



UM 2165
Transportation Electrification
Investment Framework

Dec. 14, 2021
OPUC Staff

Today's Presentation

- UM 2165 Scope and Goals
- Public Workshop Process and Stakeholder Perspectives
- Staff Recommendation for Transportation Electrification Investment Framework
- Findings for Inclusion in Rulemaking
- Outstanding Issues and Next Steps
- Conclusion

Scope of UM 2165 and HB 2165 Implementation

UM 2165 Investigation

Launched April, 2021

- Recognition of urgency to meet state EV and decarbonization goals, support market growth and capture TE benefits, while protecting ratepayers
- Broader TE evaluation approach
- Robust public process
- Holistic investment framework
- Recommendations for rulemaking

HB 2165 and HB 3055 Implementation

Passed May, 2021, effective Jan. 1, 2022

- Guidance for monthly surcharge, definitions of underserved communities
- Implementation pathway for Division 87 rulemaking and TE Plan filings

2021

2022

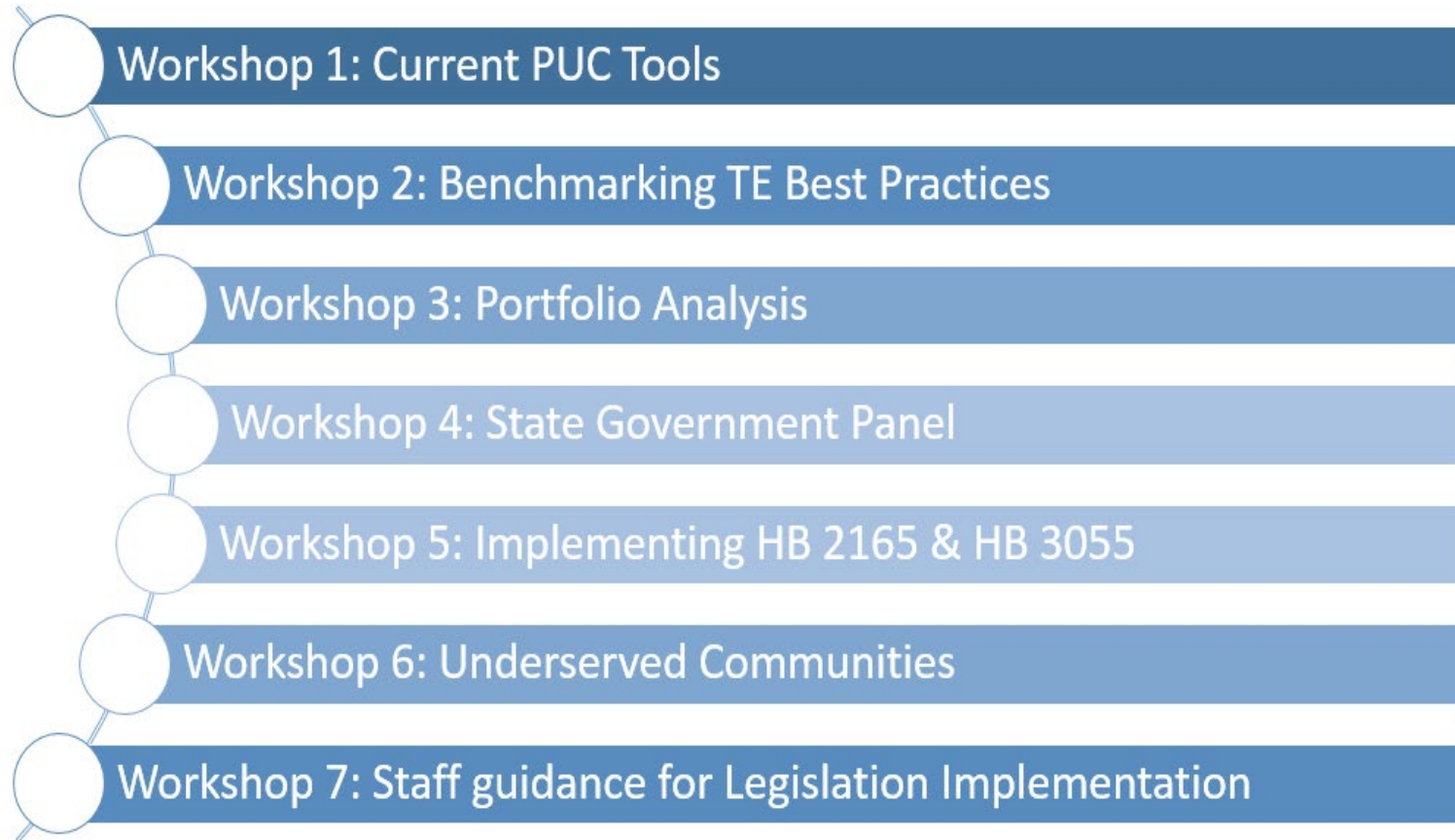


Changes to
Legislative
Landscape

2021 TE Legislation: HB 2165 and HB 3055

- New TE funding source: monthly meter surcharge
- Minimum 50 percent expenditures support TE in underserved communities
- Focus on infrastructure as new distinct category
- New statutory factors for infrastructure investments for Commission to consider during approval
- Non-infrastructure measures: only change is to exclude infrastructure measures from this bucket

