

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
SPECIAL PUBLIC MEETING DATE: December 14, 2021**

REGULAR X CONSENT EFFECTIVE DATE December 15, 2021

DATE: December 7, 2021

TO: Oregon Public Utility Commission

FROM: Eric Shierman and Sarah Hall

THROUGH: Bryan Conway and JP Batmale **SIGNED**

SUBJECT: PORTLAND GENERAL ELECTRIC:
(Docket No. UM 2165)
Staff recommendations for transportation electrification investment framework.

STAFF RECOMMENDATION:

The Public Utility Commission of Oregon (Commission or PUC) should:

1. Adopt Staff's recommendation to implement the transportation electrification (TE) Investment Framework in Oregon and support utility investment in TE;
2. Waive OAR 860-087-0020(2)(b) for the next utility TE Plan filing;
3. Order Staff to open a rulemaking to revise Division 87 of the Oregon Administrative Rules (OAR), to begin in early 2022;
4. Rescind Commission Order No. 18-376; and
5. Direct Staff to convene a quarterly TE working group.

DISCUSSION:

Issue

Whether the Commission should take the actions recommended by Staff to implement a TE Investment Framework in Oregon and implement Oregon House Bills 2165 and 3055, based on the investigation in this docket.

Applicable Rule or Law

Oregon Revised Statute (ORS) 756.060 states that the Commission has the authority to adopt “reasonable and proper” rules and regulations relative to statutes administered by the Commission.

Under OAR 860-001-0000(1), the Commission may modify or waive rules for good cause shown.

ORS 757.357 requires the Commission to direct each electric company to file programs that support TE. The statute gives considerations that the Commission is required to include in its review of such programs. House Bills 2165 and 3055 were passed in the most recent legislative session and amend ORS 757.357.

OAR Chapter 860 Division 87 was promulgated by the Commission to implement ORS 757.357, specifically prescribing “the application and reporting requirements for programs to accelerate transportation electrification filed by an electric company.” The rules currently outline requirements for TE program applications and TE Plan filings.

ORS 756.568 enables the Commission to rescind any order made by the Commission upon notice to the public utility and after opportunity to be heard.

Executive Order 20-04 establishes Governor Brown's new greenhouse gas emissions goals for the State of Oregon and directs state agencies to identify and prioritize actions to meet those goals. Section 5.4(8) of the Executive Order directs the Public Utility Commission to “[e]ncourage electric companies to support transportation electrification infrastructure that: supports GHG reductions, helps achieve the transportation electrification goals set forth in Senate Bill 1044 (2019), and is reasonably expected to result in long-term benefit to customers.”

In Order No. 21-026, upon Staff’s request, the Commission directed Staff to open an investigation to develop a TE investment framework.

In Order No. 18-376, the Commission approved Staff’s program design principles and program selection process to guide utilities in their utilization of Clean Fuels Program (CFP) revenues.

Analysis

Background

In Commission Order No. 21-026,¹ the Commission directed Staff to open an investigation to develop an updated transportation electrification investment framework (TEIF or Framework). That docket is UM 2165.

Staff defines the TEIF as a decision-making tool that would provide guiding principles to establish the bounds and desired outcomes of utility TE investments, and the basis for their evaluation by the Commission. Since the launch of UM 2165, important TE legislation became law. Two bills, HB 2165 and HB 3055, introduced a new legal landscape for utility TE investment. In addition to creating a new TE funding source through a monthly meter surcharge, and requiring utility expenditures on underserved communities, the bills placed new importance on investment in charging infrastructure. And most importantly for this investigation, the legislation broadened the range of possible infrastructure investments utilities can propose, challenging the use of traditional cost-effectiveness tests as the basis for evaluation.

In this memo, Staff first presents relevant policy background, a summary of the UM 2165 investigation public workshop process, stakeholder feedback received, and central themes that guided Staff's recommendations. Then Staff proposes its recommendation for a TE Investment Framework, followed by guidance to inform Division 87 rulemaking that reflects key input from the investigation process. Finally, Staff proposes a TE working group for utilities and stakeholders to support implementation and address additional key issues.

The Governor of the State of Oregon, the Oregon Legislature, and the Commission have given Staff clear direction regarding the importance of supporting TE. As background to Staff's recommendation, Staff will discuss the state and Commission policy goals that underlie Staff's approach to TE, the goals of the UM 2165 investigation, and the changes introduced by bills from the 2021 legislative session, HB 2165 and HB 3055.

In 2016, the legislature passed Senate Bill 1547, which was codified as ORS 757.357. The purpose of that statute was to give the Commission the authority to direct electric companies to file programs that accelerate and support TE. The Commission held a rulemaking to implement ORS 757.357, which resulted in OAR Division 87. The Division 87 rules prescribe "the application and reporting requirements for programs to accelerate transportation electrification filed by an electric company."² The rules

¹ Commission Order No. 21-026 was issued January 28, 2021.

² OAR 860-087-0001(1).

currently outline requirements for TE program applications and TE Plan filings. In accordance with Division 87, Staff currently reviews TE programs as they are filed, and reviews TE Plans on a biennial basis.

In 2019, the legislature passed Senate Bill 1044, which aimed to accelerate the adoption of zero-emission vehicles. State agencies, including the Commission, were directed to lead by example to reach this goal, which included purchasing or leasing zero-emission light- or medium-duty vehicles and by adopting policies and rules that work toward achieving the goals set out in the law.

In 2020, Governor Brown signed Executive Order 20-04, which directed the Commission to “encourage electric companies to support transportation electrification infrastructure that supports GHG reductions, helps achieve the transportation electrification goals set forth in Senate Bill 1044, and is reasonably expected to result in long-term benefit to customers.”³ In response to the Executive Order, the Commission published a TE work plan that identified goals to rapidly research new analysis and investment frameworks and promote robust data collection to enable utilities to achieve the goals in the executive order.

