

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO**

\* \* \* \* \*

IN THE MATTER OF THE APPLICATION )  
OF PUBLIC SERVICE COMPANY OF )  
COLORADO FOR APPROVAL OF ITS )  
2024-2026 TRANSPORTATION ) PROCEEDING NO. 23A-\_\_\_\_E  
ELECTRIFICATION PLAN. )

**DIRECT TESTIMONY OF NADIA I. EL MALLAKH**

**ON**

**BEHALF OF**

**PUBLIC SERVICE COMPANY OF COLORADO**

**May 15, 2023**

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**TABLE OF CONTENTS**

<b><u>SECTION</u></b>	<b><u>PAGE</u></b>
I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND RECOMMENDATIONS .....	3
II. THE ROLE OF TEPS IN SUPPORTING COLORADO'S EV ADOPTION GOALS.....	6
A. Background On Colorado's EV Adoption Goals .....	6
B. The Importance Of Utility Support In Advancing Transportation Electrification .....	11
C. The Role Of TEPs In Promoting An Affordable Clean Energy Transition And Maximizing Related Benefits.....	14
III. BUILDING ON KEY LEARNINGS FROM PUBLIC SERVICE'S 2021-2023 TEP .....	19
A. Key Learnings Through Implementing the Inaugural TEP .....	19
B. Ensuring Comprehensive Support Through The EV Adoption Journey	23
IV. PAVING THE WAY FOR AN EQUITABLE AND AFFORDABLE TRANSITION.....	32
V. LOOKING TO THE FUTURE .....	41
VI. CONCLUSION .....	45

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**DIRECT TESTIMONY OF NADIA I. EL MALLAKH**

1 I. **INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND**  
2 **RECOMMENDATIONS**

3 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

4 A. My name is Nadia I. El Mallakh. My business address is 1800 Larimer Street,  
5 Denver, Colorado 80202.

6 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

7 A. I am employed by Xcel Energy Services, Inc. ("XES") as Vice President, Clean  
8 Transportation and Strategic Partnerships. XES is a wholly owned subsidiary of  
9 Xcel Energy Inc. ("Xcel Energy"), and it provides an array of support services to  
10 Public Service Company of Colorado ("Public Service" or the "Company") and the  
11 other utility operating company subsidiaries of Xcel Energy on a coordinated basis.

12 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

13 A. I am testifying on behalf of Public Service.

1    **Q.    PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.**

2    A.    As Vice President, Clean Transportation and Strategic Partnerships for Xcel  
3    Energy, I am responsible for leading the strategy and implementation of Clean  
4    Transportation programs, policy, and related efforts. A description of my  
5    qualifications, duties and responsibilities is set forth in my Statement of  
6    Qualifications at the conclusion of my testimony.

7    **Q.    WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

8    A.    The purpose of my Direct Testimony is to:

- 9            • Discuss the role of comprehensive Transportation Electrification Plans  
10           (“TEPs”) in advancing Colorado’s ability to meet its clean transportation  
11           targets and statewide emissions reduction goals;
- 12           • Provide an overview of the key lessons Public Service has learned in  
13           implementing our inaugural TEP, including from customer, community, and  
14           stakeholder feedback, and describe how our proposed TEP will build upon  
15           these learnings; and
- 16           • Describe how Public Service’s proposed 2024-2026 TEP will continue to  
17           pave the way for an equitable and affordable transition for our customers  
18           and communities regarding transportation electrification; and
- 19           • Describe the Company’s long-term vision to advance transportation  
20           electrification and the role of this proposed TEP in making that vision a  
21           reality.

22   **Q.    ARE YOU SPONSORING ANY ATTACHMENTS AS PART OF YOUR DIRECT**  
23   **TESTIMONY?**

24   A.    No.

1   **Q.    WHAT RECOMMENDATIONS DO YOU SUPPORT THROUGH YOUR DIRECT**  
2       **TESTIMONY?**

3   **A.**    I recommend that the Colorado Public Utilities Commission (“Commission”):  
4           (1) approve Public Service’s 2024-2026 TEP and find that it is just, reasonable,  
5           and in the public interest, and (2) approve Public Service’s proposal to revise and  
6           expand its equity eligibility criteria for TEP programming.

1     **II.     THE ROLE OF TEPs IN SUPPORTING COLORADO’S EV ADOPTION GOALS**

2     **Q.     WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

3     A.     The purpose of this section of my Direct Testimony is to discuss the role of  
4           comprehensive TEPs in advancing Colorado’s ability to meet its electric vehicle  
5           (“EV”) adoption goals.

6           **A.     Background On Colorado’s EV Adoption Goals**

7     **Q.     PLEASE DESCRIBE COLORADO’S TRANSPORTATION ELECTRIFICATION**  
8           **GOALS AND THE ROLE OF COLLABORATION.**

9     A.     The State of Colorado is a clean energy leader and is “leaning in” to tackle the  
10           largest source of emissions in the State and Country – transportation.<sup>1</sup> To  
11           leverage the increasingly clean energy that is generated by the Company and  
12           others, in 2018, the State had the foresight to set a target of reaching 940,000  
13           light-duty passenger EVs on the road by 2030. Today, for context, the State has  
14           approximately 80,000 EVs on the road.<sup>2</sup> Since 2018, Colorado has expanded on  
15           its EV Plan to include medium- and heavy-duty zero emission vehicles, electric  
16           bicycles, and other shared electric transportation options.<sup>3</sup> Colorado’s 2023 EV  
17           Plan reflects that the State now “envisions the large-scale transition of Colorado’s  
18           transportation system to zero emission vehicles,” which includes increasing the

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<sup>1</sup> U.S. Environmental Protection Agency (“EPA”), Sources of Greenhouse Gas Emissions, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>; Attachment JW1-1 to Company witness Jack Ihle’s Direct Testimony at p. 3.

<sup>2</sup> Colorado Energy Office (“CEO”), EVs in Colorado Dashboard, <https://energyoffice.colorado.gov/zero-emission-vehicles/evs-in-colorado-dashboard>.

<sup>3</sup> Attachment JW1-1 is the most recent 2023 update to the Colorado EV Plan. The Colorado EV Plan is a “guiding document intended to help State agencies and stakeholders collaborate on shared strategies to accelerate EV adoption by documenting recent progress, establishing a near-term vision, and committing to goals and actions.” *Id.* at p. 3.

1 market share of light duty EVs to nearly 100 percent by 2050, transitioning 100  
2 percent of medium- and heavy-duty vehicles to zero emissions vehicles, and  
3 expanding adoption of micro-mobility and shared options.<sup>4</sup> Consistent with recent  
4 legislative developments described below, Colorado's EV Plan has also increased  
5 its emphasis on ensuring that income-qualified ("IQ") customers and  
6 disproportionately impacted ("DI") communities have an equitable opportunity to  
7 share in the benefits of transportation electrification.

8 The State recognizes that collaboration among the state, utilities, non-  
9 regulated companies, site hosts, local governments, and others will be critical to  
10 support the deployment of the EV infrastructure required to accommodate  
11 widespread EV adoption, making it possible for EVs to travel and charge  
12 throughout the State's roadways.

13 **Q. WHAT IS THE ULTIMATE PURPOSE OF COLORADO'S EV ADOPTION**  
14 **GOALS?**

15 A. The ultimate purpose of Colorado's transportation electrification goals is to reduce  
16 emissions associated with the transportation sector, which, as noted, is the largest  
17 source of emissions in the State, accounting for approximately 21 percent of total  
18 statewide emissions.<sup>5</sup> With the clean energy transition of our electric system,  
19 Public Service is on a parallel path to reduce emissions from 2005 levels by at

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<sup>4</sup> *Id.* at 4.

<sup>5</sup> These were the projected emissions for Colorado's transportation sector in 2020. See, Exhibit ES 2: Projected Colorado GHG Emissions by Sector 2020-2050, "2021 Colorado Greenhouse Gas Inventory Report," available at <https://cdphe.colorado.gov/environment/air-pollution/climate-change#inventory>; Colorado Greenhouse Gas Pollution Reduction Roadmap, January 2021, available at <https://energyoffice.colorado.gov/climate-energy/ghg-pollution-reduction-roadmap-20>

1 least 80 percent in 2030 and 100 percent by 2050, which will make zero carbon  
2 emissions vehicles possible. Harnessing this increasingly clean energy enables  
3 Colorado to efficiently tackle the ultimate emission challenge the State and nation  
4 face today – transportation.