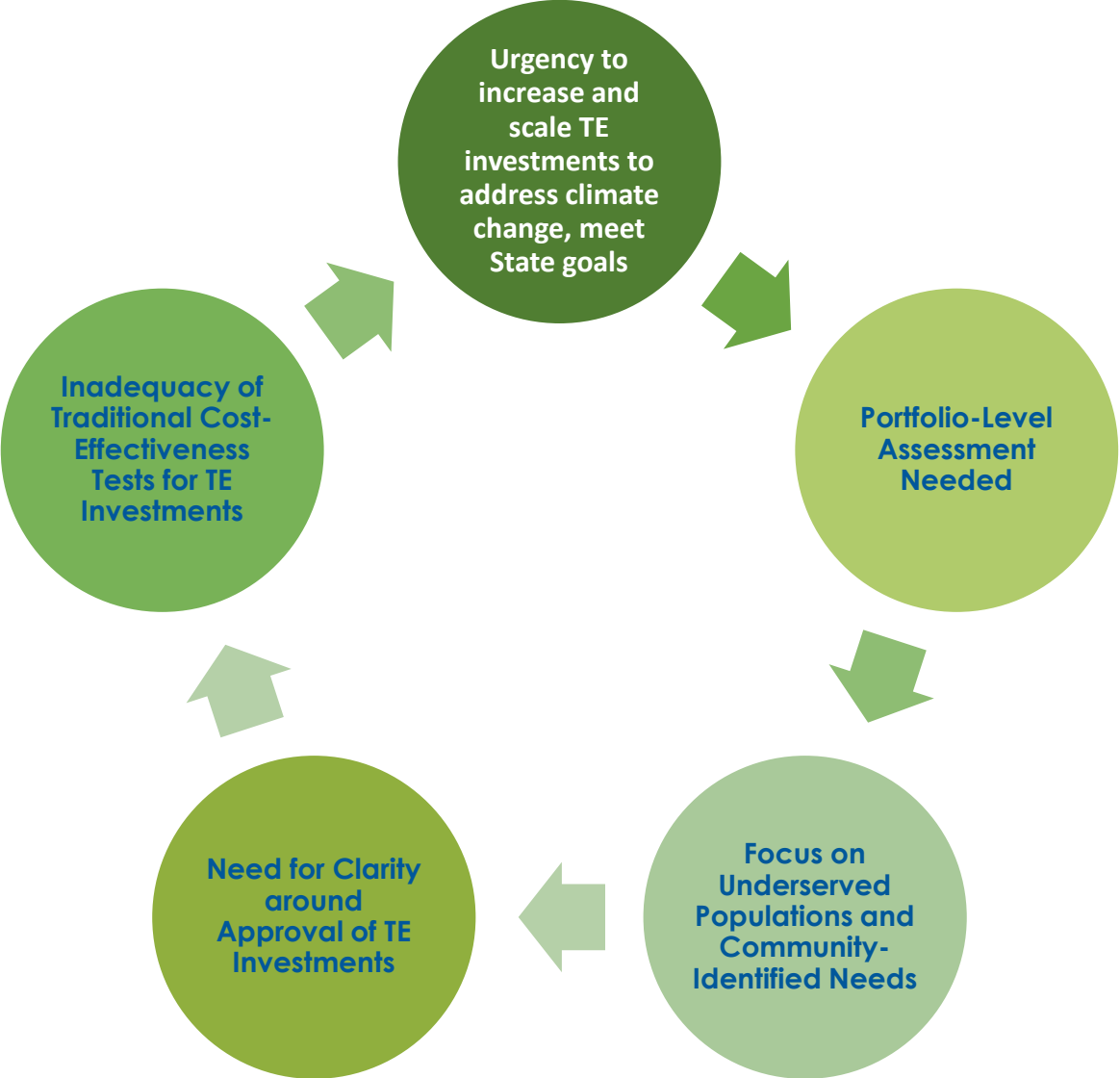
UM 2165 Public Workshop Process, May – October 2021