In 2021, the regular legislative session produced two bills that amend ORS 757.357 and underscored the legislature’s support of the Commission’s role in supporting TE. These bills, HB 2165 and HB 3055, amend ORS 757.357 in three significant ways. First, HB 2165 directs each utility to implement a monthly meter charge equal to 0.25 percent of total revenues as a dedicated funding source for TE investments. Fifty percent of that funding must be spent on “underserved communities.” Second, HB 3055 created a new category of investment in TE that is distinct from TE programs as already defined in the statute. This category is referred to as “infrastructure measures”. Third, the law redefines TE programs to exclude infrastructure measures. HB 3055 went into effect on September 25, 2021, and HB 2165 will go into effect on January 1, 2022.

Goals of UM 2165 Investigation

Based on Commission and stakeholder input, Staff’s April 6 public meeting memo identified key challenges that the UM 2165 investigation was scoped to address. These consisted of the following challenges that the OPUC can address within its authority.⁴

- Increased regulatory flexibility and clarity for approval of TE infrastructure investments;

³ See Executive Order 20-04, Section 5.B(2), 2020.

⁴ See Docket No. UE 386, OPUC Staff, Staff Report, March 29, 2021, p 7.

- Approaches for regulatory oversight of portfolio-level utility investments in TE programs and infrastructure;
- Cost/benefit evaluation metrics that encompass social and environmental benefits of TE;
- Analytic best practices and methodologies relative to EV adoption modeling;
- Understanding of TE market segments to address market barriers and incentives needed, especially in multi-family housing and public charging;
- Increased access to electric vehicles (EVs) by underserved communities, those experiencing a high energy burden, and rural customers; and
- Adequate charging infrastructure to support end-user adoption.

Desired outcomes of the investigation were described as follows:

The resulting end product will have a broad scope designed to improve the PUC's TE planning guidelines and program requirements to streamline utility processes and clarify cost-recovery criteria. The draft framework should synchronize with TE Plan filings, which may be modified. The framework should consist of concrete elements and may provide revision to respective OARs, guidance for cost-benefit assessment of TE portfolio approach, new rate mechanisms that create value for the grid, guidance on charging infrastructure investments, and metrics to track market maturation to inform investment levels. The framework should offer a staged process to allow for development of both near- and longer-term recommendations.

TE Plans may also be modified to address EO 20-04 TE Action Plan specifications that utilities provide robust data collection for a market transformation data set; and that utilities provide a strategy to transition all light, medium, and heavy-duty company vehicles to natural gas or electric vehicles by 2035. Finally, the process will also reference new Distribution System Planning filings, which require EV adoption and load forecasting as part of Part 2 DSP utility filings in August 2022.⁵

As discussed in the next section, the legislative session expanded the scope of the investigation due to the timing of critical new TE legislation.

2021 TE Legislation

The UM 2165 investigation overlapped with the regular legislative session in 2021. As a result, HB 2165 and HB 3055 were signed into law while the investigation was ongoing, resulting in a changing legal landscape. Parties agreed to incorporate discussions about implementation of the new laws into the investigation, as they were inseparable from the overall discussion of changing existing frameworks and approaches to TE. As a result,

⁵ Ibid. p. 6

Staff's recommendation to the Commission in this memo intertwines implementation of these new laws with the implementation of a TE investment framework.

Oregon House Bill 2165 was signed into law on July 27, 2021.⁶ Section 2 of HB 2165 creates a dedicated funding source for TE investments by requiring PGE and Pacific Power to collect a monthly meter charge equal to 0.25 percent of total revenues. The collection will begin January 1, 2022, and applies to all retail customers and customers of electric service suppliers (ESS) connected to the utility's distribution system. The funds collected under this charge are the minimum amount that utilities must spend on TE per year. The utilities are also required to spend at least 50 percent of the funds collected by the monthly meter charge per year on "underserved communities". The statute gives examples of what could qualify as "underserved communities" but does not limit it to just those examples.

The PUC approves the monthly meter charge budget for underserved communities and the budget items must relate to elements in the utility's most recently accepted TE Plan. Accounting for the monthly meter charge revenue and expenditures must be separate from other funds and must be reported to the PUC. The PUC needs to determine both the budget approval process and the manner and timing of the budget and reporting.

Two other sections of HB 2165 create significant changes to the existing statute and significantly broaden the range of investments utilities can propose. The new legislation creates a category of investment in TE that is distinct from TE "measures" or programs as already defined in the statute. This category is referred to as "infrastructure measures." These infrastructure measure investments are distinct from TE Programs. Infrastructure measures could include investments in a wide range of areas that are reasonably expected to benefit customers. These areas include but are not limited to:

- Distribution infrastructure that supports TE;
- Communication and control technologies that support TE;
- Behind the meter infrastructure that supports TE and is owned by either the utility or the customer.

