

**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 A CERTIFICATE OF )  
PUBLIC CONVENIENCE AND NECESSITY )  
FOR COLORADO’S POWER PATHWAY ) PROCEEDING NO. 21A-XXXXE  
345 KV TRANSMISSION PROJECT AND )  
ASSOCIATED FINDINGS REGARDING )  
NOISE AND MAGNETIC FIELD )  
REASONABLENESS )**

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**VERIFIED APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR A  
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR COLORADO’S  
POWER PATHWAY 345 KV TRANSMISSION PROJECT AND ASSOCIATED  
FINDINGS REGARDING NOISE AND MAGNETIC FIELD REASONABLENESS**

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In accordance with § 40-5-101, C.R.S., 4 CCR 723-3-3002, 4 CCR 723-3-3102, and 4 CCR 723-3-3206, Public Service Company of Colorado (“Public Service” or the “Company”) hereby requests that the Colorado Public Utilities Commission (“Commission”) grant a Certificate of Public Convenience and Necessity (“CPCN”) to construct Colorado’s Power Pathway 345 kilovolt (“kV”) Transmission Project (the “Pathway Project” or the “Project”).

**I. THE PATHWAY PROJECT**

The Pathway Project is a proposed 560-mile, 345 kV double circuit network transmission system between four existing substations and three new substations.<sup>1</sup> The Project will connect the Front Range to areas of northeastern, eastern, and southeastern Colorado that are rich with renewable energy resource development potential, but do not

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<sup>1</sup> The three new substations will be 345 kV switching stations. A switching station is a type of substation that operates at a single voltage level.

currently have a backbone network transmission system that can integrate new clean energy resources needed to meet the State's clean energy goals. As described below, integrating these new resources is a substantial and necessary step toward meeting the State of Colorado's emission reduction goals and advancing the next act in the energy transition.

The northern terminus of the Pathway Project will be at the Company's existing Fort St. Vrain Substation (located at the Fort St. Vrain Generating Station) in Platteville in western Weld County. The Pathway Project then extends east to a new Canal Crossing Substation near the existing Pawnee Substation and Pawnee Generating Station; then extends east/southeast to a new Goose Creek Substation south of the City of Burlington; then extends south to a new May Valley Substation northeast of the City of Lamar; then extends west to the planned Tundra Substation near the Comanche Generating Station. The Project will then extend north to its terminus at the Company's existing Harvest Mile Substation, located adjacent to the City of Aurora in Arapahoe County. The Project also involves expansion of the Fort St. Vrain, Pawnee, and Harvest Mile Substations; expansion of the planned but not yet in-service Tundra Substation; and construction of the new Canal Crossing, Goose Creek, and May Valley Substations.

The Company also presents, for the Commission's consideration, the May Valley-Longhorn Extension. The May Valley-Longhorn Extension involves constructing approximately 90 miles of new 345 kV double circuit transmission line from the new May Valley Substation, to be constructed at the southeastern corner of the Pathway Project near Lamar, Colorado, south to a new Longhorn Substation located near Vilas, Colorado. Public Service is recommending that the Commission consider issuing a CPCN for the

May Valley-Longhorn Extension under this Application should the Commission desire that Public Service construct and own the 345 kV transmission extension between the Lamar area and the Vilas area. This approach would diminish the need for project developers to include the necessary gen-tie(s) with their bids originating from this area, and would unlock low-cost wind resources from the southeastern portion of the State of Colorado.

The Company is proposing the Pathway Project in advance of its forthcoming 2021 Electric Resource Plan and Clean Energy Plan (“2021 ERP & CEP”) to provide generation project bidders with certainty that “backbone” transmission will be available in eastern Colorado.<sup>2</sup> The Pathway Project will unlock clean energy resources in Colorado’s designated Energy Resource Zones (“ERZs”) 1, 2, 3, and 5 necessary to meet the 2030 clean energy target of Senate Bill 19-236 (“SB19-236”) (requiring an 80 percent emission reduction from 2005 levels by 2030) and advance the State of Colorado’s efforts to meet the 2025 and 2030 economywide emission reduction goals of House Bill 19-1261 (“HB19-1261”). Moreover, and equally important, the Project will provide operational and reliability benefits.

