

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

* * * * *

RE: IN THE MATTER OF ADVICE)
LETTER NO. 1712-ELECTRIC FILED BY)
PUBLIC SERVICE COMPANY OF)
COLORADO TO REPLACE COLORADO) PROCEEDING NO. 16AL-_____E
PUC NO. 7-ELECTRIC TARIFF WITH)
COLORADO PUC NO. 8-ELECTRIC)
TARIFF)

DIRECT TESTIMONY AND ATTACHMENT OF ROBERT J. OSBORN

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

January 25, 2016

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SUMMARY OF THE DIRECT TESTIMONY OF ROBERT J. OSBORN

Mr. Robert J. Osborn currently holds a developmental position in Public Service Company of Colorado's ("Public Service" or "Company") Regulatory department as Manager of Regulatory Project Management. Mr. Osborn is an employee of Xcel Energy Services Inc. ("XES"). He is responsible for management of special regulatory projects for Xcel Energy and its subsidiaries, including Public Service, one of four utility operating company subsidiaries of Xcel Energy, Inc. His duties include strategy, regulatory policy, and program development for the Company's gas and electric initiatives.

In his Direct Testimony, Mr. Osborn presents revisions to a portion of the Company's proposed P.U.C. No. 8-Electric Tariff ("Electric Tariff"), as sponsored by Company witness Mr. Steven Wishart in Attachments SWW-5 and SWW-6, the clean and redlined Electric Tariff, respectively. The proposed Electric Tariff in these attachments includes

a multitude of revisions to rates, rules and regulations that other Company witnesses will sponsor. Mr. Osborn will discuss the revisions for street and area lighting, including expanded language regarding relocating and removing street light poles and new language regarding attaching banners and other facilities to poles. Mr. Osborn also discusses the updates to the Company-proposed rates in the street and area rate schedules in this Phase II Electric Rate Case and compares them to the rates approved in the last Phase II Electric Rate Case, Docket No. 09AL-0299E ("2009 Electric Phase II Rate Case"). Finally, Mr. Osborn discusses three rate schedules added since the 2009 Electric Phase II Rate Case: (1) an Energy Only Street Lighting Service ("Schedule ESL") applicable to municipalities that own and maintain their own lighting facilities, (2) options for converting street lights to light-emitting diode ("LED") lights under Street Lighting Service ("Schedule SL"), and (3) a Metered Street Lighting Service ("Schedule MSL").

Mr. Osborn recommends that the Commission approve the proposed Electric Tariff revisions to rates, rules, and regulations for street and area lighting, which include the expanded language regarding relocating and removing street light poles and new language regarding attaching banners and other facilities to poles. Mr. Osborn also recommends the approval of the updates to the rates in the street and area rate schedules proposed by the Company in this Phase II Electric Rate Case.

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
2009 Electric Phase II Rate Case	Docket No. 09AL-0299E
CCOSS	Class Cost of Service Study
Commission	Public Utility Commission of Colorado
Company	Public Service Company of Colorado
Electric Tariff	P.U.C. No. 8 Electric Tariff
HPS	High Pressure Sodium
kW	Kilowatt
kWh	Kilowatt hour
LED	Light Emitting Diode
LSC	Light Sensing Controls
MH	Metal Halide
Public Service	Public Service Company of Colorado
Schedule CAL	Commercial Outdoor Area Lighting Service
Schedule COL	Customer Owned Lighting Service
Schedule ESL	Energy Only Street Lighting Service
Schedule MI	Metered Intersection Service

<u>Acronym/Defined Term</u>	<u>Meaning</u>
Schedule MSL	Metered Street Lighting Service
Schedule PLL	Parking Lot Lighting Service
Schedule RAL	Residential Outdoor Area Lighting Service
Schedule SL	Street Lighting Service
Schedule SLU	Unincorporated Area Street Lighting Service
Schedule SSL	Special Street Lighting Service
Street Lighting Rules	Street Lighting Section of the Electric Service Rules and Regulation
SWEEP	Southwest Energy Efficiency Project
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services, Inc.

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

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert J. Osborn. My business address is 1800 Larimer Street,
Suite 1400, Denver, CO 80202.

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

A. I am employed by Xcel Energy Services, Inc. ("XES") in a developmental position
in Regulatory Affairs as Manager of Regulatory Project Management. XES is a
wholly-owned subsidiary of Xcel Energy Inc. ("Xcel Energy"), and provides an
array of support services to Public Service Company of Colorado ("Public
Service" or "Company") and the other utility operating company subsidiaries of
Xcel Energy on a coordinated basis.

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

A. I am testifying on behalf of Public Service.

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

2 A. I am currently engaged in a rotational developmental position as Manager of
3 Regulatory Project Management. I am responsible for project management and
4 program development for the Company's gas and electric businesses. Prior to
5 taking this position, I was a Director of Community Relations. In this role, I led
6 franchise negotiations and management, managed the Company's community
7 service programs, and oversaw service and facility programs that required
8 community engagement or outreach with the Company's municipal customers. A
9 description of my qualifications, duties, and responsibilities is set forth after the
10 conclusion of my testimony in my Statement of Qualifications.

