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

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IN THE MATTER OF THE APPLICATION	**)**	
OF PUBLIC SERVICE COMPANY OF	**)**	
COLORADO FOR APPROVAL OF ITS	**)**	**PROCEEDING NO. 20A-XXXXE**
2021-2023 TRANSPORTATION	**)**	
ELECTRIFICATION PLAN	**)**	

DIRECT TESTIMONY AND ATTACHMENT OF ARTHUR P. FREITAS

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

May 15, 2020

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

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IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS 2021-2023 TRANSPORTATION ELECTRIFICATION PLAN	)))))	**PROCEEDING NO. 20A-XXXXE**

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Attachment APF-1	TEP Revenue Requirement Model

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
Commission	Colorado Public Utilities Commission
CPCA	Customer Program Cost Adjustment
CWIP	Construction Work in Progress
DSMCA	Demand-Side Management Cost Adjustment
EV	Electric Vehicle
FERC	Federal Energy Regulatory Commission
NSPM	Northern States Power Company – Minnesota
O&M	Operations and Maintenance
PIM	Performance Incentive Mechanism
Public Service or the Company	Public Service Company of Colorado
PUCT	Public Utility Commission of Texas
SB 19-077	Senate Bill 19-077
SPS	Southwestern Public Service Company
TEP or Plan	Transportation Electrification Plan
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services Inc.

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I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, RECOMMENDATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Arthur P. Freitas. My business address is 1800 Larimer Street, Denver, Colorado 80202.

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

A. I am employed by Xcel Energy Services Inc. ("XES"), the service company subsidiary of Xcel Energy, as Manager of Revenue Analysis.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?

A. I am testifying on behalf of Public Service Company of Colorado ("Public Service" or the "Company"), a Colorado Corporation, and wholly-owned subsidiary of Xcel Energy Inc. ("Xcel Energy")

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.

A. As Manager of Revenue Analysis, I provide project supervision and technical expertise for jurisdictional cost of service studies, revenue requirement determinations, and related projects for the Xcel Energy Operating Companies.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my Direct Testimony is to sponsor the Company's proposed 2021-2023 Transportation Electrification Plan ("TEP" or "Plan") annual revenue requirement; describe how the TEP annual revenue requirement will be updated and adjusted over the course of the TEP through the procedures in the Company's proposed Customer Program Cost Adjustment ("CPCA") rider; and explain and support the Company's depreciation rates for TEP capital assets, including its request for a new depreciation rate for electric vehicle ("EV") charger assets, and proposed amortization period for TEP rebates, which are both necessary to determine the TEP annual revenue requirement.

Q. PLEASE SUMMARIZE YOUR DIRECT TESTIMONY AND RECOMMENDATIONS.

A. First, I describe how the Company plans to record the capital assets proposed in the TEP in its books and records and explain the depreciation rates used to calculate depreciation expense on the assets. In this section, I propose that a 10 percent depreciation rate be approved for the EV charger assets based on the expected useful life of EV chargers and propose a consistent 10-year amortization period for rebates offered under the TEP, which largely support and incentivize the acquisition and installation of EV chargers. In the next section of my Direct Testimony, I describe the components of the annual revenue requirement for the TEP, explain how these components come together to calculate this annual revenue requirement, and explain how the TEP annual revenue requirement will be adjusted and updated in the Company's proposed

CPCA rider to ensure appropriate cost recovery. Finally, I present the projected annual revenue requirement for each TEP year.

I recommend that the Colorado Public Utilities Commission ("Commission"):

- Approve the use of a 10-percent depreciation rate for EV chargers; and
- Approve the use of a 10-year amortization period for TEP rebates.

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

A. Yes. I am sponsoring the following attachment:

- Attachment APF-1: TEP revenue requirement model.