5 Importantly, Colorado anticipates that a statewide transition to EVs will also  
6 bring financial benefits to residents by placing downward pressure on utility bills  
7 for electric customers.<sup>6</sup> Downward pressure on rates means that the new load  
8 from EVs supports customer programs and utility infrastructure necessary for the  
9 EVs and the electric system. In other words, the growth of EVs more than pays  
10 for itself, funds customer programs and utility infrastructure, and provides savings  
11 to all customers.

12 **Q. WHAT ARE COLORADO'S EMISSIONS REDUCTION GOALS?**

13 A. Through enacting House Bill 19-1261, Colorado set economy-wide emissions  
14 reduction targets of 26 percent by 2025, 50 percent by 2030, and 90 percent by  
15 2050. For the power sector, specifically, Senate Bill 19-236 established clean  
16 energy targets for Public Service to achieve an 80 percent reduction in carbon  
17 dioxide emissions associated with electricity sales by 2030, and the provision of  
18 energy generated from one hundred percent clean energy resources by 2050.

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<sup>6</sup> See e.g., legislative declarations (e) and (g) in Senate Bill 19-077.



1 **Q. WHAT IS THE ROLE OF THE STATE'S 2030 TARGET IN REDUCING**  
2 **STATEWIDE EMISSIONS RELATED TO TRANSPORTATION?**

3 A. The State of Colorado recognizes that the transportation sector currently emits  
4 more carbon dioxide than any other sector of the economy.<sup>7</sup> If it reaches its goal  
5 of 940,000 EVs by 2030, the State estimates that achievement could result in  
6 annual emissions reductions of 800 tons of nitrous oxide, 800 tons of volatile  
7 organic compounds, and up to three million tons of greenhouse gases.<sup>8</sup>

8 **Q. HOW MUCH PROGRESS HAS THE STATE OF COLORADO MADE TOWARD**  
9 **REACHING ITS TRANSPORTATION ELECTRIFICATION GOALS?**

10 A. According to the 2023 Colorado EV Plan recently released by the Colorado Energy  
11 Office, Colorado Department of Transportation, and the Colorado Air Pollution  
12 Control Division, EV sales made up to 10.5 percent of all new passenger vehicle  
13 sales in 2022, making Colorado fifth in the nation for EV market share.<sup>9</sup> These  
14 agencies attribute the State's continued progress to "important developments at  
15 the federal, state, utility, and local levels."<sup>10</sup>

16 While EV adoption has increased over the years, we are still a long way  
17 from Colorado's ultimate objective of "the large-scale transition of Colorado's  
18 transportation system to zero emissions vehicles," which includes increasing EV  
19 sales to at least 70 percent of new light duty vehicles sales by 2030 and growing

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<sup>7</sup> 2020 Colorado EV Plan at p. 2, available at <https://drive.google.com/file/d/1-z-INQMU0pymcTQEH8OvnemgTbwQnFhq/view>

<sup>8</sup> 2020 Colorado EV Plan at p. 4.

<sup>9</sup> Attachment JW1-1 at 3.

<sup>10</sup> Attachment JW1-1 at 2.

1 the market share of light duty EVs to nearly 100 percent by 2050.<sup>11</sup> Currently, the  
2 State has only approximately 80,000 EVs on the road. “Range anxiety,” which is  
3 customers’ concern that they will not have sufficient access to convenient and  
4 affordable EV charging when they are away from their charging home base, has  
5 been shown to be a top barrier to EV adoption.<sup>12</sup> Identifying a significant gap, the  
6 State has found there is a lack of public charging necessary to accommodate  
7 widespread EV adoption and it calls for an increase in the number of charging ports  
8 awarded or installed to 1,700 direct current fast chargers (“DCFC”) and 5,800  
9 public level 2 chargers by 2025.<sup>13</sup> Further, Colorado has released an early gap  
10 analysis reflecting that about \$360 million of infrastructure spending is needed to  
11 support the electrification of medium- and heavy-duty truck fleets through 2030,  
12 including depot chargers and on-route ultra-fast chargers.<sup>14</sup>

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<sup>11</sup> *Id.* at p. 4.

<sup>12</sup> Consumer Reports, Battery Electric Vehicles and Low Carbon Fuel: A Nationally Representative Multi-Mode Survey, January/February 2022 Results, p. 4, available at [https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_BEV\\_percent20AND\\_percent20LCF\\_percent20SURVEY\\_18\\_FEBRUARY\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_BEV_percent20AND_percent20LCF_percent20SURVEY_18_FEBRUARY_2022).

<sup>13</sup> Attachment JW1-1 at p. 4.

<sup>14</sup> International Council on Clean Transportation, Colorado charging infrastructure needs to reach electric vehicle goals, p. 14 (February 2021), available at <https://theicct.org/sites/default/files/publications/colorado-charging-infra-feb2021.pdf>.

**B. The Importance Of Utility Support In Advancing Transportation Electrification**

**Q. HOW DOES TRANSPORTATION ELECTRIFICATION WORK TO REDUCE EMISSIONS FROM THE TRANSPORTATION SECTOR?**

A. Reducing transportation sector emissions involves transitioning the energy that powers our vehicles to be cleaner. Transportation electrification is a critical way to achieve cleaner energy sources for transportation, along with transitioning to other low-carbon options such as green hydrogen. For electrification to occur, it is essential to address challenges facing EV adoption, including accessibility, affordability, lack of adequate EV supply infrastructure (“EVSI”),<sup>15</sup> public charging, and potential impacts on the grid associated with EVs and EV charging.

**Q. DOES COLORADO LEGISLATION ADDRESS THE ROLE OF PUBLIC UTILITIES IN ADVANCING TRANSPORTATION ELECTRIFICATION?**

A. Yes. As described in more detail by Company witness Mr. Jack Ihle, Colorado has enacted Senate Bill 19-077, directing electric public utilities to bring forward TEPs to advance widespread EV adoption in line with a broad range of policy objectives. This legislation recognizes the critical role of robust and comprehensive regulated utility programs in helping the State achieve its transportation electrification goals.

**Q. HOW ARE PUBLIC UTILITIES UNIQUELY POSITIONED TO HELP COLORADO REACH ITS TRANSPORTATION ELECTRIFICATION GOALS?**

A. Public utilities have various unique attributes, allowing them to make valuable contributions to the State’s transportation electrification goals.

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<sup>15</sup> For a depictable representations of EVSI, please see Attachment HS-1 at Section 3.E.i.

1 First, public utilities are regulated. Unlike non-regulated companies, utilities  
2 have a public duty to provide safe, reliable, and non-discriminatory service to all  
3 customers at just and reasonable rates that are also transparent to the public.  
4 Regulated utilities are accountable to the Commission, which retains ongoing  
5 oversight and jurisdiction that can adapt to evolving conditions over time.  
6 Consistent with recent legislative developments, the Commission is also uniquely  
7 empowered and tasked with ensuring that regulated utility programs promote  
8 equitable access for IQ customers and DI Communities, which is a critical objective  
9 for the State of Colorado in advancing transportation electrification.

10 Second, public utilities have extensive experience in constructing and  
11 managing large infrastructure projects that deliver core services within the State,  
12 which can be leveraged to help build the EV infrastructure Colorado needs to  
13 achieve its goals. In providing their services, utilities are informed by the on-the-  
14 ground realities of their electric systems and focused on efficiently adding new load  
15 in manners that benefit the grid and customers (e.g., managed charging).

16 Third, public utilities have significant experience in implementing  
17 comprehensive customer-facing programs to help the State of Colorado  
18 accomplish a broad range of policy objectives, e.g., energy efficiency and demand  
19 side management.

20 Finally, while the non-regulated market is certainly making progress toward  
21 advancing EV adoption, TEPs help de-risk uncertainty associated with market  
22 forces being left to their own devices through enabling the State to rely on  
23 regulated utilities to make foundational investments to support the clean

1 transportation transition—and ensure equitable access for customers and  
2 communities in the process. For example, as described by Company witness Ms.  
3 Deborah Erwin, Public Service’s proposed Public Charging Acceleration Network  
4 provides an opportunity for the Commission to ensure there is a reliable, cost-  
5 effective core network of high-speed public charging infrastructure designed to  
6 provide access for everyone (versus only high utilization and/or affluent areas),  
7 with that core network remaining under the Commission's oversight through its  
8 regulatory authority.