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

12 A. The purpose of my Direct Testimony is to present proposed revisions to the
13 Street Lighting Service sections of the Company's P.U.C. No. 8 Electric Tariff
14 ("Electric Tariff") as sponsored by Company witness Mr. Steven Wishart in
15 Attachments SWW-5 and SWW-6, the clean and redlined Electric Tariff,
16 respectively. I describe the rate design for Street Lighting Service and discuss in
17 detail the Company's proposed tariff revisions to: (1) accommodate relocation,
18 removal and cancellation of street lighting services; and (2) accommodate
19 banner and other decorative attachments to Company-owned street lights. I also
20 discuss the updates to the rates in the street and area rate schedules proposed
21 by the Company in this Phase II Electric Rate Case and compare them to the
22 rates approved in the last Phase II Electric Rate Case, Docket No. 09AL-0299E

1 ("2009 Electric Phase II Rate Case"). Finally, I discuss three rate schedules
2 added since then: (1) an Energy Only Street Lighting Service ("Schedule ESL")
3 applicable to municipalities that own and maintain their own lighting facilities, (2)
4 options for converting street lights to light-emitting diode ("LED") lights under
5 Street Lighting Service ("Schedule SL"), and (3) a Metered Street Lighting
6 Service ("Schedule MSL").

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

9 A. Yes. I am sponsoring Attachment RJO-1, which was prepared by me or under
10 my direct supervision. Attachment RJO-1 is the Street Light Rate Design.

11 **Q. DO YOU REFERENCE ANY ATTACHMENTS PRESENTED BY OTHER**
12 **WITNESSES?**

13 A. Yes, I reference Attachments SWW-5 and SWW-6 (the clean and redlined
14 Electric Tariff, respectively), which includes the Rules and Regulations Electric
15 Service Street Lighting section of the Company's Electric Tariff. This section of
16 the tariff has been updated to include the Company's proposed changes
17 regarding the removal, relocation and cancellation of street lighting services, as
18 well as banner and decorative attachment protocols. I also reference Attachment
19 DRB-2, the Class Cost of Service Study ("CCOSS"), sponsored by Company
20 witness Dolores R. Basquez.

1 **Q. WHAT RECOMMENDATIONS ARE YOU MAKING IN YOUR DIRECT**
2 **TESTIMONY?**

3 A. I recommend that the Colorado Public Utilities Commission (“Commission”)
4 approve the revised rates for street and area lighting service and approve the
5 Company’s proposed Electric Tariff sections relating to Street Lighting Service.
6 In particular, I recommend that the Commission approve the proposed changes
7 to the terms and conditions of street lighting services related to (1) the relocation,
8 removal, and cancellation of street lighting services; and (2) the accommodation
9 of banner and decorative attachments to Company-owned street lights.

1 **II. STREET AND AREA LIGHTING RATE DESIGN**

2 **A. Overview**

3 **Q. PLEASE PROVIDE AN OVERVIEW OF THE STREET AND AREA LIGHTING**
4 **CLASS.**

5 A. Currently, there are nine rate schedules with monthly rates for Street and Area
6 Lighting Service in the Company's Electric Tariff, as listed below in Table RJO-1.

7 **Table RJO-1**

Title	Attachment SWW-5 Schedule
Residential Outdoor Area Lighting Service	RAL
Commercial Outdoor Area Lighting Service	CAL
Parking Lot Lighting Service	PLL
Street Lighting Service	SL
Special Street Lighting Service	SSL
Customer Owned Lighting Service	COL
Unincorporated Area Street Lighting Service	SLU
Energy Only Street Lights	ESL
Metered Lighting Service	MSL

8 Other than Schedules MSL and ESL, the rates set forth on Attachment RJO-1
9 are differentiated by lamp type, size, and burn hours. Lamp size is stated in
10 terms of the electric load of the lamp in nominal watts, as well as the rated light
11 output of the lamp in lumens. For example, in the Residential Outdoor Area

1 Lighting Service ("Schedule RAL") in Attachment SWW-5, HPS ("high pressure
2 sodium") lamps are rated at 100 watts and 9,500 lumens, and are specified as
3 burning from dusk to dawn.

4 **Q. WHAT IS THE PROPOSED REVENUE CHANGE FOR THE STREET AND**
5 **AREA LIGHTING CLASS?**

6 A. The Company is proposing a decrease in the base rate revenue -- as shown on
7 page 9, line 40, of Attachment RJO-1. The total class base rate revenue for the
8 2013 test year based on present rates is \$45,075,335. The proposed annual
9 base rate revenue for this Phase II Electric Rate Case is \$40,005,091, which
10 represents an annual revenue reduction of \$5,069,408, or -11.25 percent. This
11 proposed annual revenue of \$40,005,091 is very close to (only \$7,984 less than)
12 the total cost responsibility for the Street and Area Lighting class from Ms.
13 Basquez's CCOSS.

14 **Q. PLEASE DESCRIBE THE PROCEDURE USED TO DESIGN THE PROPOSED**
15 **MONTHLY BASE RATES.**

16 A. Each of the Street and Area Lighting monthly base rates comprises up to five
17 separate cost components. These components are: (1) system capacity cost,
18 (2) system energy cost, (3) facility cost, (4) routine maintenance cost, and (5)
19 non-routine maintenance cost. Table RJO-2 below summarizes each of these
20 components as they are applicable to each rate schedule.