Bringing forward this Application before the Company’s 2021 ERP & CEP is designed to address, in part, the so-called “chicken-and-egg” dilemma associated with generation resource planning and transmission planning. In many instances historically, transmission projects were not built until a known generation resource(s) was identified by the utility through its resource planning or other required acquisition activities. In the

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<sup>2</sup> A “backbone” system generally refers to bulk transmission lines networked together that can move large amounts of energy from a distant location to load areas. Backbone transmission systems support the reliability of the transmission system because of they are networked systems, and thus offer more than one route to move power to load. A grid supported by backbone transmission is better positioned to withstand outages without losing generation resources or load.

past, transmission could be planned after a fossil-fired plant was approved by the Commission. Renewable generation projects like wind and solar do not take as long to construct as traditional fossil-fired plants, meaning that transmission project approvals need to come in advance of these renewable resources. This timing sensitivity is even more acute here where clean energy generation development is needed on a short timeline to capture the benefits of recently extended Federal tax credits *and* these resources are needed to meet the clean energy targets and State of Colorado emission reduction objectives in a cost-effective way. Here, as Public Service demonstrates in its direct case, the most sensible approach for addressing the “chicken-and-egg” dilemma is approving the Pathway Project ahead of the 2021 ERP & CEP. Taking action now will provide bidders in the ERP Phase II competitive solicitation increased certainty about the availability of transmission when planning and bidding clean energy resource projects into the competitive process.

The Company’s proposal is consistent with the policy objectives underlying Senate Bill 07-100 (“SB07-100”). In 2007, the General Assembly passed SB07-100 in an effort to overcome the “chicken-and-egg” dilemma by allowing for the development of transmission projects to unlock location-constrained resources and give developers certainty about transmission availability before participating in competitive resource solicitations. Although SB07-100 has had limited success in achieving this goal, the time to fully realize SB07-100’s objectives is now. Public Service brings forward this Application to obtain approval of the Pathway Project and achieve the objective of unlocking clean energy resources in eastern Colorado. In this way, the Application represents a “Field of Dreams” approach—*i.e.*, “if you build it, [they] will come”—informed

by projects bid into past ERPs, studies of where the best renewable resources exist, and knowledge of the renewable energy generation market. This approach is critical for ensuring that Public Service and its customers will have access to Colorado's plentiful wind and solar resources in its 2021 ERP & CEP, where the Company projects the need to acquire approximately 3,900 MW of wind and solar resources to fill its resource needs *and* meet or exceed the clean energy targets of SB19-236. Developing such resources is necessary for Public Service to reduce emissions, harness the benefits of federal tax credits for customers, and make significant progress toward a carbon-free future in 2050.<sup>3</sup>

Public Service may ultimately develop the Pathway Project with other Commission-regulated and non-Commission-regulated utility partners. Public Service is currently in negotiations with Black Hills Energy ("BHE"), Tri-State Generation & Transmission ("Tri-State"), Platte River Power Authority ("PRPA"), and Colorado Springs Utilities ("CSU") to discuss details of a partnership, including ownership interests and construction responsibilities. Tri-State and BHE are both subject to this Commission's regulation, and Public Service understands that—if a partnership comes to fruition—any participating Commission-regulated utilities will file their respective CPCN applications within 45 days of this filing. This Application addresses the common elements that relate to all portions of the Project. In their respective applications, participating utilities will discuss issues from their vantage points, including detailing their specific needs and any additional facilities they propose as both entities make progress toward their own emission reduction

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<sup>3</sup> See § 40-2-125.5(4), C.R.S. Colorado law directs electric utilities to include in their first ERP after January 1, 2020 a clean energy plan that will achieve the State of Colorado's goal of reducing carbon dioxide emissions associated with electricity sales by eighty percent from 2005 levels, and to make progress toward the State of Colorado's 100 percent clean energy goal by 2050.

goals. The Company provides further details regarding this proposed process later in this Application.

