Bend EV Readiness Plan

Bend Economic Development Advisory Board

May 2, 2022

Presentation Topics

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Bend EV Readiness Plan: Purpose

- **Increase electric vehicle use in the City of Bend** by providing the City with the data, goals, timelines, and strategies to facilitate a broad transition to EVs across the community.
- Reducing greenhouse gas emissions from the transportation sector will help the City achieve its **climate action goals**.

Bend EV Readiness Plan: Existing Goal Framework

- Create a **consistent and coordinated vision and action plan** among all stakeholders to deploy charging infrastructure to encourage EV adoption
- Position the City for **funding opportunities** to leverage local funding
- Ensure the benefits of electrified transportation are **shared with underserved and vulnerable communities**

Bend EV Readiness Plan: Team Structure

City of Bend

Stephanie Betteridge
Chief Innovation Officer & Executive Sponsor

Cassie Lacy
Project Manager

Tobias Marx
Parking Services Division Manager

HDR Project Leadership

Jeff Owen
Mobility Project Manager

Stacy Thomas
Stakeholder Outreach & Communications Lead

Jim Hanson
EV Technical Planning Lead

Tyler Hopkins
EV Planning & Policy Specialist

Stakeholder Interviews and Online Survey

Four groups were interviewed in November 2021

- City of Bend Economic Development Department: Ben Hemson
- City of Bend Parks and Recreation: Sasha Sulia + Bronwen Maestro
- The Environmental Center: Neil Baunsgard
- Cascades East Transit: Ashley Mohni

An Online Survey was conducted in February/March 2022

- Over 250 responses in total
- Thank you for your help!

Stakeholder Input: Key Themes

Primary barriers to EV expansion

- High costs: charging infrastructure investment and investing in EV fleet
- Battery charge length (transit)
- Vehicle cost and availability
- Community perception

Primary opportunities for EV expansion

- Tourism industry
- New EV models: trucks and SUVs
- EV charging readiness standards
- Code addressing multifamily residences

Stakeholder Input: Key Themes

Key factors encouraging or discouraging EV use/adoption

- Charger locations
- Price of gas
- Incentives
- Awareness: people seeing peers using EVs
- Addressing barriers for different housing types
- More trucks and SUV options
- Availability of used EVs (battery replacement cost remains an issue)
- Local maintenance and service
- Serve people commuting into Bend

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Existing Conditions: Overview

In Bend today, there are:

- 1,100 registered EVs
- 10.3 EV per 1,000 residents (national average: 2.2)
- 55 public charging plugs

FHWA Alternative Fuel Corridors

- US-97 corridor – “Ready”
- US-20 corridor – “Pending”

Existing Conditions: Goals

Oregon EV adoption goal

- 250,000 EVs by 2025 (Senate Bill 1044)

Oregon GHG emissions reduction goal

- 45% below 1990 levels by 2035 (EO No. 20-04)

Bend fossil fuel use reduction goal

- 40% below 2010 levels by 2030 (City Council Resolution No. 3044)