1

Table RJO-2

Schedule	System Capacity	System Energy	Routine Maintenance	Non-routine Maintenance	Lighting Facilities
RAL	Yes	Yes	Yes	Yes	Yes
CAL	Yes	Yes	Yes	Yes	Yes
SLU	Yes	Yes	Yes	Yes	Yes
SL	Yes	Yes	Yes	No	Yes
SSL	Yes	Yes	Yes	No	Yes
PLL	Yes	Yes	Yes	No	Yes
COL	Yes	Yes	Yes	No	No
ESL	Yes	Yes	No	No	No
MSL	Yes	Yes	No	No	No
MI	Yes	Yes	No	No	No

2 **Q. HAS THE RATE DESIGN FOR STREET LIGHTING SERVICES CHANGED**
3 **SINCE THE 2009 ELECTRIC PHASE II RATE CASE?**

4 A. No, the rate design for Street and Area lighting is the same as the rate design
5 approved by the Commission in the 2009 Electric Phase II Rate Case. However,
6 the Company has added three new Street Lighting rate offerings since the 2009
7 Electric Phase II Rate Case: Schedules ESL and MSL, and LED options in
8 Schedule SL. I will discuss these additions later in my Direct Testimony. In this
9 section, I discuss the rate designs for the Street Lighting Service schedules that

1 were in place during the 2009 Electric Phase II Rate Case and have been utilized
2 again in this proceeding. The rate designs of those services have not changed,
3 but the inputs have been updated to reflect the new revenue requirement and
4 current information. I will discuss these updates in the following sections of my
5 Direct Testimony.

6 **B. System Capacity Costs**

7 **Q. HOW HAS THE MONTHLY SYSTEM CAPACITY COST COMPONENT BEEN**
8 **UPDATED?**

9 A. The system capacity cost component for each lamp is based on the capacity-
10 related revenue requirements allocated to the Street and Area Lighting class, as
11 developed in Ms. Basquez's CCOSS, Attachment DRB-2. The revenue
12 requirements associated with generating and delivering electric power to the
13 lighting facilities are also shown on page 13, lines 1-9, of Attachment RJO-1.
14 The total annual system capacity cost of \$7,596,852 is divided by the total class
15 connected load of 41,496 kilowatts ("kW") to arrive at the system capacity cost of
16 \$183.07 per kW-year of connected load. This unit cost is then multiplied by the
17 connected load associated with each size and type of lamp, resulting in the
18 monthly system capacity cost component by lamp size and type. These
19 calculations are shown in the columns titled "System Cost, Capacity" on pages
20 18 through 20 of Attachment RJO-1.

1 **C. Base Energy Cost**

2 **Q. HOW IS THE MONTHLY BASE ENERGY COST COMPONENT DEVELOPED?**

3 A. The base energy cost for each size and type of lamp is developed in a manner
4 similar to the system capacity component shown on page 13, lines 13 – 19, of
5 Attachment RJO-1. The total annual energy cost of \$814,634 is divided by the
6 annual kilowatt-hours (“kWh”) of 176,737,880 to derive the cost of \$0.00461 per
7 kWh. The resulting energy cost per kWh at secondary service voltage is then
8 multiplied by the annual kWh usage of each size and type of lamp to produce the
9 base energy cost component for that lamp. This calculation is shown on pages
10 18 through 22 of Attachment RJO-1.

11 **D. Facility Cost**

12 **Q. PLEASE EXPLAIN THE MONTHLY FACILITY COST COMPONENT.**

13 A. The facility cost is the cost associated with the Company’s ownership of, and
14 investment in, lighting-related equipment and facilities. As set forth in the
15 Company’s electric distribution extension policy for new lighting facilities, capital
16 investment is a fixed average investment per light. The Company’s lighting
17 facility costs change due to ongoing changes in facilities (i.e. additions to and
18 deletions from our lighting stock). The facility cost component of the monthly
19 base rate is the same for all sizes and types of lights on the system. The
20 Company calculates monthly rates on a per-light basis. All cost differentials,
21 such as overhead versus underground feed, or wood versus ornamental pole,

1 are included in the Contribution in Aid of Construction or the Construction
2 Payment paid by the customer. The Construction Payment is the difference
3 between the total estimated costs of the lighting facilities and the Construction
4 Allowance amount. The total annual facility revenue requirement is determined
5 by removing the system capacity, base energy, routine maintenance, and non-
6 routine maintenance costs from the total Street and Area Lighting revenue
7 requirement. This calculation is shown on page 13, lines 28 – 43, of Attachment
8 RJO-1.

9 **Q. PLEASE EXPLAIN HOW THE UPDATED MONTHLY FACILITY COST FOR**
10 **STREET AND AREA LIGHTING HAS BEEN DETERMINED.**

11 A. The total annual facility revenue requirement of \$ 27,076,799 is divided by the
12 annual prorated light count of 2,474,443, excluding the Customer Owned Lighting
13 Service ("Schedule COL") and ESL lights, to determine the monthly facility
14 revenue requirement per light. A \$0.32 reduction to the quotient was used to
15 adjust the total revenue to more closely match the revenue target from the
16 CCOSS. COL lights are excluded because, other than routine maintenance, the
17 Company has no capital investment or ownership responsibilities for these
18 lighting facilities. ESL lights are also excluded because the Company has no
19 capital investment or ownership responsibilities for these lighting facilities. The
20 resulting monthly facility cost of \$10.63 is shown on page 13, line 43, of
21 Attachment RJO-1.