II. DEPRECIATION OF TEP ASSETS AND REQUEST FOR DEPRECIATION RATE ON CHARGERS

Q. PLEASE DESCRIBE THE CATEGORIES OF CAPITAL INVESTMENTS PUBLIC SERVICE WOULD UNDERTAKE THROUGH THE TEP.

A. Public Service's proposed TEP investment focuses on three main categories of capital assets. These three categories include software, EV supply infrastructure, and EV chargers. The software enables Public Service to monitor the EV chargers. The EV supply infrastructure is the wiring and conduit from the customer's meter to the charger stub. The EV charger is the device that is attached to the charger stub and plugs into the EV to charge it. The TEP does not include any distribution assets up to and including the customer meter. Any new services will be installed in accordance with the Company's electric distribution line extension policy with the costs recovered through base rates.

Q. WHAT FEDERAL ENERGY REGULATORY COMMISSION ("FERC") ACCOUNTS WILL THESE ASSETS BE RECORDED IN, AND WHAT DEPRECIATION RATE OR AMORTIZATION PERIOD WILL BE APPLIED TO EACH ASSET?

A. The software will be recorded in FERC Account 303, which is intangible plant. The EV supply infrastructure will be recorded in FERC Account 369, which is the account for services. The EV chargers will be recorded in FERC Account 371, which is the account for Installations on Customers Premises. EV supply infrastructure will be depreciated using the approved depreciation rate for FERC Account 369, and the software will be amortized over the period approved for

FERC account 303 as the EV supply infrastructure and software are similar to the assets already in those accounts[1]. However, for the EV chargers, Public Service is requesting a new depreciation rate. Most of the assets currently in FERC Account 371 are area lights which have very different characteristics and service lives than chargers, so applying the standard depreciation rate under this account would not be appropriate. The current average service life in FERC Account 371 is 25 years which is much longer than the expected useful life of the EV chargers.

Q. WHAT DEPRECIATION RATE IS PUBLIC SERVICE PROPOSING FOR THE EV CHARGERS?

A. Public Service is requesting approval to use a 10 percent depreciation rate for the EV chargers. This is based on a service life of 10 years and no cost of removal because under Public Service's proposed terms and conditions for charger services under its TEP, customers would directly cover removal costs.

Q. WHY DOES PUBLIC SERVICE BELIEVE THAT A TEN PERCENT DEPRECIATION RATE IS APPROPRIATE?

A. The Company expects that the EV chargers will have an average useful life of 10 years based on current industry guidance.[2] Setting a 10 percent depreciation

[1] The approved amortization period for this category of FERC Account 303 – software is 7 years. The depreciation rate, including removal costs, for FERC Account 369 is 2.435 percent for overhead services and 2.431 percent for underground services.

[2] *See e.g.*, EV Connect, "Maintenance for EV Charging Stations: What to Know About EV Charger Repair," Jan. 27, 2020, available at https://www.evconnect.com/blog/maintenance-for-ev-charging-stations-what-to-know-about-ev-charger-repair/ (last visited May 9, 2020); Clean Fuels Ohio, "What You Need to Know About EV Charging Maintenance, July 20, 2017, https://www.cleanfuelsohio.org/single-post/2017/07/20/What-You-Need-to-Know-About-EV-Charging-Station-Maintenance (last visited May 9, 2020).

rate for EV chargers is also consistent with the approach other utilities have proposed in their transportation electrification initiatives, including our sister utility Northern States Power Company – Minnesota ("NSPM"). In fact, the Minnesota Public Utilities Commission voted on May 7, 2020, to approve NSPM's EV Home Charging Service program, which applies a 10 percent depreciation rate for utility-owned EV chargers.[3] Likewise, the Oregon Public Utilities Commission approved multiple EV charging pilot programs proposed by Portland General Electric that specified a 10-year useful life for utility-owned EV chargers.[4]

[3] *See* Proceeding E002/M-19559 (a written order has not been issued as of the date of this testimony).
[4] *See* Order 18-054 in Proceeding UM-1811.

III. AMORTIZATION OF TEP REBATES AND REQUEST FOR AMORTIZATION PERIOD

Q. PLEASE GENERALLY DESCRIBE THE REBATES PUBLIC SERVICE PLANS TO OFFER IN SUPPORT OF ITS TEP.

A. Through the TEP, Public Service proposes to offer a variety of rebates to help customers defray the up-front costs associated with acquiring and installing EV chargers. These rebates are presented in the Company's TEP, Attachment KDS-1 to the Direct Testimony of Company witness Kevin Schwain.