9 Colorado can count on its regulated public utilities to advance widespread  
10 EV adoption in a comprehensive, cost-effective, and equitable manner.

11 **Q. WHAT IS THE ROLE OF TEPs IN ADVANCING THE STATE OF COLORADO’S**  
12 **PROGRESS TOWARD ACHIEVING ITS STATEWIDE EMISSIONS REDUCTION**  
13 **GOALS UNDER HOUSE BILL 19-1261?**

14 A. TEPs play an instrumental role in advancing Colorado’s progress toward its  
15 statewide emissions reduction goals because they directly address transportation  
16 sector emissions with holistic, inclusive customer programs and infrastructure  
17 investments, all under regulatory oversight to ensure delivery. In addition to the  
18 near-term emissions reductions that immediately result from EV adoption as  
19 vehicles transition to a significantly cleaner fuel source, environmental benefits will  
20 multiply over time as our electric system continues progressing toward our carbon-  
21 free emissions target.

22 As discussed further in the next section of my Direct Testimony, TEPs are  
23 critical to effectively harness electrified transportation into a valuable grid resource

1 that will help make the clean energy transition more affordable for all customers.  
2 Important ways this occurs include via spreading the fixed costs of our clean  
3 energy investments more broadly, promoting the efficient operation of the grid, and  
4 the improved integration of renewable resources through targeted charging  
5 programs as well as rates. Further, TEPs are needed to fully leverage and  
6 maximize the overall emissions reduction benefits that can result from electric  
7 resource plans and related investments Public Service is making to transition our  
8 electric system toward our 2050 carbon-free goal for electricity. In this manner,  
9 our TEPs and electric resource plan investments will work together to help  
10 Colorado accomplish its economy-wide emissions reduction goals.

11 **C. The Role Of TEPs In Promoting An Affordable Clean Energy Transition**  
12 **And Maximizing Related Benefits**

13 **Q. PLEASE DESCRIBE HOW TEPs CAN SUPPORT A MORE AFFORDABLE AND**  
14 **BENEFICIAL CLEAN ENERGY TRANSITION.**

15 A. TEPs help make the clean energy transition more affordable and beneficial for our  
16 customers in multiple ways, all of which support the State's EV adoption goals  
17 through a holistic and multifaceted approach that focuses on meeting the diverse  
18 needs of our customers and communities. Below, I outline some specific  
19 examples:

- 20 • ***Downward Rate Pressure for Customers:*** EV adoption benefits all of our  
21 electric retail customers, even if they do not drive an EV, because the new  
22 load from EVs more than pays for itself, funds customer programs and utility  
23 infrastructure, and provides savings to all customers.

- 1       • **Emission Reductions for Customers and the State:** Aside from the  
2       above affordability benefits associated with transportation electrification,  
3       each EV is delivering significant carbon reductions and cleaner air to all  
4       customers and the State, which avoids social costs associated with  
5       transportation sector-related emissions. As we increase the amount of  
6       renewable and carbon-free energy on our system, EV drivers are  
7       increasingly powering up with cleaner energy. In fact, an EV powered with  
8       electricity from the Company has about 55 percent lower carbon than a  
9       conventional gasoline-powered car and is expected to have at least 80  
10      percent fewer carbon emissions by 2030 under our clean energy plan.<sup>16</sup>  
11     • **Leveraging and Harnessing Overall Clean Energy Investments**  
12       **Benefiting Customers:** In sum, the overall purpose of the clean energy  
13       transition and transportation electrification is to reduce statewide emissions.  
14       From that perspective, driving widespread EV adoption is critical to  
15       maximize the overall emissions reduction “returns” on the investments  
16       Public Service is making to transition our electric system to carbon free  
17       emissions.  
18     • **Efficient Grid Planning Benefiting Customers:** Importantly, TEPs are  
19       essential to ensure that customers have the information and resources they  
20       need to charge their EVs in a cost-effective manner that minimizes grid

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<sup>16</sup> Based on an internal analysis conducted by the Company using US Department of Transportation vehicle emissions data, available at: <https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and>

1 impacts and additional costs associated with unmanaged charging. This  
2 delivers savings to EV drivers and benefits all customers by mitigating the  
3 need for certain grid investments.

- 4 • ***EV Driver Affordability Benefits – Lower Costs and Reduced***  
5 ***Commodity Pricing Risks:*** EV drivers can save an average of roughly  
6 \$1,200 per year on fueling costs and pay approximately the equivalent of  
7 \$1 per gallon to charge at home during off-peak periods.<sup>17</sup> Also, similar to  
8 other beneficial electrification programs, transportation electrification  
9 promotes more affordable and stable fuel expenses over time by limiting  
10 customers' reliance on gasoline, the price of which can spike and fluctuate  
11 based on many factors.

12 **Q. PLEASE DESCRIBE HOW PUBLIC SERVICE HAS APPROACHED TEP**  
13 **PROGRAM DESIGN WITH THESE BENEFITS IN MIND.**

14 A. As described in the next section of my Direct Testimony, Public Service has worked  
15 to ensure that our proposed TEP offerings are comprehensive to address the key  
16 barriers to transportation electrification, expanding the affordability and clean  
17 energy benefits of EVs to our customers, and supporting our customers and  
18 communities throughout their transportation electrification journey.

19 More specifically, to promote efficient grid planning and affordability for EV  
20 drivers, our TEP incorporates managed charging, including rates that encourage  
21 off-peak charging, and opportunities for customers to leverage battery energy

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<sup>17</sup> This figure is based on a Public Service calculation with the assumption of 100 percent off-peak charging. The result is dependent upon vehicles, local taxes, and other factors.



1 storage systems to lessen grid impacts associated with necessary on-peak  
2 charging. These programs and rates can help mitigate the need for incremental  
3 generation, transmission, and distribution system investments to accommodate  
4 EV charging by limiting the incremental contribution of EV charging to system peak  
5 loads. Notably, EV charging during off-peak hours can also improve the integration  
6 of renewable resources, especially wind, that otherwise may need to be curtailed.

7 **Q. HAS PUBLIC SERVICE ALSO APPROACHED DEVELOPING THE TEP**  
8 **BUDGET WITH A GOAL OF FURTHERING BENEFITS?**

9 A. Yes, to ensure that our TEP is positioned to deliver all of these benefits for  
10 customers, we have developed our program budgets with a goal of ensuring that  
11 our TEP programs can accommodate participation in line with the evolving needs  
12 of our customers and communities and the State's transportation electrification  
13 goals. The budget and programmatic flexibility framework included in our TEP will  
14 be critical to ensure that we can comprehensively manage our overall budget to  
15 ensure that we are meeting evolving market demands.

16 **Q. DOES PUBLIC SERVICE ANTICIPATE THAT IT WILL SPEND THE FULL**  
17 **EXTENT OF ITS PROPOSED TEP BUDGET?**

18 A. Possibly, but not necessarily. Our TEP budget and related flexibility framework  
19 are designed to ensure we are positioned to support the State's EV adoption goals  
20 in an agile manner based on evolving market conditions and customer demand.  
21 To the extent program participation levels do not reach the levels reflected in  
22 program budgets, the ultimate amount that we spend on our TEP, and the amounts  
23 that are ultimately recovered from customers through the Transportation

1           Electrification Programs Adjustment (“TEPA”) rider, will decrease accordingly.  
2           Company witness Mr. Jean-Baptiste Jouve further addresses these budgetary  
3           matters.

1     **III.     BUILDING ON KEY LEARNINGS FROM PUBLIC SERVICE'S 2021-2023 TEP**

2     **Q.     WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

3     A.     The purpose of this section of my Direct Testimony is to provide an overview of the  
4           key lessons we have learned in implementing our inaugural TEP, including from  
5           customer, community, and stakeholder feedback we have received in the process.  
6           I also describe how these lessons have informed the development of our 2024-  
7           2026 TEP.