Q. WHAT OTHER FACILITY COSTS ARE INCLUDED IN BASE RATES?

A. The LED options under Schedule SL have an additional facility charge associated with the conversion of street lighting to LED from HPS or MH (“metal hide”) lighting types. The cost of the conversion is shown on page 14 of Attachment RJO-1 and is calculated using the same design included in the Stipulation and Agreement submitted by the parties in Public Service’s recently concluded LED case, Proceeding No. 15AL-0233E, which was approved by the Commission in Decision No. C15-1318¹. I will discuss the LED options under Schedule SL later in my Direct Testimony.

E. Maintenance Costs

Q. PLEASE DESCRIBE THE MONTHLY MAINTENANCE COST COMPONENTS.

A. The maintenance costs for street and area lighting facilities are separated into two categories, “routine” and “non-routine.”

Q. PLEASE EXPLAIN “ROUTINE” MAINTENANCE COSTS.

A. Routine maintenance costs cover the normal replacement of lamps and Light Sensing Controls (“LSC”). All street and area lighting rates include the cost of routine maintenance, except for Schedules ESL and MSL, and the LED options under Schedule SL. The routine maintenance costs are simply the total annual costs to replace the lamp and the LSC divided by the light count. The routine maintenance costs are differentiated by lamp type because lamp costs vary by

¹ The Commission adopted the Recommended Decision, Decision No. R15-1251, with slight modification regarding a reporting requirement for Demand Side Management.

1 type. For example, the routine maintenance for a HPS lamp is less expensive
2 than for a MH lamp because MH lamps are more expensive and have shorter
3 lives than HPS lamps. The routine maintenance cost determinations per light
4 type and rate schedule are shown on pages 13 through 16 of Attachment RJO-1.

5 **Q. PLEASE EXPLAIN “NON-ROUTINE” MAINTENANCE COSTS.**

6 A. All lighting maintenance costs other than the costs of the normal replacement of
7 lamps and LSC are considered “non-routine.” Non-routine maintenance costs
8 are embedded in the monthly base rates for rate Schedules RAL, CAL and the
9 Unincorporated Area Street Lighting Service (“Schedule SLU”). For all other
10 schedules, customers are billed separately for the actual costs of performing a
11 specific maintenance task. Non-routine costs are included in the monthly base
12 rates for Schedules RAL, CAL and SLU because there is no separate billing of
13 maintenance charges to lighting customers under those schedules. Please see
14 page 13 of Attachment RJO-1 for the resulting non-routine maintenance costs by
15 lamp type.

16 **Q. PLEASE SUMMARIZE THE STREET AND AREA LIGHTING MONTHLY**
17 **RATES.**

18 A. The system and maintenance costs included in the monthly rates for each rate
19 schedule and lamp type are shown on pages 20 through 24 of Attachment RJO-
20 1. The rate design summary and revenue reconciliation are shown on pages 26
21 through 28 of Attachment RJO-1. For all rate schedules, the rates are simply the
22 sum of the applicable portions of five cost components: system capacity, base

1 energy, facility, routine maintenance, and non-routine maintenance. The monthly
2 rate per customer for Schedule SLU is derived by first adding the per-light cost
3 components, then dividing this total cost per light by the quotient of system
4 average number of Schedule SLU customers divided by the light count

1 **III. LIGHT EMITTING DIODE (LED) SERVICE**

2 **Q. PLEASE EXPLAIN THE PURPOSE OF LED SERVICE WITHIN THE STREET**
3 **LIGHTING SECTIONS OF THE TARIFF.**

4 A. The SL tariff has been updated since the 2009 Electric Phase II Rate Case to
5 include service for street lighting customers who choose to convert to LED lights.

6 **Q. HAS THE COMMISSION ALREADY APPROVED TARIFF PROVISIONS FOR**
7 **LED SERVICE?**

8 A. Yes. Public Service first filed proposed changes to LED service on April 13,
9 2015 (Advice Letter No. 1692) in Proceeding No. 15AL-0233E. The Commission
10 suspended the tariff and asked for comment. Numerous parties intervened,
11 including Southwest Energy Efficiency Project ("SWEEP"), the City and County of
12 Denver, and Cities of Arvada, Aurora, Black Hawk, Centennial, Commerce City,
13 Englewood, Glendale, Golden, Lafayette, Lakewood, Littleton, Northglenn,
14 Thornton and Westminster, and the Town of Superior.

15 The parties ultimately filed a settlement agreement on November 12, 2015.
16 The Commission approved this agreement in Decision No. C15-1318 which was
17 mailed on December 14, 2015.

18 **Q. WHAT WERE THE TERMS OF THE SETTLEMENT?**

19 A. Public Service agreed to file tariffs, to be effective January 1, 2016, to implement
20 an LED Conversion Program under which the Company will offer five new LED
21 street light choices under Schedule SL to replace existing HPS and MH cobra
22 head street lights. The five new LED street light options shall include 70, 100,

1 150, 250, and 400 watt HPS equivalent LED fixtures to replace HPS and MH
2 lamps and associated fixtures in cobra-head lights. These fixture options shall
3 be provided under two conversion options, Option A and Option B. After Public
4 Service provides notice of the program, each municipality can elect whether to
5 participate in the program and, if so, whether to participate under Option A or B.