In addition to granting a CPCN for the Pathway Project and potentially for the May Valley-Longhorn Extension, Public Service requests the Commission find that the projected noise and magnetic field levels resulting from operating the Project are reasonable and require no further mitigation.

In support of its request for a CPCN for the Project, Public Service is including with this Application the pre-filed Direct Testimony and accompanying Attachments of the following seven witnesses: Alice K. Jackson, Brooke A. Trammell, Amanda R. King, James F. Hill, Brian J. Richter, Byron R. Craig, and Carly R. Rowe. A brief summary of the topics covered by each witness is provided here.

Alice K. Jackson, President of Public Service Company of Colorado. Ms. Jackson describes the Pathway Project's critical role in achieving Colorado's energy policy goals in the near and longer term, and she explains how the Project will facilitate the Company's own emission reduction efforts. Ms. Jackson explains how this Application is meant to address the "chicken-and-egg" problem associated with aligning transmission and resource planning. She also discusses the potential for partnership with both jurisdictional and non-jurisdictional utilities in developing the Pathway Project.

Brooke A. Trammell, Regional Vice President, Rates and Regulatory Affairs, Xcel Energy Services ("XES"). Ms. Trammell summarizes the Company's overall filing in support of this Application. She discusses why the Pathway Project is needed and the benefits it will provide, while also framing the broader policy considerations that support

the Pathway Project. She discusses and supports the Company's requested findings for the Pathway Project and its consistency with Commission Rules.

James F. Hill, Director, Resource Planning and Bidding with XES. Mr. Hill supports the Pathway Project and the need for it from a resource planning perspective. He discusses the role of transmission in the resource planning process, and explains why the Pathway Project is needed to unlock the new, cost-effective generation resources that will allow the State of Colorado and Public Service to progress toward their emission reduction goals.

Amanda R. King, Director, Strategic Transmission Planning with XES. Ms. King describes the transmission planning aspects of the Project. She describes the various components of the Project and their purpose, and discusses the collaborative transmission planning studies that have led the Company to identify the need for and final configuration of the Pathway Project. Ms. King also discusses alternatives the Company considered prior to proposing the Project, including efforts undertaken through the stakeholder process under the auspices of the Colorado Coordinated Planning Group 80x30 Task Force ("CCPG 80x30 TF").

Brian J. Richter, Senior Manager, Transmission Project Management with XES. Mr. Richter supports and sponsors the Company's cost estimates for the Pathway Project. He discusses the Company's cost estimation processes and how that process has evolved and been influenced by recent transmission CPCN proceedings. He also explains how the Company has the necessary project management processes and expertise to manage and construct a project of this magnitude.

Byron R. Craig, Director, Substation & Transmission Engineering and Design with

XES. Mr. Craig provides support for the conceptual engineering design for the various components of the Pathway Project, as well as alternative engineering designs considered, and discusses key design assumptions that informed the Project's cost estimates. He also sponsors the results of the noise and magnetic field analyses performed for the Project and discusses why the noise and magnetic field levels associated with the Project should be deemed reasonable by rule or found to be reasonable.

Carly R. Rowe, Manager, Siting and Land Rights with XES. Ms. Rowe discusses the siting, permitting, and land rights activities that have occurred and are planned to occur associated with the Pathway Project. She also sponsors and discusses study area maps for the Project segments and the proposed May Valley-Longhorn Extension.