Needs Assessment: Adoption Scenarios

Scenario 1: Stay the Course

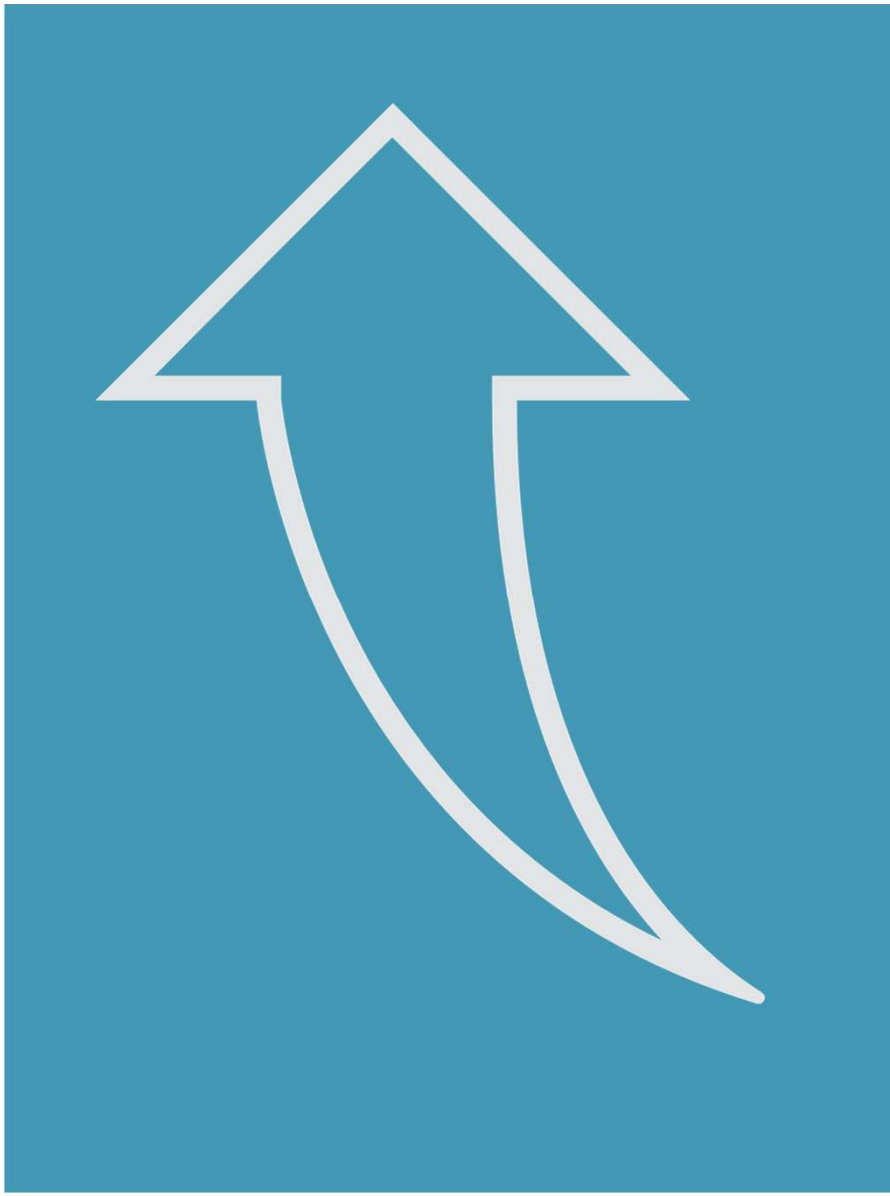
- Growth continues at current rate
  Target: 4,850 EVs in 2025
  Need: 300% increase in chargers

Scenario 2: Achieve the Goal

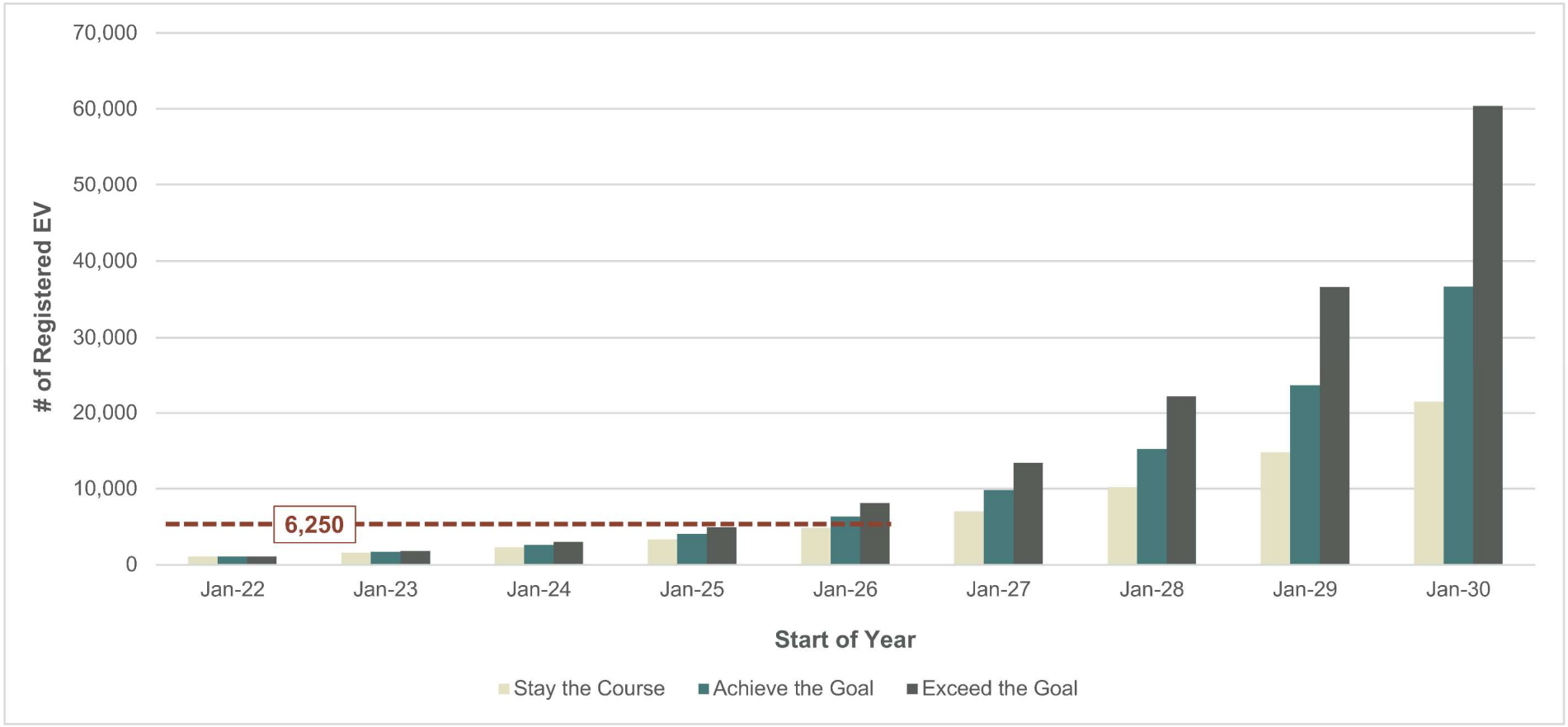
- Growth accelerates
  Target: 6,250 EVs in 2025
  Need: 400% increase in chargers

