both light duty and medium/heavy duty applications is needed to reduce barriers to adoption

- Shared transportation options such as electric vans, carshares, bikeshares and scooters could be viable solutions with ample education and infrastructure

Session 4

- Chargers that have never been online but actually show on the map
 - Car dealerships are often listed with charging stations, but they are never accessible to the public
- SE Bend is zoned commercial
 - Multi-unit Dwellings should not use high-cost charging for residents. Rep from TEC says in Bend there is one apartment that charges 40¢/kWh. Also recommends different models, self-maintenance, or a service contract.
- Recommend placing a visitor center on the way up to Mt. Bachelor. Currently an EV desert. (Avoid the resorts)
- The section west of Bend that shows “underserved” is also unpopulated.
- Cycling: currently, there are not a lot of good bike lanes going through town to eastern Bend
- Survey direct responses: Do you think Pacific Power’s Electric Mobility Grant Program will help reduce barriers to transportation electrification in your community? *Yes. The focus that I heard from the plan is saying the right things, I think the proof will really be in how well it’s executed. Consistently available, affordable, well distributed and well signed, reliable level two chargers I think could have a huge impact, but that takes a lot of work on behalf of the utility that I hope that they are willing to do*
- Do you think Pacific Power’s residential or commercial rebate program for EV charging stations will help reduce barriers to transportation electrification in your community? *Yes. I would love to see Pacific Power do a direct-to-consumer deal for EV chargers. I’ve seen that work really well with some Energy Trust programs around smart thermostats and heat pump water heaters. I also think it’s important to include chargers that plug into a NEMA 14–40 receptacle as this is commonly being required in new construction and is somewhat of a standard in many areas. In terms of commercial incentives I think it really should be split and have multifamily charging have a different set of incentives and requirements*

Session 5

- Medford to Winnemucca is impossible for electric vehicles (some Tesla models barely make it) so drivers have to drive to Sacramento, which adds up to 6 hours. 300 miles between chargers.
- One stakeholder said time of use charging hurts him because he has multiple EVs and electric water heaters, etc... he asked to allow utility to control when vehicles are charged and to not be penalized because of charging during peak rates
- Stakeholders inquired where the power is being sourced from and some refuse to use charging stations if they are sourced from coal
- Carbon offsets are not useful when you can power with renewables
- Subsidize the use of electricity to charge vehicles, like the government's subsidy for fossil fuels

Notable group discussion notes-(names have been redacted)

City of Corvallis

- **Important note:** The City of Corvallis wonders how much we are responsible for infrastructure vs manufacturers or businesses. It's outside of our expertise. We supply basic services. There's confusion about our role in that. **Ideas to bring more people into microbility (esp e-bikes):**
 - Public micro mobility events at schools - college campus during pre-existing community events. Where people could sign waivers and try things out
 - Visit Corvallis has connections. They can raise revenue. The hospital would be a good location for this
 - Corvallis Bike Collective should be a part of this
 - E-bike rentals need startup capital
 - Maybe a touristy promotion like an ale-trail e-bike pedaling thing. Rails to Trails. A unique community thing that can be electrified
 - E-bike wine tour
- We are trying to spark businesses to innovate. Manipulate the market as much as possible upfront.
- City employee: Can we incentivize Forth to bring **car share** to Corvallis and Philomath, focusing on communities that lack resources, families, ESL speakers? People need an affordable way to get around

Recommended places for car share hub:

- Public school space or other safe public space. Our organization wants to be a local leader that can set this kind of pace and it serves the community that we serve, community gardens
- City employee: Could there be an economic development piece in this? If so, our org can help match funding for a small local funding. We need partners
- eVan pools as a replacement for expensive buses
- Micro Mobility here will be important as it is a college town
- The community could put up more barriers to gas-powered mobility, more bike lanes are needed. We could charge for parking and use this to pay for more bike lanes and transit centers. This would help people make better choices about how to commute. Some people need a vehicle, but it's ok to pay for parking
- Pac Power ebike program was very successful. Helping to get them into people's hands will go far. A lot of people would be interested if that grant came up again
- Maybe we can set up community events/forums like this. Organizations like Forth can help with innovations, to help people learn about what's possible
- What if a provider came in and did a free installation, but rates were high?
- Buses are currently in the process of being converted to electric, but more funding is needed. 4 out of 15 are in process
- Corvallis community center, aquatic center has requested chargers. But the city is worried about taking a loss on the cost of the network fees. That's kept us from jumping on this. School districts have charging stations which are typically free, but will charge between 8am-4pm and after 4pm prices almost double
- Convertible resources are a good idea like schools when they are not in session

- Since range anxiety is a huge barrier to E-mobility adoption, more charging stations are a must. Perhaps Pacific Power could underwrite charging stations that would allow PP customers to be billed directly to their monthly power bill
- One idea would be to incentivize apartment owners to install chargers for their tenants. Also, perhaps downtown business associations could be incentivized to install charging stations
- This will help since level 2 chargers and installation are very expensive. Please consider making rebates available to middle- as well as low-income consumers. This well incentivizes those who are more likely to make a large expenditure for an EV
- Before this meeting, I didn't realize that there was an Electric Mobility Grant program. It would be good to have this information more widely disseminated

City of Medford

- We need an electric redesign of all our transportation. Converting the current buses to electric won't really help
 - San Francisco's Bart is awesome but if you have to go outside of the city, it doesn't work.
 - suggests a wider network of smaller electric buses to feed from 5 miles away that takes you to the feeder (a train or a larger bus, to a light rail)
- Single occupancy vehicles are probably primary mode of transportation
- Prompt: Types of EV incentives in your community. Participant says there needs to be a distinction between climate change and financial. If it will save money people will be interested. EV's are still expensive. Participant says Bolts are cheap and cheaper cars will eventually come
- Participant says tax credits can't help the underserved because they don't have enough of a tax burden
- Attendee says there is an argument about climate change is over. says this argument still happens today
- Presenter speaks of incentivizing electric rates, less expensive vehicles, etc... potential systems upgrade to home electric system can be helpful
- Participant says you can sell your state tax credit
- The renters are the biggest problem since most property owners will do that. There needs to be a building code to force property owners to place level 2 chargers in each parking space
- Level 2 light pole chargers might be a solution

Mapping suggestions: (These were all outside of the county but still affected residents in Jackson County)

- Denio junction in Idaho 140 dead ends there and then you can go to Nevada i80
- Lake view also needs a charger. Klamath falls also needs a charger-Tesla in Klamath Falls and it is about 175 miles to Lakeview
- Jackson county to the coast needs some charging. There are 25 towns. A charger in Florence will be great. Newport. Chargers in Cave junction go to HWY 101. South of Newport to the border of California, need chargers every 50 miles. Lincoln, Coos Bay. Port Orford, Gold Beach, Brookings
- Road between Corvallis and Redmond/Bend Hwy 20 needs chargers every 50 miles