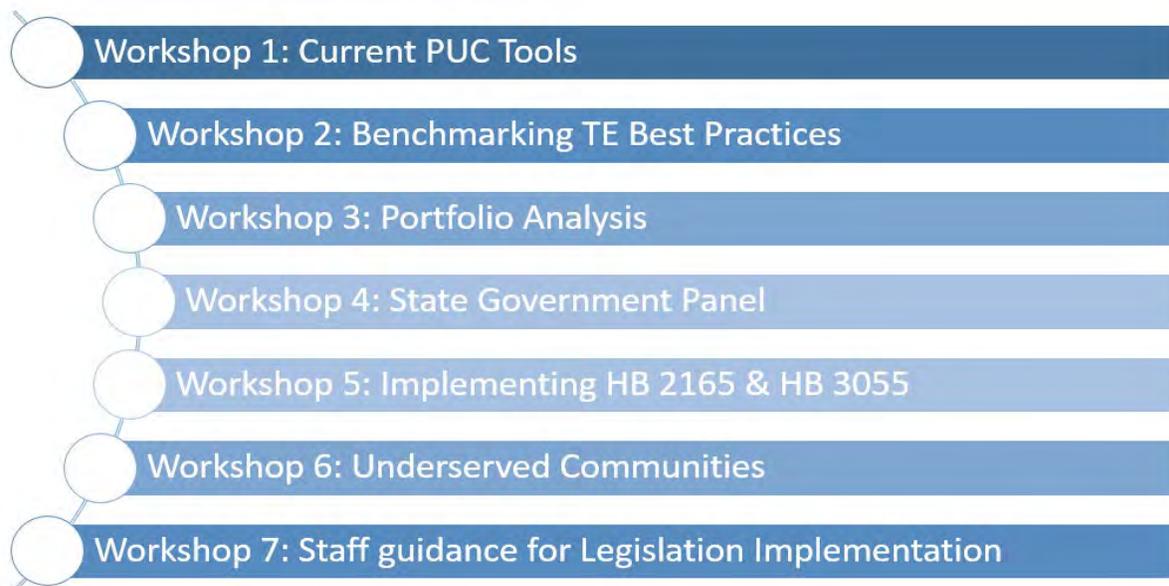
The legislature specifically excluded education and outreach activities from the definition of infrastructure measures. Additionally, the law includes statutory factors that the Commission may consider when approving these investments. The law also redefines TE Programs to exclude infrastructure measures.

⁶ Please note that HB 3055 was also signed into law this legislative session. HB 3055 contains identical language to HB 2165, so these changes will be referred to as HB 2165 throughout to avoid confusion.

HB 2165 changes the legal landscape for utility investment in TE as described above and creates implementation deliverables for both the Commission and the utilities. Accordingly, the UM 2165 investigation addressed both the TE Investment Framework and implementation of the new laws.

Summary of Public Workshop Process

Staff hosted seven public workshops from May – October 2021 to advance key issues for the investigation, introduce new expertise, and seek stakeholder perspectives. Workshops were consistently well-attended by non-profit, municipal, agency, individual, private sector, and utility attendees. Participants provided their perspectives through discussion and written comments.⁷ Staff acknowledges and thanks the many individuals who contributed and ultimately informed Staff’s recommendation. These individuals include David Farnsworth and Jessica Shipley from the Regulatory Assistance Project, all presenters listed below, and all stakeholders who gave their time and energy to engage in the process.



Workshop 1 – Current OPUC Regulatory Tools for TE Investments (May 26, 2021)
OPUC Chair Megan Decker opened the workshop welcoming participants and underscoring the importance of the work ahead. She affirmed the need for a TEIF to

⁷ Please search eDockets by Docket No. UM 2165 at [State of Oregon: Public Utility Commission of Oregon](#).

help move Oregon swiftly ahead in scaling TE, while protecting ratepayers and mitigating risks. The balance of the workshop focused on discussion of current regulatory tools for TE investments and exploring gaps and opportunities with stakeholders. Presenters were Eric Shierman, OPUC Sr. Utility Analyst, and Jill Goatcher, Oregon Department of Justice (DOJ) Assistant Attorney General. Along with colleagues, they elicited stakeholder feedback through facilitated breakout groups.

Workshop 2 – Benchmarking TE Evaluation Best Practices, and Approaches to Benefit-Cost Analysis (June 30, 2021)

This workshop focused on regulatory approaches from other states for TE evaluation, and benefit/cost analysis (BCA) practices for distributed energy resources including electric vehicles (EVs). Presenters were Anna Kim, OPUC Senior Utility Analyst; John Shenot, Senior Advisor at the Regulatory Assistance Project; and Tim Woolf, former commissioner at the Massachusetts Department of Public Utilities and current Vice President at Synapse Energy Economics.

Ms. Kim discussed the BCAs that Oregon currently uses to review EE investments. Mr. Shenot discussed common TE evaluation approaches used by utility commissions across the US. Some evaluations are broad and stand-alone efforts, and others narrowly focused on utility investment proposals. (See Figure 3.)

Mr. Woolf discussed how regulators can improve BCA practices for EE and other DERs. He presented this in the context of the *National Standard Practice Manual*.⁸ He first identified some typical shortcomings in the application of BCAs, and the process to develop a primary BCA test, from articulating applicable policy to ensuring that benefits and costs are treated symmetrically, and consistently across DER types. Mr. Woolf presented the Jurisdiction-Specific Test (JST) for use by Commissions to provide a regulatory perspective reflecting specific jurisdictional policy contexts. (See Figure 2.)

⁸ National Energy Screening Project. *National Standard Practice Manual* August 2020.

Figure 2: BCA: Cost Tests Including Jurisdiction-Specific Test

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

Figure 3: Benchmarking: Regulatory Approaches in TE Evaluation

State	Method	Test/Standard	Consistent with Other DERs?
MD	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

Workshop 3 – Portfolio Analysis; Review of Current Utility TE Portfolios (July 28, 2021)
 This was a discussion of approaches to analyzing utility TE investments as a whole and current TE portfolios of Oregon’s three electric companies. Presenters were Bob Jenks, Executive Director at the Citizens’ Utility Board; Elizabeth Turnbull, Senior Product Portfolio Manager at Portland General Electric; Kate Hawley, EV Senior Product

Manager at Pacific Power; Matt Larkin, Revenue Requirement Manager at Idaho Power; and Patti Best, Senior Program Specialist at Idaho Power.

Mr. Jenks presented workshop participants with a method for establishing a maximum expenditure level for utility TE funding, called the Grid Integration Allowance (GIA). This would establish an annual budget for companies based on the distribution revenues that they collect, in a manner similar to the current revenue collection process for line extension investments. Following discussion, each utility gave an overview of its current TE programs and anticipated program offerings.