Scenario 3: Exceed the Goal

- Heavy investment, significant growth
  Target: 8,150 EVs in 2025
  Need: 540% increase in chargers



Needs Assessment: Adoption Scenarios



Needs Assessment: Gap Analysis

Charging network gaps

- More than 200 public charging plugs
- More than 200 Level 2 workplace charging plugs
- Equitable distribution of chargers

Other gaps

- Vehicle purchase cost difference
- Cost of infrastructure for businesses
- Lack of coordination/planning
- Lack of dedicated budget
- Lack of EV-readiness, particularly at multi-family housing

Draft Charging Sites: Siting Criteria

Level 2 Chargers

- Mid-range dwell times (2-6 hours)
- Fill existing charging gap
- Near multifamily housing
- Community input
- Equitable distribution
- Right-of-way/land ownership

DC Fast Chargers

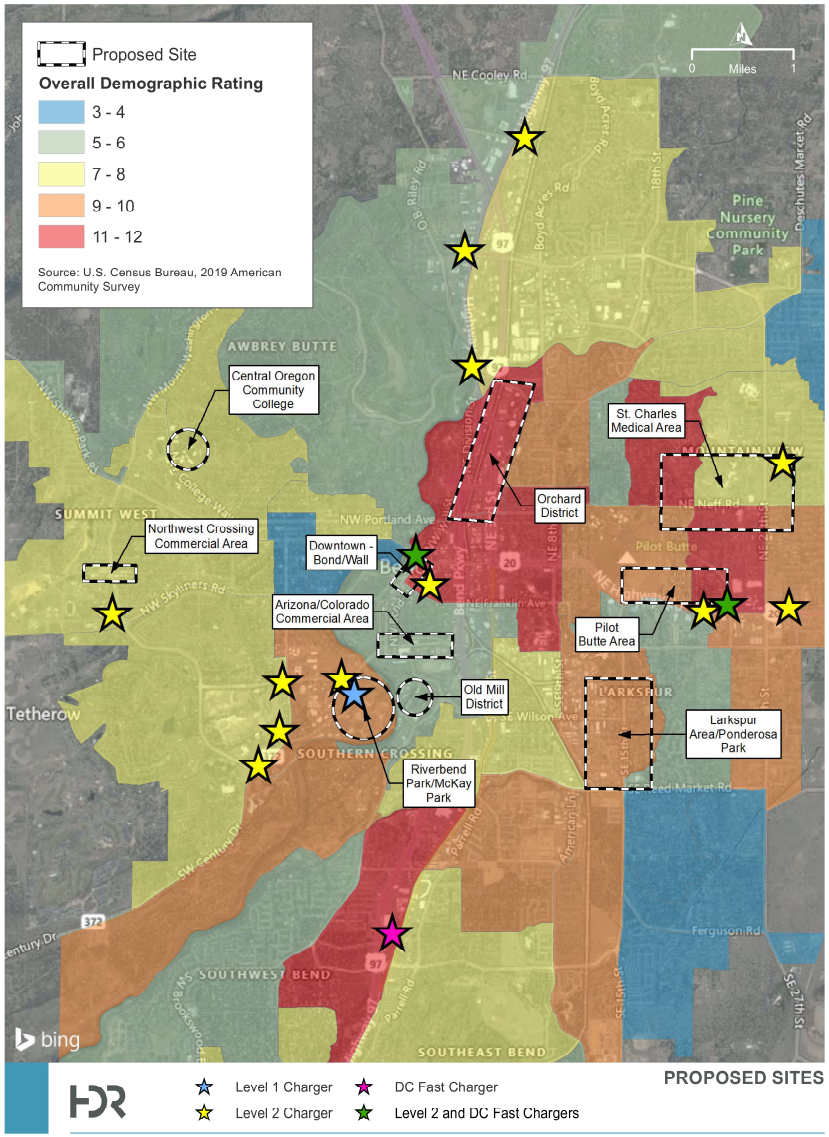
- Short dwell times (<1 hour)
- Fill existing charging gap
- Dense residential development
- Major highway corridors
- High traffic volumes
- Electrical system capacity
- Equitable distribution
- Right-of-way/land ownership