8           **A.   Key Learnings Through Implementing the Inaugural TEP**

9     **Q.     AT A HIGH-LEVEL, PLEASE DESCRIBE THE KEY LESSONS PUBLIC**  
10    **SERVICE HAS LEARNED THROUGH IMPLEMENTING ITS INAUGURAL TEP.**

11    A.     Public Service has distilled several key learnings from our experience in  
12           implementing our inaugural TEP, as well as the invaluable feedback from our  
13           customers, community partners, and many diverse stakeholders along the way,  
14           which have informed the development of this TEP. These key lessons include:

- 15           •   ***The importance of equitable and comprehensive support to address***  
16           ***key barriers to transportation electrification.*** In implementing our  
17           inaugural TEP, we have identified market gaps as well as customer and  
18           community needs that our current TEP is not positioned to address. This  
19           has led us to propose new portfolios and programs to better ensure that our  
20           TEP comprehensively supports our customers and communities in all  
21           aspects of their transportation electrification journey at this early stage of  
22           the market transformation process. I discuss in more detail how we have

1           crafted our proposed TEP to accomplish this objective in the next  
2           subsection of my Direct Testimony.

- 3           • ***The need for flexibility to address evolving customer needs and***  
4           ***market conditions.*** As discussed in more detail by Company witnesses  
5           Jack Ihle and Jean-Baptiste Jouve, our experience has also reinforced the  
6           importance of budgetary and programmatic flexibility to address evolving  
7           market conditions and customer needs. This flexibility has proven  
8           especially critical for ensuring that our TEP rebate programs are sufficiently  
9           scaled to incentivize and support EV adoption in line with Colorado's  
10          transportation electrification goals. Because the needs of our customers  
11          and communities are constantly changing, and TEPs are meant to drive that  
12          evolution even further, we expect that the foundation of flexibility built in our  
13          TEP framework will remain a vital component of future TEPs.

- 14          • ***The value of federal, state, and community partnerships to maximize***  
15          ***TEP benefits.*** Implementation of our first TEP and recent legislative  
16          developments have solidified the importance of leveraging partnerships  
17          with communities, governments, and key stakeholders to share information  
18          and coordinate our programs with other ongoing EV initiatives and streams  
19          of support to maximize related benefits for customers. As described in  
20          Company witness Huma Seth's Direct Testimony, our programs coordinate  
21          and complement federal, state, and local programs to ensure that our TEP  
22          builds on the progress of other EV initiatives. The Direct Testimony of  
23          Company witness Jack Ihle further describes the TEP relationship with

1 federal incentives and support available under the Inflation Reduction Act  
2 (“IRA”) and Infrastructure Investment and Jobs Act (“IIJA”).

- 3 • ***The need to plan ahead for an EV-ready future.*** Finally, to help ensure  
4 that the TEP investments we make today will meet the needs of our  
5 customers and system for years to come, we have increased our TEP’s  
6 emphasis on commercial customer future proofing and grid supportive  
7 investments. These “measure twice, cut once” investments are designed  
8 to avoid the need for duplicative and potentially more costly investments  
9 going forward. Public Service supports these proposals through Company  
10 witness Ms. Connie Paoletti’s Direct Testimony.

11 Beyond these key lessons, many more granular learnings and descriptions  
12 of how they have specifically informed the design of various programs are  
13 addressed throughout our 2024-2026 TEP (Attachment HS-1).

14 **Q. FROM YOUR PERSPECTIVE, HAS THE INAUGURAL TEP BEEN A SUCCESS?**

15 A. Yes, I would say so. Via our inaugural TEP, we have implemented a broad and  
16 diverse range of programs to support transportation electrification throughout our  
17 service territory that are the first of their kind in Colorado. Although we initially  
18 encountered certain challenges in driving customer participation to original  
19 estimates as a result of lasting impacts of the COVID-19 pandemic, supply chain  
20 issues that followed, and inflationary pressures that have driven up the cost of  
21 vehicles, labor, and equipment, we have continually adjusted our programs and  
22 implementation strategies to ensure that our TEP can meet the evolving needs of  
23 our customers and communities. We are encouraged to see these efforts build

1 momentum, especially for our EVSI offerings across multifamily housing,  
2 commercial, and public sectors as well as our Residential programs. We are  
3 making progress and seeing increasing uptake across the TEP portfolios and  
4 program offerings, but these programs in particular have truly excelled. We are  
5 excited to continue to build on this progress and momentum as we embark on our  
6 next TEP, which will offer our customers and communities even more  
7 comprehensive support throughout their transportation electrification journeys and  
8 help ensure an equitable and affordable transition along the way.

9 **Q. IN TERMS OF PROGRAM IMPLEMENTATION, HOW DO YOU EXPECT**  
10 **PUBLIC SERVICE WILL BUILD ON ITS EXPERIENCE AND LEARNINGS FROM**  
11 **THE 2021-2023 TEP?**

12 A. Through our first TEP, Public Service has gained valuable experience in developing  
13 EVSI for our customers and communities, implementing charging optimization,  
14 equipment rental, and rebate programs to support transportation electrification, as  
15 well as conducting targeted customer education and outreach through our  
16 Advisory Services portfolio. In implementing these new programs, we have been  
17 encouraged to receive formal (and informal) feedback from our customers and  
18 communities demonstrating a high level of customer satisfaction with our TEP  
19 programming. Through this experience, we have established the processes  
20 necessary to execute and adjust a variety of programs in a streamlined manner,  
21 and these efficiencies will advance our ability to hit the ground running as we  
22 implement this proposed TEP and future TEPs. In other words, we have built the

1 solid foundation from which we can scale with customer demand to support the  
2 State's EV goal.

3 **B. Ensuring Comprehensive Support Through The EV Adoption Journey**

4 **Q. HOW WILL PUBLIC SERVICE'S PROPOSED TEP HELP ADDRESS KEY**  
5 **BARRIERS TO TRANSPORTATION ELECTRIFICATION?**

6 A. The clean transportation transition will require significant investment to create an  
7 ecosystem that encourages and accommodates widespread EV adoption, and as  
8 discussed above, regulated utilities are well positioned to drive this investment in  
9 multiple respects. Our proposed TEP will comprehensively address barriers to  
10 widespread transportation electrification in the following ways:

- 11 • ***Accessibility and Reliability:*** Our TEP expands investment in public  
12 charging to better ensure affordable and convenient access to EV charging  
13 throughout our service territory and addresses "range anxiety." As noted,  
14 range anxiety currently poses a significant barrier to EV adoption.  
15 Additionally, one recent study found that about 23 percent of high-speed  
16 public chargers were not working in the San Francisco area.<sup>18</sup> Another  
17 recent survey conducted in Northern States Power's Minnesota service  
18 territory by ChargerHelp! found that *only* 13 of 21 DCFC stations assessed  
19 (62 percent) were in working order, and all eight of the assessed DCFC  
20 stations that did not function properly were the only DCFC station on site.<sup>19</sup>  
21 While the technology is still evolving and utilities do not control charging

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<sup>18</sup> *Reliability of Open Public Electric Vehicle Direct Current Fast Chargers*, Rempel, Cullen, Bryan, and Cezar, at p. 6 (Table 2) (Mar. 30, 2022), available at: <https://arxiv.org/ftp/arxiv/papers/2203/2203.16372.pdf>

<sup>19</sup> Schedule 3 at 1, Rebuttal Testimony of Jason Peuquet in Minnesota PUC Docket No. E002/M-22-432.

1 hardware and software, utilities are uniquely well positioned to explore ways  
2 to help enhance reliability over time, leveraging existing and planned  
3 system and operational investments.

- 4 • **Information:** Our advisory services for residential and commercial  
5 customers and communities will help increase awareness and  
6 understanding of the benefits of EV adoption, the practical steps needed to  
7 transition to electric transportation, and cost-effective charging practices.

- 8 • **Affordability:** Our TEP includes programs that help lower upfront cost  
9 barriers. Key examples are rebates, EVSI support, and equipment rental  
10 programs to address cost-related barriers to transportation electrification,  
11 with enhanced support through equity-based rebate programs to help  
12 ensure an equitable and affordable path to electric transportation for all  
13 customers.

- 14 • **Grid Impacts:** Our charging optimization programs and rates will help  
15 reduce the costs associated with EV charging for customers, as well as  
16 mitigate potential grid impacts that can result when customer charging  
17 coincides with peak system demand. We are also proposing new programs  
18 that incorporate bidirectional charging and battery systems as  
19 demonstrations to further explore the potential for EVs to serve as assets  
20 for the grid.



1 Q. AT A HIGH LEVEL, PLEASE DESCRIBE HOW PUBLIC SERVICE'S  
2 PROPOSED TEP WILL SUPPORT CUSTOMERS THROUGHOUT THEIR EV  
3 ADOPTION JOURNEY.