Workshop 4 – State Panel of TE Program Leaders (August 9, 2021)

This was a discussion with representatives from state agencies and Forth, Clean Fuels Program backstop aggregator, on priorities and vision for TE in Oregon. Presenters were Cory-Ann Wind, Oregon Clean Fuels Program Manager at the Oregon Department of Environmental Quality; Kelly Yearick, Senior Program Manager at Forth; Mary Brazell, Transportation Electrification Program Manager at the Oregon Department of Transportation, and Jessica Reichers, Technology & Policy Manager at the Oregon Department of Energy.

Ms. Wind provided an overview of the CFP, a key source of TE funding with the goal to reduce transportation emissions 10 percent below 2016 levels by 2025. She described her work developing the CFP Equity Advisory Committee. Ms. Yearick explained the range of activities Forth conducts, from the Forth Mobility Fund to utility roundtable forums.

Ms. Brazell discussed the importance of TE to meeting Oregon's climate challenge goals. She also explained ODOT's *Transportation Electrification Infrastructure Needs Analysis* (TEINA) report, which evaluates the state's charging infrastructure needs and provides policy and implementation recommendations.

TEINA estimates Oregon's charging infrastructure needs through 2035 to meet state policy goals, specifically EV adoption goals for light-duty vehicles set forth by SB 1044.⁹ In developing TEINA, ODOT established an advisory panel, surveyed the market segments of several EV use cases, and built a predictive model to forecast infrastructure need. ODOT plans to convert the model into a user-facing planning tool.

TEINA provides evidence-based guidance for infrastructure need across the key public use cases, which are:

- Urban light duty vehicle (LDV) workplace charging

⁹ ORS 283.401(3)(b).

- Urban LDV public Level 2 charging
- Urban LDV direct current fast charging (DCFC)
- Rural LDV workplace charging
- Rural LDV public Level 2 charging
- Rural LDV DCFC
- Corridor LDV
- Local medium duty vehicle (MDV)
- Corridor heavy duty vehicle (HDV)
- Transportation Network Companies (TNC)

TEINA also estimates some home and fleet charging use cases but is not comprehensive for private charging. For example, estimates for multi-unit dwelling infrastructure are absent from ODOT's study. Since charging at home or at a fleet depot are relatively simple functions of ports per vehicle, private charging infrastructure need will largely reflect an updated EV adoption forecast and updated assumptions about charging speed.

Ms. Reichers explained ODOE's role in reporting on the adoption of zero emissions vehicles in Oregon. She also explained the work on the state's ZEV Interagency Action Plan, including development of recommendations and publication plans.

Workshop 5 – Implementing HB 2165 and HB 3055 (August 27, 2021)

In this workshop, stakeholders discussed new TE legislation and integrating it within the TE investment framework investigation. OPUC Staff and DOJ presenters reviewed HB 2165 and HB 3055 and coordinating bill implementation and TE planning.

Workshop 6 – Underserved Communities and Equity; Quantifying Non-Energy Impacts (September 15, 2021)

This discussion focused on TE portfolios that better address underserved communities and equity goals, effective outreach and engagement strategies with diverse communities, and analysis of non-energy impacts to inform program investments. The workshop also focused on informing implementation of HB 2165. Presented by Ezell Watson, OPUC Diversity, Equity, and Inclusion Director; Ingrid Fish, Transportation Decarbonization Policy Lead, City of Portland Bureau of Planning and Sustainability; and Lisa Skumatz, Principal, Skumatz Economic Research Associates (SERA).

Mr. Watson led a conversation with stakeholders, asking questions about the different ways underserved communities utilize EVs, and whether we have confirmed/researched our assumptions about serving these communities. He led discussion about potential unintended impacts of HB 2165, and historical harm to communities of color. He discussed how TE investments can provide both environmental and economic benefits.

Ms. Fish discussed City of Portland's climate goals, transportation decarbonization strategies, and equity impacts and goals. She presented Portland's Pricing Options for Equitable Mobility (POEM) public engagement process.¹⁰ She also discussed an Equitable Mobility Framework, which is based in part on the Greenlining Institute's Mobility Equity Framework,¹¹ a process that prioritizes extending benefits, reducing disparities, and improving safety for BIPOC communities.¹²

Dr. Skumatz explained that part of understanding the benefits and costs of more equitable utility TE investment will require a better understanding of hard to quantify "non-energy impacts." She set out principles and examples for participants to discuss. Though sometimes hard to measure, equity costs and benefits can be quantified, tested through defensible methods that have been accepted by utility commissions, and can inform policy and be integrated into decision-making.

Workshop 7 – Staff Guidance for Implementation of HB 2165 (October 20, 2021)

In this workshop, Staff presented draft interim guidance for the HB 2165 monthly meter charge budget, separate accounting, and reporting. Staff also proposed definitions for underserved communities. Staff then presented options for timing of Division 87 rulemaking relative to utility TE Plan filings. Stakeholder feedback provided a consensus for Division 87 rulemaking to be launched in Q1 2022, followed by TE Plans filed in Q3.

Stakeholder Feedback and Key Themes

Over the course of these workshops, various themes emerged that helped guide Staff's thinking in formulating TEIF policy recommendations. Staff deeply appreciates the robust engagement by stakeholders in this investigation, and their intensive effort to participate and prepare thoughtful written comments. To fully translate this participation into actionable learnings, Staff distilled stakeholder comments into the following themes that surfaced in nearly all workshops. Further, these themes helped guide Staff's recommendations.

Theme 1 - Portfolio-Level Assessment: There was a broad agreement that the urgency in scaling TE investment, and the need to increase transparency into the full range of utility TE expenditures, require a review of TE portfolios rather than individual programs. Additionally, there was agreement to use a more flexible evaluation framework at the portfolio-level by establishing budget guidance, and some form of outcome-based

¹⁰ City of Portland Pricing Options for Equitable Mobility
<https://www.portland.gov/transportation/planning/pricing-options-equitable-mobility-poem>.

¹¹ Creger, Espino, and Sanchez Mobility Equity Framework March 20.