6 **Q. WHAT IS OPTION A?**

7 Under Option A, Public Service will pay 100 percent of the cost to convert
8 existing HPS and MH cobra-head fixtures to the new LED fixtures. The
9 municipality will agree to convert at least 90 percent of the HPS and MH cobra-
10 head lights within its borders to LED. The Company will recover the costs of the
11 conversion plus the cost to retire the replaced fixtures through an Option A LED
12 Service Option Charge. Once the new LED street lights are operational, the
13 customer will pay on a monthly basis the base rate for the applicable LED
14 Service size to reflect the energy savings associated with the LED street light
15 service plus the Option A LED Service Option Charge.

16 **Q. WHAT IS OPTION B?**

17 A. Under Option B, the customer will pay 100 percent of the cost to convert the new
18 LED fixtures plus the cost of retiring existing HPS and MH lamps through a non-
19 refundable contribution in aid of construction, to be billed to the customer after
20 commencement of the conversion project at 90-day intervals. The conversion
21 cost will be calculated using the labor, materials, and vehicle charges specified in
22 Public Service's electric tariff governing Maintenance Charges for Street Lighting

1 Service. These charges include the reasonable and customary additional costs
2 Public Service incurs to accomplish the conversion -- including, but not limited to,
3 the costs of the new fixture, traffic control, lodging and meals. Alternatively, the
4 conversion cost shall be based on more favorable unit pricing that may be
5 negotiated by Public Service once the scope of work under Option B has been
6 determined.

7 **Q. HOW ARE NEW COBRA HEAD LED LAMPS TREATED UNDER THE**
8 **TARIFF?**

9 A. New LED street lights are governed by the terms of the Company's Service
10 Lateral Extension and Distribution Line Extension Policy and relevant
11 construction allowance in effect at the time of the conversion. Once new LED
12 street lights are operational, the customer pays on a monthly basis the new base
13 rate for the applicable LED Service size. This rate reflects the energy savings
14 associated with the LED street lights.

15 **Q. WAS AN AMENDED RATE SCHEDULE INCLUDED AS PART OF THE**
16 **SETTLEMENT?**

17 A. Yes. The settlement included an updated Schedule SL that included rates, rules,
18 and regulations for LED lights, including both Option A and Option B. The
19 updated schedule (revised Tariff Sheets R80-86 and 85A-E) was attached to the
20 settlement agreement and was approved by the Commission when it approved
21 the settlement.

1 **Q. IS PUBLIC SERVICE PROPOSING ANY CHANGES TO THE RATE DESIGN IN**
2 **THIS PROCEEDING?**

3 **A.** No. The rate designs are not being changed. But the inputs are being updated
4 to reflect the new revenue requirements and current information.

1 **IV. ESL SERVICE**

2 **Q. PLEASE EXPLAIN THE PURPOSE OF ESL SERVICE WITHIN THE STREET**
3 **LIGHTING SECTIONS OF THE TARIFF.**

4 A. ESL service includes service for street lighting customers who own and maintain
5 their own lighting poles. This service, which does not include maintenance, is
6 called Energy-Only Street Lighting Service.

7 **Q. HAS THE COMMISSION ALREADY APPROVED TARIFF PROVISIONS FOR**
8 **ESL SERVICE?**

9 A. Yes. Public Service filed proposed changes to its tariffs to include ESL service
10 on September 11, 2011. Numerous parties intervened in the subsequent
11 proceeding, and the Commission ultimately issued orders specifying how rates
12 for the ESL service should be designed. (See Proceeding No. 11AL-768E,
13 Decisions Nos. C12-0782 and R12-0475.)

14 **Q. DID PUBLIC SERVICE FILE TARIFF AMENDMENTS TO CONFORM TO THE**
15 **COMMISSION DECISIONS?**

16 A. Yes. Schedule ESL became effective on October 11, 2012.

17 **Q. IS PUBLIC SERVICE PROPOSING ANY CHANGES TO THE RATE DESIGN**
18 **FOR SCHEDULE ESL IN THIS PROCEEDING?**

19 A. No. The rate designs are not being changed. But the inputs are being updated
20 to reflect the new revenue requirements and current information.

1 **V. STREET LIGHT REMOVAL AND RELOCATION**

2 **Q. WHAT CHANGES TO THE TARIFFS ARE BEING PROPOSED WITH**
3 **RESPECT TO THE RELOCATION AND REMOVAL OF STREET LIGHTS?**

4 A. The Company is proposing to add sections to the Street Lighting Section of the
5 Electric Service Rules and Regulations (“Street Lighting Rules”) that define the
6 practices for the removal and relocation of street lights and traffic signal facilities.

7 **Q. WHAT SPECIFIC LANGUAGE DOES THE COMPANY PROPOSE TO ADD TO**
8 **THE STREET LIGHTING RULES?**

9 A. As drafted and identified in Attachment SWW-5, the Company proposes to add
10 two specific sections to Street Lighting Rules. The first section, entitled
11 “Relocation of Street Lighting or Traffic Signal Facilities,” defines the process by
12 which a customer who takes service under Schedule SL – can pursue the
13 relocation of a street light with the Company. This process includes relocations
14 or changes to traffic signal facilities owned by the Customer. Relocations under
15 this tariff section will be allowed only if the relocation can be reasonably
16 accommodated by the Company and the proposed relocation is acceptable to the
17 local municipality with jurisdiction over the public rights of way where the facility
18 is currently located. This tariff section also explains how a relocation will be
19 accommodated by the Company, and the payment requirements associated with
20 relocations. In addition, this section also defines how relocations will be handled
21 for municipal customers taking service under Schedule SL. The protocol for
22 each type of customer is substantively the same.