4 A. Our proposed TEP is designed to comprehensively support our customers and  
5 communities through each aspect of the EV adoption journey, including:

- 6 • **Trusted Information Source:** Providing the advice needed to choose,  
7 understand the benefits (including total cost of ownership), and make the  
8 transition to electric transportation;
- 9 • **Lowering Upfront EV Costs:** Rebates to incentivize and enable customers  
10 to purchase, lease, and/or (for rideshare drivers) rent an EV, to support  
11 customers and communities that face heightened barriers to EV adoption  
12 and support the electrification of high-mileage vehicles;
- 13 • **Lowering Other Upfront Costs for Residential Customers:** Rebates and  
14 rental programs for charging equipment, a rental option demonstration for  
15 battery equipment to support EV charging, and rebates to defray costs  
16 associated with related residential wiring to help customers address  
17 financial and logistical barriers to EV adoption;
- 18 • **Lowering Upfront Costs for Business Customers:** Investments in EVSI  
19 to incentivize and enable transportation electrification for commercial  
20 customers, as well as certain rebates to support EV ready wiring upgrades  
21 for commercial new construction and Primary General ("PG") and  
22 Transmission General ("TG") customers;

- 1           • ***Managed Charging to Promote Efficient Grid Investments and Lower***  
2           ***Charging Costs for Drivers:*** Options and strategies to enable customers  
3           to cost-effectively manage their EV charging in a manner that also supports  
4           the efficient operation of the grid and advances the integration of renewable  
5           resources; and
- 6           • ***Public Charging Investments to Address Range Anxiety and Promote***  
7           ***Adoption:*** Investments to ensure adequate access to convenient, reliable,  
8           and affordable public charging throughout our service territory.

9           As discussed in the next section of my Direct Testimony, as well as  
10          providing comprehensive and robust incentives and support to stimulate this early  
11          stage of market transformation, our TEP includes many forward-looking elements  
12          that are designed to support the future needs of our customers and system as EV  
13          adoption continues to grow including future proofing, grid investments, and  
14          exploration of new technologies and innovation, including vehicle-to-grid (“V2G”) and  
15          vehicle to everything (“V2X”).

16   **Q.   HOW WILL PUBLIC SERVICE PROVIDE CUSTOMERS THE INFORMATION**  
17   **AND ADVICE THEY NEED TO TRANSITION TO AN EV?**

18   A.   The first part of a customer’s journey toward transportation electrification is making  
19          the decision to move forward with the EV transition, which requires education  
20          about the benefits of EV adoption as well as advice on actionable strategies to  
21          execute the transition in a manner that promotes the efficient use of customer and  
22          grid resources. While it is certainly encouraging to see how the overall interest in  
23          EVs has grown throughout our service territory and nationwide, lack of sufficient

1 and accurate information still poses a key barrier to EV adoption. Through our  
2 Advisory Services portfolio, we are proposing new tools, decision-making guides,  
3 and efforts that will efficiently direct our customers and communities to the  
4 information and advice they need to accomplish their transportation electrification  
5 goals.

6 **Q. HOW WILL THE TEP SUPPORT CUSTOMERS IN ACQUIRING EVS?**

7 A. In implementing our inaugural TEP, we have learned that the relatively high up-front  
8 costs associated with acquiring an EV remains a significant challenge for our  
9 customers and communities, especially those that face heightened barriers to EV  
10 adoption. While our current TEP includes a Residential EV Rebate program, it is  
11 limited to IQ customers and does not address the needs of customers residing in  
12 communities in need of additional support, nor those of sectors that also encounter  
13 heightened barriers to EV adoption. For this reason, we are proposing to  
14 implement a Clean Vehicles portfolio that includes programs to defray vehicle  
15 costs for (1) any residential customer that is eligible for equity-based rebate  
16 programs, (2) high mileage rideshare and delivery drivers, and (3) state and local  
17 governments as described by Company witness Ms. Deborah Erwin.

18 Through our Innovation portfolio, we are proposing EV rebates for specialty  
19 vehicles that are part of industries and use-cases that have proven particularly  
20 challenging to electrify, including agriculture, construction, long-haul trucking,  
21 emergency response, and others, in addition to expanding on rebates to support  
22 the electrification of school buses.

1           Our EV rebate programs and related Innovation projects will help ensure  
2           that our customers and communities have equitable opportunities to acquire EVs,  
3           further the emissions reductions that can result from our TEP through transitioning  
4           high-mileage vehicles, and spur innovation to broaden electrification of more  
5           challenging sectors.

6   **Q.   HOW WILL THE TEP WORK TO ADDRESS CUSTOMERS' EV CHARGER,**  
7   **WIRING, AND INFRASTRUCTURE NEEDS?**

8   A.   Consistent with our current TEP, Public Service will continue to provide equity-  
9           based rebates to support customers in acquiring EV charging equipment, rebates  
10          for residential customers to complete necessary home wiring, and direct  
11          investment in EVSI for commercial customers. Company witness Ms. Huma Seth  
12          addresses several refinements to Public Service's EVSI programs to enable  
13          commercial customers of all sizes and sectors to readily access this support,  
14          including a wiring rebate program to support PG and TG customers under  
15          circumstances where it is not practical or feasible for the Company to address  
16          these customers' EVSI needs through direct investment.

17               We will also continue to offer EV charging equipment rental services for  
18               residential and commercial customers through Schedule EVC to provide a hassle-  
19               free, turnkey solution for customers to use EV charging equipment that is owned,  
20               installed (via third-party electricians), and maintained by the Company. Through  
21               our updated TEP, we build on this support by expanding equipment rental options  
22               to include demonstrations of battery systems and bidirectional chargers. Our TEP

1 also extends access to our equipment rental programs to individual fleet drivers  
2 that desire to charge employer-owned vehicles from their homes.

3 **Q. HOW WILL THE TEP PROVIDE CUSTOMERS WITH STRATEGIES AND**  
4 **OPTIONS TO COST EFFECTIVELY MANAGE THEIR EV CHARGING?**

5 A. Several stakeholders and the Commission have continued to express a strong  
6 interest in further development of our managed charging options, which we share.  
7 As supported by Company witness Andre Gouin, we have thoughtfully considered  
8 this feedback in developing this proposed TEP and have greatly expanded on the  
9 current managed charging programs, rates, and options to support customers in  
10 finding the solution that best fits their unique interests and needs. Through our  
11 Advisory Services portfolio, we are proposing new strategies to drive increased  
12 customer enrollment in our Managed Charging Program, which is also a critical  
13 channel to educate customers on how to charge their EVs in a cost-effective  
14 manner while supporting the efficient use of grid resources.

15 **Q. HOW WILL THE TEP ENSURE CUSTOMERS HAVE ADEQUATE ACCESS TO**  
16 **CONVENIENT, RELIABLE, AND AFFORDABLE PUBLIC CHARGING?**

17 A. We are increasingly understanding and appreciating that lack of sufficient access  
18 to affordable, convenient, and reliable public charging remains a significant barrier  
19 to transportation electrification in our service territory. To address this challenge,  
20 Public Service is proposing to deploy a Public Charging Acceleration Network to  
21 pave the way for widespread EV adoption to ensure equitable and affordable  
22 access to public charging for our customers and communities throughout our  
23 service territory, as described by Company witness Deborah Erwin.

1   **Q.   HOW DOES THE TEP POSITION PUBLIC SERVICE TO SUPPORT THE**  
2       **FUTURE NEEDS OF COLORADO'S CLEAN TRANSPORTATION**  
3       **TRANSITION?**

4   A.   Our TEP includes new future proofing of EVSI and reinforcement of certain  
5       portions of our distribution system, as supported in Company witness Ms. Connie  
6       Paoletti's Direct Testimony, to ensure that the investments we make today will  
7       support the future needs of our customers and our system as EV adoption  
8       continues to increase. Positioning and scaling our TEP investments to  
9       accommodate growing EV adoption will help minimize the overall costs of  
10      Colorado's clean transportation transition by avoiding the need for potentially more  
11      costly investments down the road, such as the Company or our customers needing  
12      to go back and perform additional EVSI buildouts.