¹² I.e., Black people, Indigenous people, and people of color.

metrics and benefit/cost analysis. This allows for the balance between ratepayer protection and accelerating TE to meet State goals.

Theme 2 - Difficulty with Traditional Cost-Effectiveness Tests for TE Investments: A number of stakeholders indicated that traditional cost-effectiveness tests aren't fully adequate for evaluating TE investments. In particular these tests don't reflect the benefits TE can provide to underserved communities, such as the health benefits of pollution reduction, and overall positive economic impacts for the state. There was a recognition among stakeholders that while these benefits and related costs may be challenging to measure, it is still important to do so.

Theme 3 - Need for Clarity around Approval of TE Investments: Stakeholders identified the need for clarity around TE program approval. This includes clear substantive criteria and precision regarding timing, in order to guide utility program filings and Commission review.

Theme 4 - Focus on Underserved Communities: Stakeholder opinions coalesced on the need to ensure better-informed investments on underserved communities. There was consensus among stakeholders to require utilities to engage with overburdened and underserved communities to identify their TE needs in order to develop utility programs.

Staff Recommendation for TE Investment Framework

Staff's core recommendation for the Commission is to adopt a TE Investment Framework comprised of the following three elements:

1. **Infrastructure spending "guardrail"** - First, limit TE infrastructure investment proposals to a maximum level of expenditures as forecasted by ODOT's TEINA model. This approach provides both direction regarding the scale of acceptable investment, and a limit on such investment. Further, utilities should prioritize funding in a way that emphasizes external funding sources before investing ratepayer dollars.
2. **Portfolio performance areas** - Second, require utilities to develop TE portfolios that invest in targeted performance areas, and require regular utility reporting on their portfolio performance in these areas. Portfolio performance areas include:
 - a. Greenhouse gas emissions impacts,
 - b. Electric vehicle adoption,
 - c. Inclusion of and program offerings to underserved communities,
 - d. Distribution system impacts and benefits,

- e. Charging adequacy,
- f. Infrastructure performance, and
- g. Learnings for readiness.

- 3. Benefit/cost analysis** - Third, adopt a benefit/cost analysis for TE portfolios to increase transparency of investments and ratepayer impacts over time, as illustrated in Figure 4 below. Staff foresees working with stakeholders over the next several years to develop a Jurisdiction-Specific Test to be applied as a formal criterion in future TE Plans for Commission approval of TE Budgets.

It is Staff's position that this framework provides the flexibility needed to support scale-up of utility TE investments and that it is directly aligned with state policy goals. The framework proposed creates a regulatory environment that better aligns investment levels with state goals, integrates with other state agency efforts, and prepares our utilities to partner in effective deployment of the significant dollars anticipated to flow into Oregon through the federal Infrastructure Investment and Jobs Act.¹³

The TEIF is grounded empirically in the most current, detailed needs analysis for the state, and reflects stakeholder feedback from the UM 2165 investigation. As a "maturity model," this proposed framework is an adaptive approach designed to evolve over time as reporting provides more robust data to inform future benefit/cost analyses. Each of these three TEIF elements is further discussed below.

Framework Element No. 1: Utility TE infrastructure investments should be limited to maximum expenditures forecasted by ODOT's TEINA model. Utilities should utilize available external funding before investing ratepayer funds.

As a spending principle to control maximum infrastructure expenditures, Staff recommends utilities apply TEINA's method to establish the maximum infrastructure need for public charging in their service territories for the following reasons.

Staff views TEINA as the most rigorous available approach to establishing charging infrastructure need in Oregon. TEINA is also the best currently available means of establishing a spending guardrail linked to the state's EV infrastructure needs. Staff recommends the use of TEINA because it is flexible and capable of incorporating updated information as the EV market evolves.

Staff provides the following initial guidance to utilities in utilizing TEINA to develop an estimate of maximum infrastructure expenditures in their service areas:

¹³ Passed into law Nov. 5, 2021.

1. Utilities should augment TEINA with a comprehensive estimate of private charging needs. Use of the TEINA methodology should not be interpreted to preclude utility investments in private EVSE use cases that TEINA didn't model.
2. Staff recommends utilities use TEINA's method, not its inputs. TEINA's approach is to start with the United States Department of Energy's Electric Vehicle Infrastructure Projection Tool (EVI-Pro Lite) and augment gaps in its output. ODOT found four gaps: traffic passing through a state's corridors by out-of-state residents; growth in TNC drivers; MDV, HDV; and the reduction in charging infrastructure need due to micro-mobility adoption. After taking all these adjustments to EVI-Pro Lite into account, ODOT then optimized how the different use cases can be expected to overlap.
3. Staff recommends electric companies take this basic approach of augmenting EVI-Pro Lite to develop a charging infrastructure needs analysis customized to their service territories. This will be a central component of the 2022 TE Plans. All assumptions ODOT made should be reviewed with the best, most current, evidence utilities will have next year. Staff expects the most reasonable assumptions to be used. For example, ODOT used the state LDV EV goals from SB 1044 as an EV adoption forecast. Staff recommends utilities update that forecast with the latest estimate of expected EV adoption in each companies' service territory.
4. In funding infrastructure investments, Staff recommends prioritization of external funding sources before investing ratepayer dollars. The exception to this is the monthly meter charge which must be spent, regardless of available external funds. Staff expects utilities to utilize all external funding sources, including but not limited to: CFP credits, grants, and program participant contributions. Additionally, utilities should seek to avoid ratepayer subsidization of EVSE charging infrastructure that a project is required to install due to a building code.

Consideration of Other Approaches

Staff considered other near-term alternatives to establish bounds for utility spending on TE infrastructure, and carefully reviewed stakeholder comments on this issue. For example, CUB's GIA proposal would limit utility spending to the incremental distribution charge revenue from EVs.¹⁴ Another example, the State of Colorado, limits recoverable utility EV-related spending to one half of one percent of revenue. While Staff appreciated these approaches, we sought to craft a proposal to meet infrastructure needs and maximize external funding that better aligns utility TE Plans with state policy

¹⁴ See Docket No. UM 2033, CUB, Comments, p 14-17.

goals. We found pegging utility spending limits to a percentage of revenue might carry too many limitations to truly align utility activities with state policy goals, especially in the short run.