Q. PLEASE EXPLAIN HOW PUBLIC SERVICE WILL RECORD TEP REBATES IN ITS BOOKS AND RECORDS.

A. As explained in more detail below, Public Service plans to book TEP rebates as a regulatory asset, which will amortize over time.

Q. WHAT AMORTIZATON PERIOD IS PUBLIC SERVICE PROPOSING FOR THE REBATE REGULATORY ASSET?

A. Public Service requests to use a 10-year amortization period for the rebates.

Q. PLEASE EXPLAIN PUBLIC SERVICE'S RATIONALE FOR REQUESTING A 10-YEAR AMORTIZATION PERIOD.

A. The rebates proposed in the TEP are primarily designed to incentivize and support the installation of EV chargers, which have an expected useful life of 10 years as explained above. This proposed amortization period ties Public Service's cost recovery for the rebates with the duration of the benefits they are anticipated to provide.

IV. COST RECOVERY APPROACH AND RATIONALE

Q. HOW IS PUBLIC SERVICE PROPOSING TO RECOVER THE COSTS INCURRED UNDER THE TEP?

A. Public Service is proposing to utilize a rider to recover the costs of the TEP. Senate Bill 19-077 ("SB 19-077") permits utilities to utilize a rider mechanism to recover the costs of a TEP. In order to avoid placing another line item on customers' bills, Public Service is proposing to include the TEP revenue requirement in the Demand-Side Management Cost Adjustment ("DSMCA") rider and to rename this combined rider the Customer Program Cost Adjustment ("CPCA"). Company witness Steven Wishart sponsors the Company's proposed CPCA, which is filed as Attachment SWW-3 to his Direct Testimony.

Q. WHAT TEP COSTS WILL BE INCLUDED IN THE ANNUAL REVENUE REQUIREMENT UNDER THE CPCA?

A. Public Service is proposing to recover both capital and O&M costs through the CPCA, as well as the cost of rebates. The TEP annual revenue requirement under the CPCA includes a return, equal to the Company's weighted average cost of capital, on capital investments and rebates; the plant-related ownership costs associated with such investments, including depreciation and amortization, accumulated deferred income taxes, and income tax expense; the annual amortization expense associated with rebates; O&M expenses; and the cost of energy to operate Company-owned public charging stations incurred in connection with the Commission-approved TEP for the year in which the CPCA will be in effect. Public Service will also include a credit to the revenue requirement for certain revenues separately generated by TEP assets including revenues from the monthly EV charging service charge customers will pay for use of EV chargers provided by the Company and revenues from Company-owned public charging stations received in that TEP year. The capital costs included in rate base will use a 13-month average methodology as the rider uses a forecasted test year with a true up.

Q. IS PUBLIC SERVICE PROPOSING TO INCLUDE CONSTRUCTION WORK IN PROGRESS ("CWIP") IN RATE BASE IN THE RIDER?

A. No. The vast majority of the investment has a short construction cycle and likely won't be in CWIP more than 30 days. Since the majority of the assets will be placed in service in the same month that they begin construction, the extra complexity of including CWIP in rate base is not necessary.

Q. WHAT IS PUBLIC SERVICE PROPOSING FOR THE CAPITAL STRUCTURE IN THE CPCA?

A. Public Service is proposing a capital structure composed of long-term debt and equity. Since CWIP is not in rate base, it would not be inappropriate to include short term debt in the capital structure. Given the short construction cycle of the assets, financing the construction using short term debt is not necessary. Therefore, including short term debt in the capital structure in the rider would not be reflective of the financing costs of the TEP assets. Public Service is proposing to use the actual debt to equity ratio in each year of the TEP plan.

Q. WHAT IS PUBLIC SERIVCE PROPOSING FOR THE COST OF DEBT AND THE COST OF EQUITY USED IN THE RIDER?

A. Public Service is proposing to use the actual embedded cost of long-term debt and the return on equity approved in the most recent rate case.

Q. HOW WILL THE COMPANY APPROACH ADJUSTING AND UPDATING THE REVENUE REQUIREMENT FOR THE CPCA TO ENSURE THE CPCA RECOVERS THE APPROPRIATE AMOUNT?