Benchmarking Regulatory Approaches for TE Evaluation

State	Method	Test/Standard	Consistent with Other DERs?
MD	Benefit-cost analysis (BCA)	JST in development	No?
MN	BCA	SCT, UCT, RIM (no primary test)	Mostly
NY	BCA	SCT (primary)	Yes
RI	BCA	JST (primary)	Yes
WA	BCA	SCT (primary)	No
CA	Performance vs Target	Minimize costs and maximize benefits	No
CO	Performance vs Target	Rate Impact <0.5%	No
VA	Prudence	Public Interest	No

Stakeholder Feedback and Key Themes



Staff Recommendation for TE Investment Framework

TE Portfolio Plan and Budget

Infrastructure Guardrail

Maximum investments aligned with ODOT's *Transportation Electrification Infrastructure Needs Analysis* (TEINA) and SB 1044 adoption goals for light-duty EVs

Portfolio Performance Areas

Direct goals and measure progress of investments to focus portfolios, deliver data

Benefit-Cost Analysis

Various cost tests applied, non-binding

"Jurisdiction-specific" Societal Cost Test, applied for TE approval

2022 - 2024

2025 - 2030

Infrastructure Guardrail: Why TEINA?

*ODOT's Transportation Electrification
Infrastructure Needs Analysis (2021)*

- Predictive model forecasting public charging infrastructure needed to meet State policy goals for EV LDV adoption
- Most rigorous analysis of charging infrastructure need in Oregon
- Flexible, capable of incorporating updates as EV market evolves
- Can be applied to service territory, census tract, across use cases, to inform equitable utility planning
- Robust stakeholder process, highlights market barriers and recommendations

Infrastructure Guardrail: TEINA

Modeling Results
Number of Charging Ports Needed by Use Case (Business as Usual Scenario)

	2020	2025	2030	2035
Urban Light-Duty Vehicles (LDVs)	2,000	8,000	39,000	84,000
Rural LDVs	1,000	5,000	22,000	49,000
Corridor LDVs	400	2,000	3,900	6,100
Local Commercial and Industrial Vehicles	10	371	949	1,836
Transit and School Buses	15	893	3,318	7,407
Transportation Network Companies (TNC)	0	23	193	216
Long-Haul Trucking	0	39	219	690
Disadvantaged Communities	100	600	2,700	6,000
Total Number of Charging Ports	3,525	16,926	72,279	155,249
Increase Over 2020 Level		480%	2,050%	4,404%

Note: Modeling assumes 50,000 electric vehicles in 2020. Projections reflect optimized Business as Usual results.

Light-Duty Vehicle Charging Ports Needed by Type of Charging Port (Business as Usual Scenario)

	2025	2030	2035
Workplace Level 2	7,022	32,405	70,429
Public Level 2	4,472	20,611	44,785
Public Direct Current Fast Charge (DCFC)	4,411	14,875	29,639

Note: LDV includes the Urban, Rural, Corridor, TNC, and Disadvantaged Communities Use Cases

- Utilities can use TEINA to set maximum budget for service territory to meet State EV adoption goals
- Then propose TE portfolios to move market within maximum need
- Use TEINA's methodology, updating inputs with best available data
- Augment with estimated private charging needs
- Prioritize external funding sources
- User-facing tools from ODOT

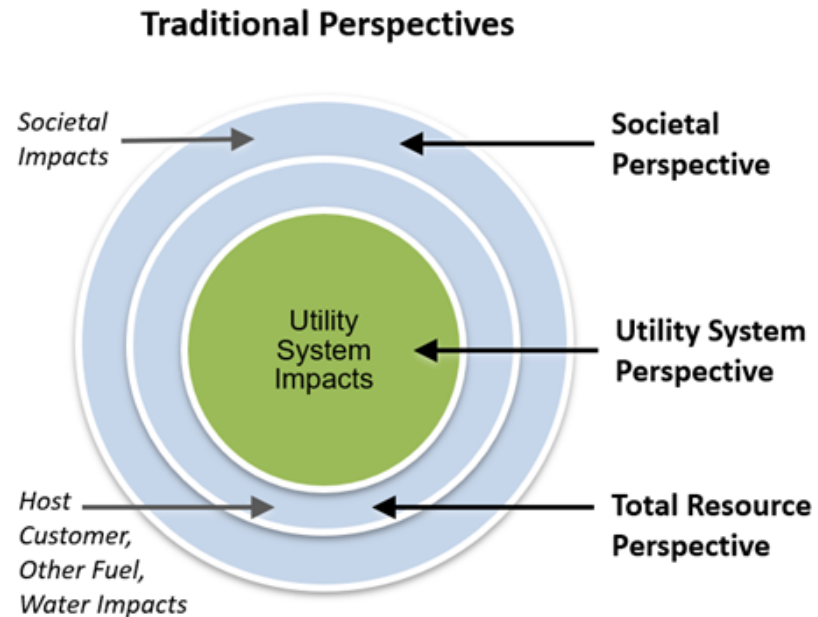
Portfolio Performance Areas

1. Greenhouse gas emission reduction
2. EV adoption
3. Underserved community inclusion and offerings
4. Distribution system impacts and resource benefits
5. Program participation
6. Charging adequacy
7. Infrastructure performance
8. Learnings for readiness