Instead, Staff recommends the use of TEINA to set the optimal level of TE infrastructure spending in a utility's territory. This allows for transitioning from individual pilot programs, most of which are set to expire by 2024, to the assessment of an integrated TE portfolio with goals that support the state's policy and climate ambitions, independent of utility budgets and revenues.

When utilities file their third TE Plans in 2024 (with TE Budgets for 2025 and 2026), Staff anticipates this transition may produce enough information for the Commission to make a reasonable long-term comparison of TE Budget benefits and costs.

As an important next step, Staff will host a public workshop in early Q1 2022 to facilitate further understanding of ODOT's TEINA report, and the technical application of its methodology by utilities for EV infrastructure planning.

Framework Element No. 2: Portfolio performance areas should be adopted for TE Plan portfolios to direct goals and measure progress of investments.

Staff recommends the use of targeted portfolio performance areas in conjunction with optimal levels of TE infrastructure investment as modeled by TEINA. In this sense, each "area" helps to assess utility investments, becoming a yardstick for performance of TE portfolios that the utilities will report on over time.

Staff proposes working with stakeholders and utilities to refine these performance areas and support development of related measurement metrics during the Division 87 rulemaking in Q1-Q2 2022. The draft categories below reflect stakeholder feedback and the language of HB 2165.

1. **Greenhouse gas emissions impacts** – Reduced or avoided emissions resulting from TE programs and portfolio.
2. **Electric vehicle adoption** – Increased EV adoption resulting from utility TE investments.
3. **Underserved community inclusion and offerings** – Understanding and incorporating the needs of low-income and communities of color with clean, sustainable mobility options will produce societal benefits that include positive health impacts, increased quality of life, and greater employment and education opportunities. A conscious economic focus on these communities

will also benefit the entire Oregon economy. This will help improve equity in transportation planning and investment by enabling utilities to prioritize the fair distribution of TE burdens and benefits, and take steps to incorporate the needs and concerns of marginalized communities in TE investment decisions.

- a. Utilities should build on the structures identified by Greenlining Institute's Mobility Equity Framework, and the City of Portland's POEM process, and utilities should adopt the following outreach steps to ensure that all Oregonians have access to high quality mobility options that reduce air pollution and enhance economic opportunity in low-income communities of color.
 - i. Identify the mobility needs of a specific underserved community.
 - ii. Conduct the analysis to prioritize transportation modes that best equitable mobility needs while maximizing benefits and minimizing burdens.
 - iii. Share decision-making power with local communities.
 - iv. This approach is meant to be implemented at the community level, so community leaders and community-based organizations can play a significant role. Communities can be represented by local governments or other organizations.
- b. Utilities should also articulate their plans to meet the following goals, and report on these goals annually:
 - i. Organizations engaged and their community representation.
 - ii. Numbers and nature of outreach efforts in energy-burdened communities.
 - iii. Learnings from that engagement.
 - iv. TE investment plans as a result of learnings.
 - v. Timing and milestones for program rollout.
 - vi. Equitable buildup of infrastructure using TEINA, and meeting gaps in allocation (per Census tracts).
 - vii. EV ownership per capita infrastructure using TEINA, and meeting gaps in allocation (per census tracts).
 - viii. In all TE budgets, identify amount of money spent on underserved communities.

4. Distribution system impacts and resource benefits –

- a. Coordination with Distribution System Planning to anticipate grid impacts.
- b. Improved grid integration including DR-ready EVSE and managed charging programs.
- c. Off-peak "smart" charging participation.

- d. Money saved (i.e., difference between standard kwh charge vs. off-peak per kwh charge for average driver).
 - e. Marginal cost to serve EVSE customers.
5. **Program participation** – To understand barriers and outcomes in customer participation.
 6. **Charging adequacy** – To understand utilization of infrastructure.
 7. **Infrastructure performance** – To understand EVSE buildout in comparison with TEINA modeling, by Census tract.
 8. **Learnings for readiness** – Utilities should seek to share learnings across technology, market, program deployment, and technical and other areas in this emerging market.
 - a. To understand customer charging behavior and preferences, particularly in workplace charging.
 - b. Innovations in vehicle-to-grid, EV batteries as distributed resources.

Framework Element No. 3: Benefit-cost analysis (BCA) should be performed for TE programs and portfolio budgets to improve transparency and equity of investment choices. Staff supports working with stakeholders to develop a primary cost test for use in approving TE Plan budgets, by 2025 if possible.