A. The proposed rider will utilize forecasted information to calculate a projected revenue requirement which is then charged for the upcoming year. Once each TEP year is completed, an annual true up will then reconcile the projected revenue requirement for that TEP year to the actual revenue required. Consistent with the process under the current DSMCA, Public Service proposes to complete the true up filing for each TEP year filing on April 1 of the following year with the appropriate adjustment to the CPCA to take effect on July 1. Also consistent with the process under the current DSMCA, Public Service proposes to revise the CPCA annually on October 1 to reflect the forecasted revenue requirement for the upcoming TEP year for a January 1 effective date.

Q. PLEASE DESCRIBE HOW THE COST OF REBATES IS INCLUDED IN THE RIDER.

A. Under SB 19-077 utilities are authorized to earn a return on rebates provided through a TEP at the utility's weighted average cost of capital, including the most recent rate of return on equity approved by the Commission. Public Service proposes to implement this aspect of the legislation by including the rebates as regulatory assets in rate base. When a rebate is paid by Public Service, it will be recorded as a regulatory asset and included in rate base. The regulatory asset will then be amortized over time and the amortization expense will also be included in the rider revenue requirement. This methodology is consistent with the manner in which plant is included in rate base. The regulatory asset included in rate base will also be calculated on a 13-month average, consistent with the plant included in rate base.

Q. PLEASE DESCRIBE THE O&M EXPENSES INCLUDED IN THE RIDER.

A. The O&M expenses recovered in the rider include the maintenance costs of the assets as well as customer education and outreach costs, advisory services costs, certain research and innovation costs, and program administration and evaluation costs. These O&M costs are incremental and not already included in base rates. Company witness Kevin Schwain describes these costs in his Direct Testimony.

Q. PLEASE DESCRIBE THE ENERGY COSTS INCLUDED IN THE RIDER.

A. To operate the Company-owned public charging stations proposed in the TEP, the Company plans to procure the necessary electricity through an interdepartmental purchase, and the Company's costs for procuring that electricity are included in the CPCA revenue requirement. As Company witness Steven Wishart explains in his Direct Testimony, whether the revenues the Company receives from the EV drivers using these charging stations will cover the costs associated with them will depend on their level of utilization.

Q. WOULD PUBLIC SERVICE ALSO RECOVER ANY FINANCIAL REWARDS EARNED THROUGH ITS PROPOSED PERFORMANCE INCENTIVE MECHANISMS ("PIMS") THROUGH THE CPCA RIDER?

A. Yes. As explained in Company witness Kevin Schwain's Direct Testimony, Public Service proposes that it be eligible for any reward from the customer experience PIM annually, whereas eligibility for the cost efficiency PIM would occur once at the end of the three-year TEP timeframe. Public Service would incorporate any applicable financial reward for its proposed customer service PIM in the April 1 true up filing for each TEP year and any applicable financial reward for its proposed cost efficiency PIM in the annual true-up filing following the 2023 TEP plan year, in April 2024.

Q. WHY IS PUBLIC SERVICE CREDITING THE ANNUAL TEP REVENUE REQUIREMENT FOR CERTAIN REVENUES SEPARATELY GENERATED BY TEP ASSETS AS INDICATED ABOVE?

A. Public Service is crediting the TEP annual revenue requirement for certain revenues separately generated by TEP assets to avoid double recovery. For example, customers that choose to use an EV charger provided by Public Service will pay a monthly charge on their bill, and these resulting revenues will decrease the amount of revenue Public Service needs to collect through the CPCA. Additionally, any revenue generated by Company-owned public charging stations will decrease the costs necessary to operate them and, likewise, the amount of revenue Public Service needs to collect through CPCA. Company witness Steven Wishart discusses the monthly charge for the EV chargers and the Company-owned public charging station rate in his Direct Testimony.

Q. ARE THERE ANY TEP PROGRAMS PUBLIC SERVICE DOES NOT PLAN TO INCLUDE IN THE CPCA?

A. Yes. As described in Company witness Jack Ihle's Direct Testimony, Public Service plans to fund grants for school buses as part of the TEP's Research, Innovations, and Partnerships portfolio with $2.2 million in sales proceeds Public Service has earned through the sale of carbon offsets. Public Service therefore does not plan to recover the costs to support these grants through the CPCA. These sales proceeds are currently booked as a regulatory liability.