In further support of its request, Public Service states as follows:

**II. REQUEST FOR A CPCN**

**A. Information Required by Rule 3102(b)(I)**

1. Please see Section V below for the information required by Rule 3002(b) and (c).

**B. Facts Relied Upon to Show that the Public Convenience and Necessity Require Granting this Application (Rule 3102(b)(II))**

2. The Company is proposing the Pathway Project to facilitate access to the transmission system for generating facilities in areas that have rich clean energy development potential in eastern Colorado. The Project's looped configuration and geographic scope provide interconnection points for clean energy resources located in ERZs designated pursuant to SB07-100. Moreover, the Project will facilitate an



interconnected transmission system that: (1) achieves improved reliability and operational flexibility while interconnecting needed clean energy resources in ERZs 1, 2, 3, and 5; and (2) enables the delivery of energy from these resources to the Company's load centers. As described in the testimonies of Ms. Jackson and Ms. Trammell, the Pathway Project will support implementation of the Company's forthcoming 2021 ERP & CEP, which will be developed to meet or exceed the 2030 clean energy target of SB19-236. As Mr. Hill explains, the Company anticipates it will need to acquire approximately 3,900 MW (nameplate) of additional clean energy resources to achieve this emission reduction objective. Of this approximate 3,900 MW, the Company's generic modeling for its 2021 ERP & CEP projects the need to acquire 2,300 MW of wind and 1,600 MW of utility-scale solar (as well as 400 MW of storage and other resource additions). The existing transmission system is unable to reliably accommodate this substantial level of additional renewable generation, particularly from the eastern and southern areas of the State that are most rich in wind and solar resources. The Pathway Project will provide an extensive, strategic, and networked transmission backbone facility to accommodate the vast amount of clean energy resources coming online throughout the ERP resource acquisition period that goes out to 2030.

3. The Pathway Project is therefore the lynchpin in Public Service's efforts to meet the clean energy targets of SB19-236 and advance the State of Colorado toward the economywide greenhouse gas emission reduction goals of HB19-1261.

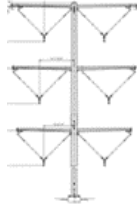
**C. Description of the Proposed Facilities to be Constructed (Rule 3102(b)(III))**

4. Company witnesses Ms. King and Mr. Craig describe the Pathway Project in detail, including the transmission line and substation facilities the Company plans to construct and expand. At a high level, the Pathway Project involves constructing an

approximately 560-mile, 345 kV double circuit network transmission system between four existing substations and three new substations. The Project will connect the Front Range to areas of northeastern, eastern, and southeastern Colorado that are rich with potential for renewable energy resource development, but do not currently have a backbone transmission system that can integrate new renewable energy resources needed to meet Colorado's clean energy goals. The northern terminus of the Pathway Project will be at the Company's existing Fort St. Vrain Substation (located at the Fort St. Vrain Generating Station) in Platteville in western Weld County. The Pathway Project will then extend east to a new Canal Crossing substation near the Pawnee Generating Station; then east/southeast to a new Goose Creek Substation south of the City of Burlington; then extends south to a new May Valley Substation northeast of the City of Lamar; then extends west to the planned Tundra Substation near the Comanche Generating Station. The Project will then extend north to its terminus at the Company's existing Harvest Mile Substation, located adjacent to the City of Aurora in Arapahoe County. The Project involves the expansion of the existing Fort St. Vrain, Pawnee and Harvest Mile Substations, the expansion of the planned but not yet in-service Tundra Substation, and construction of the new Canal Crossing, Goose Creek, and May Valley Substations. The three new substations will be 345 kV switching stations.