1 **Q. HAS THE COMPANY OUTLINED THE PAYMENT REQUIREMENTS FOR THE**
2 **RELOCATION AND REMOVAL OF STREET LIGHTS WITHIN THE**
3 **PROPOSED STREET LIGHTING RULES?**

4 A. Yes. The Company proposes that customers taking service under Schedule SL
5 must pay for relocation costs based on the Company's estimated cost of
6 providing the necessary labor and materials. The charges for this work are
7 based on the labor rates reflected in Maintenance Charges for Street Lighting
8 Service and the actual material costs at the time of the request. For removals of
9 street lights at the request of customers taking service under Schedule SL, the
10 Company will charge the customer labor and materials associated with the
11 removals, plus a charge for the street light itself, which I explain in the following
12 section as the "Average Embedded Gross Plant" for each street light. If the
13 customer requests to install more street lights (served under Schedule SL) than
14 the number of lights the customer requests to be removed or relocated, then the
15 Company may award a construction allowance for each additional street light in
16 accordance with the Street Light Extension Policy.

17 **Q. WHAT IS THE AVERAGE EMBEDDED GROSS PLANT FOR EACH STREET**
18 **LIGHT?**

19 A. Based on the Company's proposed CCOSS, the average embedded gross plant
20 for lighting is \$800. This amount is derived by first dividing the gross lighting
21 plant of \$164,190,979 (see Attachment DRB-2, page 1, line 25) by the street and
22 area lighting count of 206,204 (which is derived by dividing the total Company

1 owned lights of 2,474,443.31 light months, as seen in Attachment RJO-1, page
2 13, line 40, by 12 months) which equals \$796.25. This amount is then rounded
3 to the nearest ten dollars to \$800.00, which has been the traditional rounding
4 method used by the Company and approved in prior proceedings for calculating
5 the average gross embedded plant for lighting.

6 **Q. WHY IS THE COMPANY PROPOSING THAT CUSTOMERS WHO TAKE**
7 **SERVICE UNDER SCHEDULE SL BE REQUIRED TO PAY THE AVERAGE**
8 **EMBEDDED GROSS PLANT VALUE FOR THE REMOVAL OF EACH STREET**
9 **LIGHT THAT A CUSTOMER REQUESTS TO HAVE REMOVED?**

10 A. This proposal is designed to recover the value of the plant that is being removed
11 and protect remaining customers from paying for the assets that are being
12 removed. The proposal recognizes that each monthly bill for each light
13 contributes the same amount to the recovery of the lighting plant. The average
14 gross lighting plant for the full system is inclusive of all lighting plant: lighting
15 conductor, pole base, pole arm and fixtures associated with and allocated to
16 lighting. When a Customer decides to end service via removal of a light, the
17 Company must assess a charge for the discontinuance of the service so that
18 customers who continue to accept service are not burdened with paying for the
19 assets that will no longer be billed to the canceling customer.

1 **Q. ARE THERE OTHER REASONS FOR THIS PROPOSED METHODOLOGY?**

2 A. Yes. Assessing a single, standardized price for the removal of street lights
3 simplifies the Company's administration of such removals and provides
4 predictability and consistency to customers.

5 **Q. DOES THIS PROPOSED CHARGE IMPACT THE PROVISIONS OF**
6 **FRANCHISES THAT RELATE TO REMOVAL AND RELOCATIONS FOR**
7 **MUNICIPAL PROJECTS?**

8 A. This proposal is consistent with franchise terms; it does, however, make clear
9 that if a municipal customer wants to remove street lights and not relocate them,
10 then the removal provisions of the tariff will apply.

1 **VI. ATTACHMENTS TO POLES**

2 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE TARIFF LANGUAGE**
3 **TO ACCOMMODATE ATTACHMENTS TO POLES.**

4 A. Language has been added to provide municipalities a standardized process for
5 attaching banners and other decorative materials to street light poles. The
6 language requires notice to the Company so that we can analyze the pole to
7 determine if it is physically capable of supporting the attachments and if any
8 constraints are required to protect the viability of the poles and public safety.

9 **Q. WHY IS THE COMPANY PROPOSING THIS LANGUAGE?**

10 A. The Company owns the street light assets. Therefore, it is important to have
11 customers notify us of their intended uses of the street lights. Street lights come
12 in a myriad of sizes, shapes and designs, and each type has different loading
13 capacities, wind shear capacity, material strengths, and other attributes. A street
14 light can be adversely affected by improper alterations, modifications or
15 installations that exceed its design tolerances. The Company also needs to
16 confirm that any installation of an attachment does not cause harm, interfere with
17 the way the facility is served electrically, or interfere with the facility's safe and
18 proper operations. Additionally, the Company recognizes that some lights are
19 fed with overhead conductor. In such cases, the Company must address the
20 manner in which customers install the attachments – to better protect against
21 customers from putting their installers in proximity of the hot zone and risking
22 electrical shock. The Company believes that a systemic approach to notice,

1 verification of capability and approval of installation is a reasonable approach in
2 the interest of public safety.