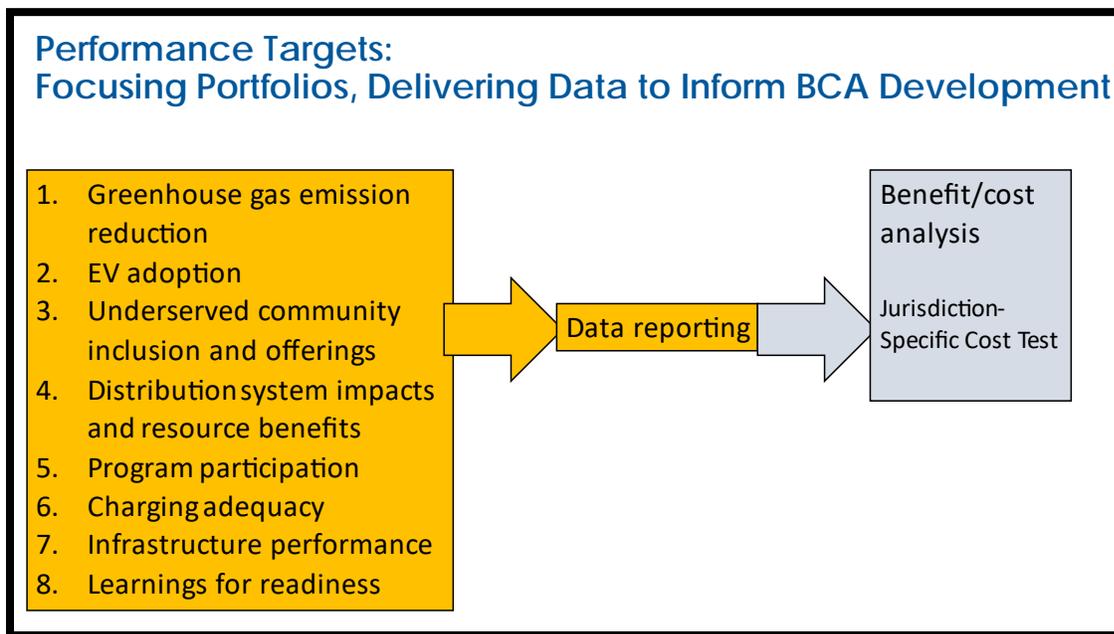
Staff recommends that utilities apply a variety of cost tests for analysis of their programs and portfolios in order to increase transparency and understanding of investment choices. These include the Societal Cost Test, Total Resource Cost Test, Participant Cost Test, Utility Cost Test, and Ratepayer Impact Measure Test. Staff recommends utilities present results for each as they can provide additional perspectives for the Commission and stakeholders to consider. However, Staff will not use results to assess near-term investments.

For the long-term, Staff recommends phasing in the adoption of a Jurisdiction-Specific Test (JST) as the primary form of BCA to be applied as a criterion for Commission approval of TE portfolios, possibly by 2025. (See Figure 4 below.) Most states limit utility TE spending with some form of BCA.

The Societal Cost test looks more broadly but also encompasses the inquiries of the other benefit cost tests. The Jurisdiction-Specific Test would be a “tailored” Societal Cost Test for the state of Oregon, reflecting specific state policy goals. The JST assesses the impacts of investments on the utility system, as well as impacts associated with achieving applicable state policy goals.

Building on Stakeholder feedback received during the public workshops, Staff is open to exploring inclusion of non-energy impacts such as public health benefits in a JST. During the next three years, Staff will host a quarterly working group as a forum for stakeholders and utilities to explore development of a JST for use in evaluating TE in Oregon.

Figure 4: Portfolio Performance Areas: Focusing Portfolios, Delivering Data to Inform Benefit / Cost Analysis



Staff Recommendation: That the Commission adopt Staff’s recommendation for a TE Investment Framework with three elements that Staff will use to make recommendations to the Commission on whether to approve an electric company’s TE Budget.

Findings for Inclusion in Rulemaking

The four elements listed below outline key considerations for a holistic rulemaking process that have emerged from the investigation. Our goal is to systematically consider and then integrate as appropriate the wealth of ideas and perspectives shared during the UM 2165 workshops into future rulemaking. Staff intends to develop these points further with stakeholders in drafting rules to revise OAR Chapter 869 Division 87 for TE Plan filings.

TE Planning Process

Staff envisions a holistic biennial TE planning process with a TE “Portfolio” Plan that encompasses all proposed TE investments, and an associated expense and revenue budget reflecting all funding streams. The scope of the TE portfolio should include all activities the electric company is making to support TE. This should include both infrastructure measures and programs.

A unified review process will also sustain greater stakeholder engagement if Commission decisions occur through the TE Plan review process rather than in separate ongoing advice filings. Stakeholders can assess TE investments more holistically than as separate programs filed throughout the year. Key planning elements that Staff plans to adopt via the rulemaking:

- **Scope**: The TE planning cycle should consist of the TE Plan, Budget, and Report. After 2022, the TE Plan should be filed biennially by May 1 of even-numbered years. The TE Plan should include a two-year action plan and TE Budget presented for Commission approval.
- **Breadth of Offerings**: Per stakeholder feedback, TE Plans should present an integrated portfolio with multimodal TE offerings that address market barriers and expand customer groups. A multimodal approach should consider a wide range of market barriers. As we discussed at the workshop on Underserved Communities and Equity; Quantifying Non-Energy Impacts (September 15, 2021), an important example is micromobility. Staff recommends utilities explore promotion of electric scooters and electric bikes for underserved communities. This mode of transportation offers both more affordability and offers an even better environmental impact than LDV EVs.
- **Holistic Planning**: TE programs funded by CFP credits should also be fully integrated into the TE planning cycle. Staff recommends rescinding Order

No. 18-376 to allow programs funded by CFP credits into the utility's TE portfolio. This would provide utilities the flexibility to fund programs with both CFP credits and ratepayer funds. Staff also makes this recommendation in order to optimize stakeholder engagement across related TE planning processes.

Based on stakeholder feedback and other best practices, Staff plans to encourage utilities to include the following in their plans, but is ultimately unclear at this time if/how they should be captured in rule:

- Utilities should include portfolio maps detailing not only EV infrastructure, but also program utilization. Developing maps that display a heat map showing the U.S. Census tracts, demographic data, and the utility's service territory by percentage of TEINA infrastructure buildout would be very helpful.
- The utilities should develop a tracking mechanism that forecasts EV adoption. Subsequent TE plans should compare actual versus forecasted EV adoption.
- Within their TE Plans, utilities should present a similar level of detail as individual programs that utilities have historically proposed through advice filings.

TE Budget

The programs in the TE Budget must be based on programs described in the most recently accepted TE Plan. Forecasted expenditures should be grouped by program and expenditure type:

- a. Capital
- b. Expenses
 - I. Administrative costs
 - II. O&M on investments
 - III. Rebates
 - IV. Other expense categories that may arise

Forecasted spending on underserved communities should also be identified separately. After 2022, Staff expects to see the annual HB 2165 monthly meter charge budget filed as part of this portfolio TE Budget, including the minimum of 50 percent of the meter charge to support TE in underserved communities.