Underserved Community Engagement and Offerings

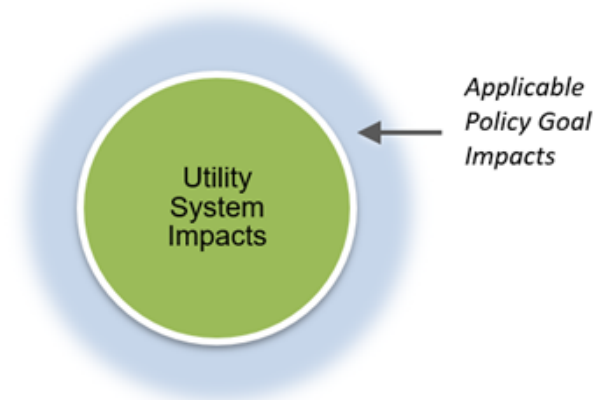
- Directly engage underserved communities building on *Mobility Equity Framework* and City of Portland POEM process
- To guide community prioritization, geographic designation, spending priorities
- Utilities should establish and report on goals for outreach, learnings, investment plans, riming and rollout, equitable infrastructure, EV ownership, total expenditures on underserved communities

Benefit-Cost Analysis: Cost-Effectiveness Perspectives



- Three perspectives define the scope of impacts to include in the most common traditional cost-effectiveness tests.

Regulatory Perspective



- Perspective of public utility commissions, legislators, muni/coop boards, public power authorities, and other relevant decision-makers.
- Accounts for utility system plus impacts relevant to a jurisdiction's applicable policy goals (which may or may not include host customer impacts).
- Can align with one of the traditional test perspectives, but not necessarily.

Source: Tim Woolf, Synapse Energy Economics and Lead Author, *National Standard Practice Manual for Distributed Energy Resources*, 2020

Jurisdiction-Specific Test (JST) and Traditional Cost Tests

Test	Perspective	Key Question Answered	Categories of Benefits and Costs Included
Jurisdiction-Specific Test	Regulators or decision-makers	Will the cost of meeting utility system needs, while achieving applicable policy goals, be reduced?	Includes the utility system impacts, and those impacts associated with achieving applicable policy goals
Utility Cost Test	The utility system	Will utility system costs be reduced?	Includes the utility system impacts
Total Resource Cost Test	The utility system plus host customers	Will utility system costs and host customers' costs collectively be reduced?	Includes the utility system impacts, and host customer impacts
Societal Cost	Society as a whole	Will total costs to society be reduced?	Includes the utility system impacts, host customer impacts, and societal impacts such as environmental and economic development impacts

Source: Tim Woolf, Synapse Energy Economics

Findings for Rulemaking – TE Planning

- Portfolio-wide TE Plan that encompasses all proposed TE investments and activities
- Two-year action plan, budget and annual report
- Broad offerings that are multi-modal, address market barriers
- Holistic planning process includes Clean Fuels Program and all other funding streams
- Rescind Order No. 18-376 allow utilities to coordinate CFP revenue with ratepayer-funded programs, and fold CFP plan review into TE Plan review.

Revise to: Direct Staff to identify timing of CFP plan filings, allowing for holistic planning process and utility flexibility to mix ratepayer and CFP funds

TE Working Group

- TEINA model methodology
- Interoperability between EVSE companies
- Develop Jurisdiction-specific cost test
- Distribution system impacts and EV charging management
- Standardizing business practices to ensure greater consumer protections
- Coordinated rate design – Utilities to update working group in 12 months
- Other topics as needed

Outstanding Issues and Next Steps

Issue	Next Step
Common understanding of TEINA and model implementation	Stakeholder workshop, Jan - Feb, 2022
Performance areas and metrics Clean Fuels Program integration Attribution	Division 87 rulemaking process, Q1-Q2
Emerging issues across implementation, planning, market development	TE Working Group Q3 and quarterly

**Staff
Recommendations
for UM 2165**

1. Adopt Staff's recommendation to implement TE Investment Framework
2. Waive OAR 860-087-0020(2)(b) for next utility TE Plan filings
3. Order Staff to open rulemaking to revise Division 87, to begin in early 2022
4. Rescind Commission Order No. 18-376 – *Revise to: Direct Staff to identify timing of CFP plan filings, allowing for holistic planning process and utility flexibility to mix ratepayer and CFP funds*
5. Direct Staff to convene a quarterly TE working group