13           To plan for the efficient operation of our grid in anticipation of growing EV  
14      loads, we have also increased the TEP's emphasis on rate design, managed  
15      charging, and battery systems (as demonstrations), which can each be leveraged  
16      as tools to limit the need for incremental investments in our distribution,  
17      transmission, and generation system to accommodate incremental load from EV  
18      charging.

19           Finally, as supported by Company witness Mr. Andre Gouin's Direct  
20      Testimony, Public Service's TEP includes exploration of new technologies and  
21      innovations, including the potential for V2G and V2X advancements, which have  
22      drawn significant interest from the Commission and key stakeholders. While the  
23      ultimate trajectory of these efforts remains uncertain, Public Service is committed

1 to innovation and to explore the potential for these technologies to benefit our  
2 customers and our grid.

1     **IV.     PAVING THE WAY FOR AN EQUITABLE AND AFFORDABLE TRANSITION**

2     **Q.     WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

3     A.     The purpose of this section of my Direct Testimony is to discuss how Public  
4           Service's TEP supports an equitable and affordable clean transportation transition  
5           for our customers and the communities we serve.

6     **Q.     AS A GENERAL MATTER, PLEASE DESCRIBE THE ROLE OF EQUITY IN**  
7           **INFORMING THE DEVELOPMENT OF PUBLIC SERVICE'S TEP PROGRAMS.**

8     A.     Consistent with the inaugural TEP, in developing each of our portfolios and  
9           programs, Public Service has carefully considered how to better ensure that the  
10          benefits of transportation electrification are accessible to all customers. As with  
11          the first TEP, Public Service views equitable TEP support as a core component of  
12          our strategy and customer offerings. Ranging from our long-term, strategic 2030  
13          and 2050 clean transportation visions (discussed below in Section V) to individual  
14          program design, we are focused on access and equity for our customers and  
15          communities. To help guide our approach to both customer offerings and strategy,  
16          we consider stakeholder feedback, best practices, and state policy, which I will  
17          discuss in more detail.

18    **Q.     ON THE POLICY AND STAKEHOLDER FRONT, HOW DOES COLORADO**  
19           **LEGISLATION ADDRESS IDENTIFYING CUSTOMERS AND COMMUNITIES**  
20           **THAT MAY BE IN NEED OF ENHANCED SUPPORT IN CONNECTION WITH**  
21           **TEPS AND REGULATED UTILITY PROGRAMS MORE GENERALLY?**

22    A.     As a foundational matter, Senate Bill 19-077, codified in C.R.S. § 40-5-107,  
23           specifically directs the Commission to consider whether utility investments and



1 proposed expenditures within TEPs are reasonably expected to “improv[e] air  
2 quality in communities most affected by emissions from the transportation sector”  
3 and “provide access for low-income customers.” However, Senate Bill 19-077  
4 does not specify how utilities, or the Commission should identify “communities  
5 most affected by emissions from the transportation sector.”

6 Following the approval of the Company’s inaugural TEP, the State passed  
7 legislation specifically addressing how the Commission and regulated utility  
8 programs should promote equity and environmental justice. Passing in July 2021,  
9 the Colorado Environmental Justice Act (“HB 21-1266”) outlines that retail  
10 customer “programs, including any associated expenditures, include floor  
11 objectives, set aside as equity budgets, to ensure that low-income customers and  
12 disproportionately impacted communities will have at least proportionate access  
13 to the benefits of such programs, incentives, and investments.”<sup>20</sup>

14 Specifically, HB 21-1266 defines a DI Community as:

15 (1) a community that is in a census block group where the proportion of  
16 households that are low income, that identify as a minority, or that are housing  
17 cost-burdened is greater than 40 percent; or

18 (2) any other community as identified or approved by a state agency, if the  
19 community has a history of environmental racism perpetuated through redlining,  
20 anti-Indigenous, anti-immigrant, anti-Hispanic, or anti-Black laws; or a community

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<sup>20</sup> § 40-2-108(3)(c)(II), C.R.S.

1 where multiple factors may act cumulatively to affect health and the environment  
2 and contribute to persistent disparities.

3 Importantly, HB 21-1266 created a stakeholder task force known as the  
4 Environmental Justice Action Task Force to inform further implementation of the  
5 law and related strategies to address environmental justice inequities.

6 **Q. ARE THERE ANY OTHER PENDING LEGISLATIVE UPDATES TO**  
7 **COLORADO'S DI COMMUNITY CONSIDERATIONS?**

8 A. Yes. While not yet enacted, in May 2023, the Colorado General Assembly passed  
9 House Bill 23-1233. Among other things, this bill includes statutory changes to the  
10 definition of a DI Community. In general, the proposed changes to the DI  
11 Community definition represent further refinements to the identification of such  
12 communities. As a notable example, the bill extends DI Community status to  
13 encompass disadvantaged communities ("DACs"), as defined by the federal  
14 Justice40 initiative, which was developed by the Biden-Harris administration to  
15 confront and address decades of underinvestment in areas most impacted by  
16 climate change, pollution, and environmental hazards.<sup>21</sup>

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<sup>21</sup> U.S. Department of Transportation, Justice40 Initiative, <https://www.transportation.gov/equity-Justice40#:~:text=What%20is%20the%20Justice40%20Initiative,%2C%20pollution%2C%20and%20environmental%20hazards> (last visited April 5, 2023).

1    **Q.    IS THERE AN AVAILABLE TOOL TO IDENTIFY DI COMMUNITIES?**

2    A.    Colorado is using the equity mapping tool of EnviroScreen. It enables users to  
3    identify DI Communities based on the definition in HB 21-1266.<sup>22</sup> EnviroScreen  
4    also displays the areas of the State that are DACs.

5    **Q.    HOW IS PUBLIC SERVICE ADJUSTING ITS TEP IN RESPONSE TO THESE**  
6    **MANY LEGISLATIVE DEVELOPMENTS?**

7    A.    Public Service is reflecting the updated concepts of equity since the inaugural TEP  
8    through overarching changes made to its equity-eligibility criteria, as provided in  
9    Section 2.B. of the 2024-2026 TEP (Attachment HS-1). By broadening the criteria,  
10   the Company can ensure that its robust equity offerings can reach those in need,  
11   consistent with State objectives. Public Service's revised equity-eligibility criteria  
12   include three principal methods to qualify our customers, including the following:  
13   (1) IQ status; (2) community status; and (3) federally-recognized Tribe status.

14            For *IQ status*, there are various eligible income definitions depending on the  
15   program, including (but not limited to) enrollment in Colorado's Weatherization  
16   Assistance Program, enrollment in the Supplemental Nutrition Assistance  
17   Program, enrollment in other Company IQ programs, and household income  
18   verification. Broadly, the Company will simplify and streamline the overall income  
19   qualification process for customers to participate in the TEP.

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<sup>22</sup> Colorado Department of Public Health & Environment, Colorado EnviroScreen,  
<https://cdphe.colorado.gov/enviroscreen> (April 5, 2023).

1 For *community status*, the criteria applies to customers that reside in: (1) a  
2 DI Community, as defined by HB 21-1266<sup>23</sup> and documented in EnviroScreen,<sup>24</sup>  
3 or (2) a DAC. These community-based definitions reflect the current policy  
4 refinements to identify equity-eligible communities at the State and federal level.  
5 By using these definitions, the TEP can promote program efforts in communities  
6 that are in the greatest need.

7 For *tribal status*, our criteria apply to individual residential customers that  
8 are members of a federally recognized Native American Tribe.

9 **Q. BASED ON THE UPDATED EQUITY ELIGIBILITY CRITERIA, WHAT**  
10 **PROPORTION OF PUBLIC SERVICE'S ELECTRIC CUSTOMERS WILL BE**  
11 **ELIGIBLE TO PARTICIPATE IN TEP EQUITY PROGRAMS?**

12 A. The Company estimates that based on these updated eligibility criteria,  
13 approximately 53 percent of our non-residential electric customer premises and  
14 approximately 48 percent of our residential electric customers will be equity eligible  
15 to participate in TEP programs.

16 **Q. WHY IS IT APPROPRIATE TO EXPAND ACCESS TO TEP EQUITY-BASED**  
17 **PROGRAMS IN THIS MANNER?**

18 A. Federal and state policy recognize that various communities warrant enhanced  
19 support through regulated utility programs, which includes TEP programs. It is

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<sup>23</sup> As discussed further above, the Company recognizes that HB 23-1233 is proposing definitional changes to the identification of DI Communities, including, but not limited to, the expansion of these communities to encompass DACs. If HB 23-1233 is enacted, the Company will consider revisions to its equity-eligibility criteria such as to ensure that its identification of DI Communities reflects the up-to-date statutory definition.