5. Table 1 below, shows the proposed infrastructure by project segment.

**Table 1: Proposed Infrastructure by Project Segment**

Project Segment	Project Segment Description (approximate length in miles)
All Segments	<p align="center"><b>Colorado’s Power Pathway 345 kV Transmission Project</b> Total 560 miles</p>
	<ul style="list-style-type: none"> <li>➤ The Project consists of five transmission line segments (Segments 1-5) as detailed below, with each segment bounded by substations.</li> </ul> <p><u>Transmission Facilities:</u></p> <ul style="list-style-type: none"> <li>➤ The overall Project involves construction of approximately 560 miles of new 345 kV double circuit transmission line in new 150-foot wide right of way.</li> <li>➤ Each segment of transmission line will be constructed using single pole, double circuit tangent structures (see typical structure diagram at left) and two-pole dead-end structures. The Project will utilize two-bundle 1272 kcmil ACSR Bittern conductor.</li> </ul> <p><u>Substation Facilities:</u></p> <ul style="list-style-type: none"> <li>➤ The Project involves expansion of three existing substations (Fort St. Vrain, Pawnee, and Harvest Mile), expansion of a planned switching station (Tundra), and construction of three new substations which will be 345 kV switching stations (Canal Crossing [near and interconnected to existing Pawnee Substation], Goose Creek [near and interconnected to Cheyenne Ridge Wind Project], and May Valley [near but not interconnected to existing Lamar Substation]).</li> </ul>
<p><b>Fort St. Vrain Substation expansion</b></p>	<p><b>Expand existing Fort St. Vrain Substation:</b> The existing 230 kV Fort St. Vrain Substation will be expanded, and a new 345 kV station arrangement will be established on land currently owned by Public Service.</p>

<b>Segment 1</b>	<b>Fort St. Vrain Substation to Canal Crossing / Pawnee Substations</b> 75 miles
	<b>Segment 1</b> involves constructing approximately 75 miles of new 345 kV double circuit transmission line from the existing Fort St. Vrain Substation to the new Canal Crossing and existing Pawnee Substations.
<b>Canal Crossing Substation new construction</b>	<b>Construct New Canal Crossing Substation:</b> A new 345 kV switching station will be constructed adjacent to the existing Pawnee Substation to accommodate new 345 kV line terminations and equipment on land currently owned by Public Service. The new Canal Crossing Substation is essentially an expansion of the Pawnee Substation and will interconnect to the Pawnee Substation <i>via</i> two short transmission ties.
<b>Pawnee Substation expansion</b>	<b>Expand existing Pawnee Substation:</b> The existing 345 kV Pawnee Substation will be expanded to accommodate new 345 kV line terminations and equipment on land currently owned by Public Service.
<b>Segment 2</b>	<b>Canal Crossing / Pawnee Substations to Goose Creek Substation</b> 160 miles
	<b>Segment 2</b> involves constructing approximately 160 miles of new 345 kV double circuit transmission line from the new Canal Crossing and existing Pawnee Substations to a new 345 kV Goose Creek Substation located near the existing Cheyenne Ridge Wind Project.
<b>Goose Creek Substation new construction</b>	<b>Construct New Goose Creek Substation:</b> A new 345 kV switching station will be constructed on approximately 40 acres of land to be acquired by Public Service near the existing Cheyenne Ridge Wind Project. The new switching station will accommodate new 345 kV line terminations and equipment. This substation will electrically tap the Shortgrass – Cheyenne Ridge West transmission line to effectively network the Rush Creek Gen-Tie.

<b>Segment 3</b>	<b>Goose Creek Substation to May Valley Substation</b> 65 miles
	<b>Segment 3</b> involves constructing approximately 65 miles of new 345 kV double circuit transmission line from the new Goose Creek Substation to a new 345 kV May Valley Substation.
<b>May Valley Substation new construction</b>	<b>Construct New May Valley Substation:</b> A new 345 kV switching station will be constructed on approximately 40 acres of land to be acquired by Public Service near the existing Lamar Substation. The new switching station will accommodate new 345 kV line terminations and equipment, but will not interconnect to the existing Lamar Substation.
<b>Segment 4</b>	<b>May Valley Substation to Tundra Substation</b> 140 miles
	<b>Segment 4</b> involves constructing approximately 140 miles of new 345 kV double circuit transmission line from the new May Valley Substation to the planned Tundra Substation.
<b>Tundra Substation expansion</b>	<b>Tundra Substation:</b> The Tundra Substation is a 345 kV switching station planned to interconnect a solar with storage project approved as part of the Company's approved Colorado Energy Plan Portfolio that will be in service by the end of 2022. This Project will expand the planned Tundra Substation to accommodate new 345 kV line terminations and equipment. No new land acquisition is required for the expansion.
<b>Segment 5</b>	<b>Tundra Substation to Harvest Mile Substation</b> 120 miles
	<b>Segment 5</b> involves constructing approximately 120 miles of new 345 kV double circuit transmission line from the Tundra Substation to the existing Harvest Mile Substation.
<b>Harvest Mile Substation expansion</b>	<b>Harvest Mile Substation:</b> The existing 345 kV Harvest Mile Substation will be expanded to accommodate new 345 kV terminations and equipment. No new land acquisition is required for the expansion.