Q. HAVE YOU CALCULATED A REVENUE REQUIREMENT FOR THE TEP?

A. Yes. Using the budget presented by Company witness Kevin Schwain and revenues calculated by Company witness Steven Wishart I have calculated the revenue requirement for each year of the plan. The revenue requirement for each of the years is presented in Table APF-D-1 below.

TABLE APF-D-1: TEP REVENUE REQUIREMENT

	2021	2022	2023
Revenue Requirement	$7,662,879	$11,249,295	$15,658,961

Attachment APF-1 is the revenue requirement model used to calculate the above revenue requirement

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Statement of Qualifications

Arthur P. Freitas

I graduated from Marquette University with a Bachelor's degree in Business Administration in 1994. I worked for Boston Gas Company from 1998 through 2000 as a rate analyst. In 2000, I began working for a consulting group, La Capra Associates. While at La Capra Associates, I gained a broad range of experience and expertise that encompassed utility functions from system planning through retail ratemaking. I performed analyses on a range of topics that included retail cost allocation and rate design, electricity market design and analysis, power market forecasting, and integrated resource planning. I have significant experience involving the regulatory process. I have participated in the regulatory process on behalf of both regulated utilities and other interested stakeholders in multiple states. The issues explored include cost allocation and retail rate design, integrated resource planning, resource acquisition, transmission system expansion, and renewable energy policy. Over the course of my involvement in numerous regulatory proceedings, I have drafted and reviewed pre-filed testimony, developed and responded to discovery, and conducted analyses on issues relevant to the proceeding to support the testimony of expert witnesses. In 2011, I joined XES as Principal Rate Analyst and was promoted to Manager of Revenue Analysis for Public Service's affiliate Company Southwestern Public Service Company ("SPS"). I assumed my current role as Manager of Revenue Analysis for Public Service in April 2020.

I testified before the New Mexico Public Regulation Commission in Case No. 17-00255-UT on SPS's cost of service and on transmission costs. I also submitted pre-filed testimony on those same issues in Case Nos. 19-00170-UT, 15-00139-UT, and 15-00296-UT. In Case No. 17-00044-UT I submitted testimony on the revenue requirement calculations in an application for a Certificate of Convenience and Necessity to construct two wind projects. I testified before the Public Utility Commission of Texas ("PUCT") in Docket No. 43695, a rate case filed in 2014, regarding expenses incurred and revenues received from the Southwest Power Pool and other utilities under the applicable Open Access Transmission Tariff. In addition, I submitted pre-filed testimony in PUCT Docket Nos. 49831, 47527 and 45524, both of which were base rate cases. I also submitted pre-filed testimony to the PUCT in Docket Nos. 42042 and 42004 regarding transmission-related costs incurred under tariffs approved by the FERC. In Docket No. 46936, I submitted testimony on the revenue requirement calculations in the companion application in Texas for a Certificate of Convenience and Necessity to construct two wind projects. I have also submitted pre-filed testimony on cost of service and formula rate mechanisms before the FERC in Docket Nos. ER19-404, ER19-675, and ER20-277. Finally, I have testified before the Massachusetts Department of Public Utilities on behalf of Blackstone Gas Company, and I have submitted pre-filed testimony to the New Hampshire Public Utilities Commission on behalf of the Office of Consumer Advocate.

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AFFIDAVIT OF ARTHUR P. FREITAS
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO

I, Arthur P. Freitas, being duly sworn, state that the Direct Testimony and attachments were prepared by me or under my supervision, control, and direction; that the 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.

Signed in Denver, Colorado, this 14th day of May 2020.

Arthur P. Freitas
Manager, Revenue Analysis

Subscribed and sworn to before me this 14th day of May, 2020.

SCHUNA D WRIGHT
Notary Public
State of Colorado
Notary ID # 19974007693
My Commission Expires 05-06-2021

Schuna D. Wright
Notary Public

My Commission expires May 6, 2021