Draft Charging Sites: Methodology

- Evaluated multifamily housing density, population living in poverty, and minority population (American Community Survey)
- Each category was given a 1-5 ranking, then combined for a 3-15 ranking
  - 3 indicates lowest need
  - 15 indicates highest need
- Overlayed existing chargers and government-owned tax parcels to visualize system gaps
- Coordinated with the local utilities to identify areas with electrical capacity for new chargers

Draft Charging Sites

- St. Charles Medical Area (Level 2)
- Riverbend Park (Level 2)
- Central Oregon Community College (Level 2)
- Larkspur Area/Ponderosa Park (Level 2)
- Pilot Butte Area (Level 2/DCFC)
- Orchard District (DCFC)
- Old Mill District (DCFC)
- Arizona/Colorado Commercial Area (DCFC)
- Northwest Crossing Commercial Area (DCFC)
- Downtown Bend (Level 2/DCFC)



Draft Recommended Actions: Promote EVs

- **Increase community awareness of the benefits, costs, safety, and availability of EVs**
  - Coordinate with partners to develop and distribute information, conduct outreach
- **Incentivize community adoption of EVs, private investment in EV charging infrastructure, and local service support for EVs**
  - Develop/publicize incentives for workplaces, developers, and low-income households installing chargers, assist local service centers entering the EV market
- **Ensure equity through coordinated outreach to Bend's underserved and historically disadvantaged communities**
  - Work with local nonprofit groups to distribute information to underserved communities
- **Coordinate with other local projects and partner groups to improve access to, and visibility of, E-mobility in Bend**
  - Partner with the local utilities, Cascades East Transit, the CWCCC, and other groups

Draft Recommended Actions: Enable EVs

- **Incorporate E-mobility and EV charging infrastructure in planning and budgeting efforts**
  - Include all forms of E-mobility in the Bend Transportation System Plan and local planning efforts, develop a continuous funding program for EVSE installation
- **Enable EV ownership and EVSE deployment through policy**
  - Define EV-related terms in the Bend Code, adopt regulations for 'pre-wiring' or chargers at new/renovated development, update zoning to permit EVSE, support home chargers
- **Develop and enforce criteria for dedicated EV parking spaces**
  - Adopt EV parking criteria and enforcement language, work with Bend Police Department and private parking operators

Draft Recommended Actions: Deploy EVSE

- **Strategically site new EV charging infrastructure to best serve the needs of the Bend community**
  - Fill charging gaps, prioritize equity, create charging hubs, install chargers on City-owned land, locate chargers in convenient and accessible spaces, share ownership
- **Develop and implement an approach to charging fees that balances user costs, power demand, and municipal revenue**
  - Define pricing structure for City-owned and EMP-operated chargers, consider 'demand charge holidays', investigate time-of-day/time-dynamic pricing with the local utilities
- **Build and maintain a charging network that incorporates industry best practices, promotes the use of renewable energy, and reduces strain on the local power grid**
  - Integrate chargers in a renewable power grid, pursue EMPs using renewable energy, incentivize self-sustaining EVSE, establish consistent design criteria

Questions?

How to Contact Us

Email

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Survey

tinyurl.com/BendEvSurvey

Thank You!