Incremental energy and capacity costs attributable to the TE portfolio are out of the scope of the TE Budget. However, Staff will work with the utilities to attempt to include these two elements in the forecasts of benefit/cost analysis in the TE Plan.

The forecasted funding should be grouped into the following categories:

- a. Monthly meter charge
- b. Clean Fuels Program credits
- c. Grants
- d. Base rates approved for TE
- e. Deferrals

To align with other PUC planning processes, Staff suggests the utilities attempt to include an estimated twenty-year forecast of TE program spending and funding by source. This is intended to provide long-term context for TE planning.

TE Plan Report

A TE Report should be filed annually by May 1 of each year. The TE Report should contain actual expenditures for the previous calendar year following the same format as the TE Budget. A supporting spreadsheet should be shared through Huddle reporting all TE expenditures at the transaction level and identifying what funding source financed each transaction.

Utilities can file “interim-year updates” to report material changes to existing Plans or introduce new programs if needed.

Consolidated Processes

Isolated review processes should be consolidated into the TE Plan by moving Division 87’s Section 30 (Program Application) and Section 40 (Program Report) into Section 20 (TE Plan). To create a TE planning cycle that efficiently subjects utility TE portfolios to public review, two regulatory tools should be folded into the TE Plan. First, the reporting requirements for new TE programs in Section 30 of Division 87 should become the threshold for meeting the requirement that TE Budgets consist of elements from an accepted TE Plan. Second, the program report in Section 40 of Division 87 should provide a biennial assessment of all existing TE programs.

Waiving Rules to Delay Plan Filings in 2022

OAR 860-087-0020(2)(b) requires the utilities to file their TE Plans within two years of an accepted TE Plan. For PGE, PAC, and Idaho Power this would require reports to be filed in Q1 and early Q2 of 2022. During workshop No. 7, stakeholders all agreed that it

would be optimal to update the rules before the next round of TE Plans are developed. Staff agrees and finds clarifying the approach to TE policy via updated rules good cause for delaying the submission of the next round of TE Plans. Accordingly, Staff suggests waiving OAR 860-087-0020(2)(b) and giving the utilities an additional nine to twelve months to develop their next TE plans. Staff's goal is to complete the proposed rulemaking by July 1, 2022.

Staff Recommendations:

- Order Staff to commence a rulemaking, to begin in early 2022, to revise Division 87 of the OARs, formalizing Staff's recommendations. Staff notes that the intent of the rulemaking is to move quickly and incorporate the stakeholder input already collected in this investigation.
- Rescind Order No. 18-376 to allow utilities to coordinate CFP credit revenue with ratepayer-funded programs, and to fold the CFP plan review process into the TE Plan review.
- Waive OAR 860-087-0020(2)(b), which requires the utilities to file their TE Plans in Q1 of 2022.

Staff Recommendation for TE Working Group

Staff recommends establishing a quarterly TE working group for utilities and stakeholders, to convene in Q3 2022 after proposed rulemaking. The working group would serve as a venue to address TEIF implementation and other key topics that require ongoing attention. These include but are not limited to:

- Refining the TEINA model methodology, as needed, to ensure its most effective use in TE investment, and the needs of stakeholders and utilities;
- Ensuring greater interoperability between EVSE companies serving Oregon's TE needs, including the removal of company-to-company barriers, in order to promote greater standardization of a marketplace for EV adoption, and improved future-proofing infrastructure supported through public funding;
- Reviewing and developing a jurisdiction-specific cost test for use in future portfolio evaluation;
- Better understanding distribution system impacts and the relationship of utility EV charging management to distribution system planning;

- Standardizing business practices to ensure greater consumer protections, greater availability of cost-related information, and reduction in soft-costs associated with installation of EV-related infrastructure.
- Supporting implementation of rate designs that will ensure that Oregon consumers are encouraged to charge vehicles in a manner that helps utilities optimize their power grid investments, lowers utility costs for all ratepayers, and encourages fuel cost savings for the public.

As a starting deliverable for the working group, Staff recommends that utilities present an update by December 31, 2022, on the efficacy of their EV-related rates and share pertinent data to advance coordinated ratemaking modernization for TE.

Staff Recommendation: That the Commission direct Staff to convene a quarterly TE working group in Q3 2022 to further develop the TEIF.

Conclusion

The work in this investigation resulted in comprehensive insights into TE investment frameworks and the implementation of new legislation. With the support of stakeholders and utilities, Staff developed specific recommendations for a TE Investment Framework in Oregon and an implementation strategy for the new legislation. Staff also presented recommendations to guide a proposed revision of Division 87 rules, reflecting stakeholder feedback. In summary, Staff recommends that the Commission do the following:

1. Adopt Staff's recommendation to implement the TE Investment Framework in Oregon.
2. Waive OAR 860-087-0020(2)(b), which requires the utilities to file their TE Plans in Q1 of 2022.
3. Order Staff to commence a rulemaking, to begin in early 2022, to revise Division 87 of the OARs to formalize Staff's recommendations. Staff notes that the intent of the rulemaking is to move quickly and incorporate the stakeholder input already collected in this investigation.
4. Rescind Order No. 18-376 to allow utilities to coordinate CFP credit revenue with ratepayer-funded programs and to fold the CFP plan review process into the TE Plan review.
5. Direct Staff to convene a quarterly TE working group in Q3 2022.

PROPOSED COMMISSION MOTION:

1. Adopt Staff's recommendation to implement the TE Investment Framework in Oregon and support utility investment in TE;
2. Waive OAR 860-087-0020(2)(b) for the next utility TE Plan filing;
3. Order Staff to open a rulemaking to revise Division 87 of the Oregon Administrative Rules, to begin in early 2022;
4. Rescind Commission Order No. 18-376; and
5. Direct Staff to convene a quarterly TE working group.