3 **Q. PLEASE DESCRIBE THE NOTICE REQUIREMENTS.**

4 A. Customers will be required to send a written notice to the Company that details
5 the size, type, material, weight, and other relevant information related to the
6 proposed attachments, along with a listing of street light facilities to which the
7 Customer wishes to install the proposed attachments.

8 **Q. WHAT WILL THE COMPANY DO UPON RECEIPT OF THE REQUEST?**

9 A. The Company will evaluate both the proposed attachments and the light poles
10 that would accept the attachments to:

- 11 • determine if the attachments would damage the pole;
- 12 • determine if the capacity of the pole is sufficient to safely support the
- 13 proposed attachments;
- 14 • identify any criteria necessary to install the attachments; and
- 15 • determine the location(s) on a pole that can support the attachments.

16 Despite the Company undertaking these evaluations, the tariff makes clear that
17 the municipal customer assumes all risk of using the street lights.

18 **Q. WILL THERE BE A CHARGE FOR THIS ANALYSIS?**

19 A. No. There will not be any charge. Public Service will conduct the analysis as
20 part of its ongoing maintenance of poles.

1 **Q. WHAT WILL HAPPEN IF THE COMPANY DETERMINES – BASED ON ITS**
2 **ANALYSIS – THAT A STREET LIGHT FACILITY CANNOT ACCOMMODATE**
3 **A PROPOSED ATTACHMENT?**

4 A. If the street light is deemed incapable of accepting the attachment due to the
5 facility's design or integrity limitations or interference with the safe operation of
6 the facility, then the Company would inform the customer that the attachment is
7 not authorized. The Company would state the reason for denying authorization,
8 and subsequently allow the customer to modify the attachment in a manner that
9 would be within the limitations of the street light, if possible. For example, the
10 customer may choose a different existing light for the attachment, or choose to
11 have a different type of street light installed at the desired location to
12 accommodate the desired attachment. In the latter case, the customer would be
13 required to pay for the installation of the new street light.

14 **Q. ARE CUSTOMERS CURRENTLY ATTACHING BANNERS AND OTHER**
15 **ITEMS TO STREET LIGHTS?**

16 A. Yes. However, there is a lack of consistency in notice from customers when they
17 place banners and other attachments on street light poles. The proposed
18 changes to the Street Lighting Rules would promote consistent notice and facility
19 inspections to accommodate safe attachments.

1 **Q. DO FRANCHISED COMMUNITIES HAVE FRANCHISE RIGHTS THAT ALLOW**
2 **ATTACHMENTS TO STREET LIGHT POLES?**

3 A. Some franchises allow franchised cities to install attachments, while other
4 franchises do not. Most franchises that refer to attachments detail notice and
5 inspection requirements, as well as limitations based on safety considerations.

6 **Q. YOU HAVE MENTIONED PUBLIC SAFETY NUMEROUS TIMES IN YOUR**
7 **TESTIMONY. CAN YOU ARTICULATE THE RISKS TO PUBLIC SAFETY**
8 **ABSENT A PROCESS FOR ALLOWING ATTACHMENTS?**

9 A. Yes. Each street light is designed to provide lighting services, support the weight
10 of the systems attached to it for street lighting service, and accommodate wind
11 loads and other environmental conditions. Moreover, different types of street
12 lights have different material strengths and design capacities. If an attachment to
13 a street light affected its structural integrity, the structure could fall down, which
14 could injure or harm the public. Additionally, if attachments are made on poles in
15 a manner that puts the attachment or installer in the hot zone, there is severe risk
16 of electrical shock. Requiring a notice and review program for attachments is a
17 prudent way to proactively manage these risks.

18 **Q. IS THE COMPANY TAKING ON LIABILITY BY ALLOWING THESE**
19 **ATTACHMENTS?**

20 A. The municipal customers we serve with street lighting service have indicated that
21 these attachments are key parts of their communities. In order to balance these
22 requests, the Company also drafted its tariff language on attachments to clarify

1 that the Company is not assuming any risk, even though it is will be conducting
2 the inspections mentioned above. This is a critical component of the willingness
3 of the Company to allow the attachments

VII. MISCELLANEOUS LANGUAGE CHANGES

Q. IS THE COMPANY PROPOSING ANY OTHER CHANGES TO STREET AREA LIGHTING?

A. Yes. The rate for “Maintenance Charges for Street Lighting” now includes a rate and added language regarding late payment charges. This change makes these services subject to the same late payment charges, on the same terms, as other Company services.

Q. ARE THERE ANY ADDITIONAL CHANGES?

A. Yes. There are several language changes to the schedules for Street Lighting services. Those changes are summarized below:

- Commercial Area Lighting Service (“Schedule CAL”)
 - Language has been added clarifying that parking lots are not eligible for Commercial Area Lighting Service. Parking Lot Lighting Service (“Schedule PLL”) has been specifically created to serve those areas.
 - The three days’ notice requirement has been replaced by a reference to the Street Lighting Rules that includes parameters around removal of lighting facilities.
 - The term “bracket” has been changed to “street light arm” to avoid confusion with other references to “brackets” in the tariff.
 - The word “wood” has been inserted before “pole” to clearly define the facilities and equipment used.