<sup>24</sup> This definition is described in further detail in the Company's 2024-2026 TEP, Attachment HS-1 to the Direct Testimony of Company Witness Huma Seth, as well as on the EnviroScreen online page, "Definitions," accessible at [https://teeo-cdphe.shinyapps.io/COEnviroScreen\\_English/](https://teeo-cdphe.shinyapps.io/COEnviroScreen_English/).

1 foreseeable and expected that certain individual customers living in these  
2 communities (such as in a DI Community) may apply for equity-based rebates  
3 *without* an income-driven need for enhanced support. Critically, however, is  
4 recognition that the environmental and public health benefits of transportation  
5 electrification flow to the whole community. Through our expanded equity criteria,  
6 the Company's rebate programs will support efforts to recognize and address  
7 histories of unfair treatment in the communities we serve. This result is intended  
8 and reflected in federal and state policy. And, as also mentioned above, the end  
9 goal of TEPs is ultimately to reduce economy-wide emissions and place downward  
10 pressure on electric retail rates. All of our electric retail customers will ultimately  
11 share in these benefits.

12 **Q. HOW CAN TRANSPORTATION ELECTRIFICATION PROGRAMS BENEFIT**  
13 **CUSTOMERS WHO ARE NOT IN A POSITION TO OWN OR LEASE AN EV?**

14 A. While many programs can help customers buying/leasing an EV and with the  
15 associated infrastructure,<sup>25</sup> just as important, the benefits of our TEP and EV  
16 adoption are not limited to customers with EVs. Various programs in our TEP  
17 support the electrification of public transit, rideshare programs, delivery services,  
18 and school buses, which create opportunities for customers that do not have their  
19 own EV to directly participate in the clean transportation transition. As noted,  
20 emissions reductions that result from TEPs create environmental and public health

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<sup>25</sup> For example, our transportation electrification programs help address cost-based barriers of EV adoption through rebates to help defray upfront costs associated with purchasing, leasing, or renting an EV, as well as necessary wiring and charging equipment. Utility investment in EVSI and public charging are also important tools to help make EV adoption more affordable and accessible for our customers and communities.

1 benefits that flow to the entire surrounding community, as supported by the cost-  
2 benefit analysis sponsored by Company witness Mr. Jean-Baptiste Jouve.  
3 Importantly, as explained by Company witness Mr. Derek Klingeman, as a result  
4 of the additional load growth from EV charging, our TEP will create tangible  
5 economic benefits for all of our customers by placing downward pressure on our  
6 retail electric rates.

7 **Q. ARE THERE ARE ANY NEW EQUITY PROGRAMS IN THE 2024-2026 TEP**  
8 **THAT YOU WOULD LIKE TO HIGHLIGHT FOR THE COMMISSION?**

9 A. Yes. While many of these programs are supported by other Company witnesses,  
10 there are a few new or significantly expanded equity-based programs I would like  
11 to highlight as notable examples. As supported through Company witness Ms.  
12 Deborah Erwin's Direct Testimony, Public Service plans to implement a Clean  
13 Vehicles portfolio focusing on enhancing our ability to support transportation  
14 electrification for customers and communities that face heightened financial  
15 barriers to EV adoption through targeted rebates, which will directly incentivize and  
16 enable customers to rent, lease, or purchase EVs. The proposed Clean Vehicles  
17 portfolio includes EV rebate programs for rideshare and delivery network drivers  
18 as well as State and local government fleets, and an expansion of our current  
19 Residential EV Rebate program to all equity-eligible residential customers. Certain  
20 programs in the Clean Vehicles portfolio specifically target electrification of high-  
21 mileage vehicles to leverage opportunities for outsized emissions reductions,  
22 which we expect will result in environmental and public health benefits for  
23 customers and communities throughout our service territory.

1           As supported by Company witness Mr. Andre Gouin's Direct Testimony, we  
2           are also planning to significantly enhance our School Bus Electrification program  
3           through our Innovation portfolio, which will prioritize geographically diverse and  
4           equity-eligible communities for school bus purchase rebates up to the full cost of  
5           the bus or approximately \$400,000. This program will result in environmental and  
6           public health benefits for children and communities that are particularly vulnerable  
7           to the emissions associated with diesel-fueled buses.

8           Another example is the proposed expansion of the Company's investment  
9           in public charging stations across our service territory to address significant public  
10          charging needs we have identified throughout the areas we serve. As discussed,  
11          approximately 48 percent of the Company's residential customers meet the TEP  
12          definition of equity eligible. Ensuring sufficient access to public charging  
13          throughout our service territory is thus critical for our customers and communities  
14          to have meaningful and equitable access to the benefits of transportation  
15          electrification.

16   **Q.   WHAT PORTION OF YOUR BUDGET DO YOU ESTIMATE WILL SUPPORT**  
17   **EQUITY-ELIGIBLE CUSTOMERS?**

18   A.   With the change to our equity criteria, Public Service estimates that our TEP  
19          budget is ready to support the market demand of our equity-eligible customers with  
20          programming funding that reflects a range of approximately 20-30 percent of the

1 total TEP budget, as addressed by Company witness Mr. Jouve.<sup>26</sup> Further, the  
2 Company is committed to spending at least 30 percent of its Innovation portfolio  
3 budget to advance equity. Finally, as supported by Company witness Ms. Deborah  
4 Erwin, we propose to continue the Equity Performance Incentive Mechanism<sup>27</sup>  
5 (“PIM”), which incentivizes the prioritization of enrollment in equity-based  
6 programs.

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<sup>26</sup> As explained in Mr. Jouve’s Direct Testimony, it was not practicable for Public Service to precisely estimate the share of budgets that could reasonably support equity-eligible customers and communities for each and every TEP program. For example, Public Service has not attempted to estimate the portion of EVSI investments that will ultimately support equity-eligible customers and communities. For this reason, this estimated range may underestimate the full share of our overall TEP triennial budget that can be leveraged to support equity. However, a reasonable range of budget support is provided.

<sup>27</sup> The Company’s Equity PIM was approved through Decision No. R22-0378 in Proceeding No.21AL-0494E.



**V. LOOKING TO THE FUTURE**

**Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

A. The purpose of this section of my Direct Testimony is to describe Xcel Energy's long-term vision to advance transportation electrification and the role of this proposed TEP in making that vision a reality.

**Q. PLEASE DESCRIBE XCEL ENERGY'S COMMITMENT TO ADVANCING TRANSPORTATION ELECTRIFICATION.**

A. As part of our vision to be a net-zero energy provider by 2050, Xcel Energy's clean transportation vision is to enable one out of five vehicles in the areas we serve to be electric by 2030 and all vehicles to run on carbon-free electricity or other clean energy by 2050. Consistent with Senate Bill 19-236, EVs within our Colorado service territory will be powered with electricity that has at least 80 percent fewer carbon emissions (from 2005 levels) by 2030 and net zero emissions by 2050. The Company's clean energy transition will help maximize the ability of transportation electrification to reduce emissions. We plan to do our part in supporting the State's goals and advance our EV vision by developing holistic programs and infrastructure for delivering affordable EV charging solutions for customers at home, work, and on the go in all the communities we serve. Xcel Energy is committed to lead by example by transitioning all sedans in its fleet to electric by 2023, as well as 100 percent of its light-duty trucks and sport utility vehicles and 30 percent of its medium and heavy-duty vehicles by 2030. By 2050, we are committed to pursuing a zero-carbon Xcel Energy vehicle fleet.

1           We want to ensure that by 2050, our customers can access convenient and  
2           affordable EV charging at or within one mile of their homes. For this once in a  
3           lifetime transition of transportation, the Company is committed to underserved  
4           communities having opportunities to participate in Xcel Energy programs and the  
5           economic development benefits associated with zero-carbon transportation.

6   **Q.   WHY HAS XCEL ENERGY ADOPTED THESE 2030 AND 2050 GOALS FOR**  
7   **CLEAN TRANSPORTATION?**

8   A.   Xcel Energy was the first in our industry to set ambitious greenhouse gas reduction  
9           goals across the ways our customers use our services, including electricity,  
10          heating, and transportation. The overarching purpose of these efforts is to drive  
11          down overall emissions in the communities we serve and reduce emissions from  
12          hard-to-reduce sectors like transportation, which will ultimately help drive Colorado  
13          toward its statewide emissions reduction goals. Put another way, since  
14          transportation is the most significant contributor to overall emissions, our  
15          transportation related commitments are a key piece of maximizing the benefits of  
16          becoming a net-zero energy provider by 2050. Xcel Energy also recognizes that  
17          well-managed transportation electrification places a downward pressure on  
18          customer bills, in sync with our goal of advancing an equitable and affordable clean  
19          energy transition. Clean transportation is the future. Xcel Energy was an early  
20          mover with its inaugural TEP as well as being a leader in announcing an ambitious  
21          2030 transportation electrification target in August 2020, with the support of over  
22          40 private and public sector entities.

1   **Q.    IN LINE WITH THESE COMMITMENTS, HOW WILL THIS TEP CREATE A**  
2   **FOUNDATION TO BUILD ON FOR FUTURE TEPs?**

3   A.   We have approached this TEP with a goal of offering the comprehensive and  
4       robust support and incentives necessary to stimulate the nascent state of  
5       transportation electrification in Colorado to turn a corner and build increased  
6       momentum. Our investment in advisory services, EVSI, equipment rental  
7       programs, rebates and innovation will play a vital role in enabling our customers  
8       and communities to invest in transportation electrification. Along these lines,  
9       investment in the buildout of a convenient, reliable, and affordable public charging  
10      network throughout our service territory will be critical to drive a comprehensive  
11      market transformation and more equitable charging access, not only for light-duty  
12      EVs, but also to address the unique challenges and demands associated with  
13      electrifying medium- and heavy-duty vehicles as EV adoption continues to grow.

14           We have approached these early efforts with an overarching goal of EV  
15      adoption becoming increasingly more commonplace and self-sustaining, which we  
16      expect will occur once our customers and communities become more broadly  
17      aware of the benefits of EV adoption, affordable new and used EVs become more  
18      readily available across our service territory, and a sufficient foundation of  
19      infrastructure and public charging has been developed to serve these vehicles.

20           In addition to our focus on accelerating EV adoption across sectors, we are  
21      also looking toward the future needs of our customers and system to ensure the  
22      investments we will make through this TEP can cost-effectively and reliably  
23      accommodate growing EV adoption for years to come. With this objective in mind,

1       our TEP includes proposals to future proof our buildout of EVSI and undertake  
2       certain prudent investments to ensure that our distribution system is adequately  
3       reinforced to accommodate growing EV adoption. Our TEP places an increased  
4       emphasis on managed charging, rates, battery systems, and exploration of  
5       emerging technologies and innovation to enable the integration of additional EV  
6       charging loads in a manner that supports the efficient operation of our grid and  
7       improves the integration of renewable resources.

8               We believe that all of these efforts working together will be instrumental in  
9       maximizing the benefits of increased EV adoption for all customers, including  
10      downward pressure on rates from additional EV charging loads, progress toward  
11      our statewide emissions reduction goals and associated environmental and public  
12      health benefits, efficient grid planning, EV driver affordability benefits, and  
13      maximizing our ability to leverage and harness overall clean energy investments.

14             As well as advancing these many benefits, our TEP is designed to provide  
15      all of our customers and communities an equitable opportunity to participate in  
16      Colorado's clean transportation transition. This foundation of equity that supports  
17      environmental justice is critical to the success of this and future TEPs.

**VI. CONCLUSION**

**Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

A. I recommend that the Commission approve Public Service's 2024-2026 TEP and find that it is just, reasonable, and in the public interest, including approving Public Service's proposal to expand its equity eligibility criteria.

**Q. PLEASE SHARE ANY CONCLUDING THOUGHTS YOU WOULD LIKE THE COMMISSION TO CONSIDER.**

A. Public Service is encouraged by the progress we have made in implementing Colorado's first TEP, and we greatly appreciate the invaluable experience, customer and stakeholder feedback, community partnerships, and learnings that have informed the development of our proposed 2024-2026 TEP.

Through enacting Senate Bill 19-077, the Colorado General Assembly has recognized that robust TEPs are critical to advance widespread EV adoption in line with the State's emissions reduction goals under House Bill 19-1261 and to fully harness and leverage the potential of our clean energy investments. The Colorado Environmental Justice Act, enacted through HB 21-1266, further emphasizes the importance of ensuring equitable access to the benefits of such regulated utility programs. We have carefully developed our proposed 2024-2026 TEP to comprehensively advance these key State energy policies, all while placing a downward pressure on our electric retail rates, creating a winning outcome for our customers, communities, and the State of Colorado.

I recommend that the Commission approve our 2024-2026 TEP to enable Public Service to continue to build Colorado's momentum toward widespread

1            transportation electrification and our statewide emissions reduction goals, while  
2            ensuring an equitable and affordable transition for our customers and communities  
3            along the way.

4    **Q.    DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

5    **A.    Yes, it does.**

**Statement of Qualifications**

**NADIA I. EL MALLAKH**

Nadia El Mallakh is Vice President of Clean Transportation and Strategic Partnership for Xcel Energy – Colorado. She leads strategy, implementation and design of Clean Transportation programs, policy and related efforts across Xcel Energy’s eight state footprint, including first-of-their kind Clean Transportation efforts focused on equity, research, innovation and offering practical solutions for customers to charge at home, at work and on the go.

Ms. El Mallakh is responsible for executing partnership strategy and innovative solutions for customers to achieve Xcel Energy’s strategic priorities related to leading the clean energy transition, keeping bills low and enhancing the customer experience. Ms. El Mallakh leads the Clean Transportation team, including development of the Company’s 2030 Electric Vehicle Vision and new 2050 Clean Transportation Vision. In 2021, Ms. El Mallakh received recognition as Fortnightly Magazine’s Top Innovator in Public Utilities for Electric Vehicle innovation, programs and team building. In 2022, Ms. El Mallakh received the “Utility Transformation Leader of the Year” award from the Smart Electric Power Alliance (SEPA).

Ms. El Mallakh joined Xcel Energy in 2007 and previously served as Assistant General Counsel for Xcel Energy, leading the real estate legal team and supporting various commercial transactions. Her prior work experience includes commercial real estate transactional law at several law firms, including Gibson, Dunn & Crutcher LLP. She also developed community partnerships in Colorado while on a rotational assignment for Xcel Energy – Colorado.

Ms. El Mallakh is a member of the Colorado and California State Bars and was a member of the Colorado Bar Association Real Estate Council. She serves as a Member of EPRI's Electrification & Sustainable Energy Sector Council, sits on EFG's Executive Advisory Panel (customer insights and advisory firm), and EVCx as an Forum Advisory Panel member.

Ms. El Mallakh received a Juris Doctor from the University of California, Berkeley School of Law, a Master of City Planning degree from UC Berkeley, College of Environmental Design, and a Bachelor of Science degree in Conservation and Resources Studies from the College of Natural Resources, graduating summa cum laude.



BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

\* \* \* \* \*

IN THE MATTER OF THE APPLICATION )  
OF PUBLIC SERVICE COMPANY OF )  
COLORADO FOR APPROVAL OF ITS ) PROCEEDING NO. 23A-\_\_\_\_E  
2024-2026 TRANSPORTATION )  
ELECTRIFICATION PLAN. )

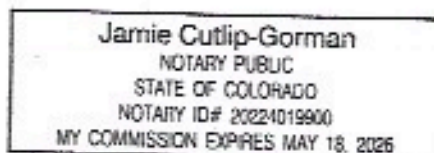
AFFIDAVIT OF NADIA I. EL MALLAKH  
ON BEHALF OF  
PUBLIC SERVICE COMPANY OF COLORADO

I, Nadia El Mallakh, being duly sworn, state that the Direct Testimony and attachments were prepared by me or under my supervision, control, and direction; that the Direct Testimony and attachments are true and correct to the best of my information, knowledge and belief; and that I would give the same testimony orally and would present the same attachments if asked under oath.

Dated at Denver, Colorado, this 9<sup>th</sup> day of May, 2023.

  
Nadia El Mallakh  
Vice President, Clean Transportation and  
Strategic Partnerships

Subscribed and sworn to before me this 9<sup>th</sup> day of May, 2023.



  
Notary Public  
My Commission expires May 18, 2026