1 ○ The Company, for safety purposes, will no longer provide additional wood
2 poles and spans of overhead secondary feed wire or underground cable
3 upon a customer's request.

4 ○ In the Street Lighting Rules, the timeframe when the automatic control
5 equipment turns on and off has been changed from eighteen minutes to
6 fifteen minutes after sunset and from eleven minutes to fourteen minutes
7 prior to sunrise. Since the total burn time has not changed, the rates
8 based upon the burn time of 4,140 hours a year have not changed.

9 • Parking Lot Lighting Service ("Schedule PLL")

10 ○ The three days' notice requirement has been replaced by a reference to
11 the new sections in the Street Lighting Rules that include parameters
12 around removal of lighting facilities.

13 ○ The term "bracket" has been changed to "street light arm" to avoid
14 confusion with other references to "brackets" in the tariff.

15 ○ Additional language has been included in the Street Lighting Rules section
16 to ensure Company access to lighting facilities. Should a Customer not
17 grant this access, the Company reserves the right to discontinue service in
18 accordance with the Company's service discontinuance rules.

19 ○ In the Street Lighting Rules section, the timeframe when the automatic
20 control equipment turns on and off has been changed from eighteen
21 minutes to fifteen minutes after sunset and from eleven minutes to
22 fourteen minutes prior to sunrise. Since the total burn time has not

1 changed, the rates based upon the burn time of 4,140 hours a year have
2 not changed.

- 3 • Energy-Only Street Lighting Service (“Schedule ESL”)
 - 4 ○ Language has been added to require that all loads other than ESL service
 - 5 must be connected to Company conductors. This language is designed to
 - 6 prevent non-metered service being placed on the Customer’s side of the
 - 7 point of delivery.
- 8 • Metered Intersection Service (“Schedule MI”)
 - 9 ○ New language has been added requiring a Customer to purchase
 - 10 Company-owned lighting assets prior to metering the Customer’s existing
 - 11 flat-rated intersections.
- 12 • Metered Street Lighting Service (“Schedule MSL”)
 - 13 ○ New language has been added including a Service Conversion and
 - 14 Connection section similar to the section found in Schedule ESL.
 - 15 Customers will be responsible for providing identification markers on
 - 16 facilities, so that the Company can differentiate between Company-owned
 - 17 and Customer-owned facilities.

- 1 • Residential Outdoor Area Lighting Service (“Schedule RAL”)
 - 2 ○ The three days’ notice requirement has been replaced by a reference to
 - 3 the Street Lighting Rules that includes parameters around the removal of
 - 4 lighting facilities.
 - 5 ○ The term “bracket” has been changed to “street light arm” to avoid
 - 6 confusion with other references to “brackets” in the tariff.
 - 7 ○ The word “wood” has been inserted before “pole” to clearly define the
 - 8 facilities and equipment used.
 - 9 ○ The Company, for safety purposes, will no longer provide additional wood
 - 10 poles and spans of overhead secondary feed wire or underground cable
 - 11 upon a customer’s request.
 - 12 ○ In the Street Lighting Rules section, the timeframe when the automatic
 - 13 control equipment turns on and off has been changed from eighteen
 - 14 minutes to fifteen minutes after sunset and from eleven minutes to
 - 15 fourteen minutes prior to sunrise. Since the total burn time has not
 - 16 changed, the rates based upon the burn time of 4,140 hours a year have
 - 17 not changed.
- 18 • Customer Owned Lighting Service (“Schedule COL”)
 - 19 ○ The term “bracket” has been changed to “street light arm” to avoid
 - 20 confusion with other references to “brackets” in the tariff.
 - 21 ○ The “Identifiable Area” in which the Company will provide conversions has
 - 22 been changed from ten lights to eight lights at a time.

- 1 • Street Lighting Service (“Schedule SL”)
- 2 ○ Schedule SL now includes tariff sheets for the new LED options available
- 3 to Customers.
- 4 ○ The term “Company-owned” has been inserted prior to the term “street
- 5 light” to be consistent with the new terms and conditions for relocation and
- 6 removal of facilities and to clearly differentiate between Customer-owned
- 7 and Company-owned facilities within the tariff.

1 **VIII. CONCLUSION**

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

3 **A.** Yes, it does.

Statement of Qualifications

Robert J. Osborn

I began my employment with Xcel Energy Services, Inc. in 2009, in the Company's Community Relations department as an Area Manager. In 2010 I was asked to lead the Community Relations department and became the Director of Community Relations. My responsibilities included negotiation of franchises, community engagement, and policy development and oversight. In June of 2015 I began a developmental position in Regulatory Affairs as Manager of Regulatory Program Management, Xcel Energy Services Inc. ("XES"). My responsibilities include management of special regulatory projects for Xcel Energy and its subsidiaries. My duties include strategy, regulatory policy, and program development for the Company's gas and electric initiatives.

Prior to joining Xcel energy I managed two economic development corporations, one in Wheat Ridge, Colorado and one in Allentown, Pennsylvania, where I was responsible for business development, real estate development, environmental remediation, public/private finance initiatives and overall policy development to promote sustainable economic growth in the communities I served.

I was awarded my JD from Suffolk University Law School and admitted to the Pennsylvania and Massachusetts Bars. I have an undergraduate degree in Civil Engineering from Temple University.