6. In addition to the Pathway Project, the Company also presents the May Valley-Longhorn Extension for the Commission's consideration. The May Valley-Longhorn Extension involves constructing approximately 90 miles of new 345 kV double

circuit transmission line from the new May Valley Substation, to be constructed at the southeastern corner of the Pathway Project near Lamar, Colorado, south to a new substation located near Vilas, Colorado. The Company is recommending that the Commission consider issuing a CPCN for the May Valley-Longhorn Extension under this Application should the Commission desire that Public Service construct and own the 345 kV transmission extension between the Lamar area and the Vilas area, as opposed to a project developer being required to include the necessary gen-tie(s) with their respective bid originating from this area.

**D. Estimated Project Costs (Rule 3102(b)(IV))**

7. The Company currently estimates that the Pathway Project will cost approximately \$1.7 billion. The Company estimates the May Valley-Longhorn Extension will cost approximately \$250 million. A breakdown and discussion of these cost estimates can be found in the Direct Testimony of Mr. Richter.

8. For both the Pathway Project and the May Valley-Longhorn Extension, Mr. Richter provides a breakdown of these costs by transmission line facilities, substation facilities, and land. Within the cost estimates, Mr. Richter further breaks the costs down into separate subcategories, including: (1) engineering, permitting, and project management; (2) land/easements; (3) materials; (4) construction; and (5) overheads and escalation. Mr. Richter also provides cost estimates for each segment of the transmission line and for each of the substations.

9. In past CPCN applications, the Company has included a contingency of plus or minus 20 percent or plus or minus 30 percent, but this Application does not include a contingency or a request to approve a cost contingency in addition to the Company's estimates. The Company has incorporated a risk register that accounts for project risk

as accurately as possible and has built risk reserve into the cost estimate of approximately \$1.7 billion for the Pathway Project and approximately \$250 million for the May Valley-Longhorn Project.

10. As described by Ms. Trammell and Mr. Richter, while the Commission's Rules do not require reporting on projects that are granted a CPCN, the Commission has in the past required semi-annual reporting for projects of larger or more complex magnitudes. These semi-annual reports provide updates and transparency to the Commission and stakeholders as project cost estimates inevitably change from the time a CPCN is granted to completion of construction. Public Service proposes to report on the Pathway Project in a manner similar to that recently approved by the Commission in Consolidated Proceeding Nos. 19A-0728E and 20A-0063E. The Company proposes to file the first semi-annual report 90 days after the Commission's final decision in this proceeding and the second semi-annual report six months later. The Company proposes to continue the semi-annual reporting for the duration of the Project and conclude within six months after all Project segments are placed in service.

**E. Anticipated Construction Start Date, Construction Period, and In-Service Date (Rule 3102(b)(V))**

11. Ms. Trammell and Mr. Richter discuss the Project timeline and sequencing in their Direct Testimonies. The Project will be constructed in stages, with different transmission segments constructed sequentially. For Segments 2 (Canal Crossing to Goose Creek) and 3 (Goose Creek to May Valley) and the associated Pawnee, Canal Crossing, Goose Creek, and May Valley Substations, construction will start in 2023 with an estimated two-year construction duration. For Segment 1 (Fort St. Vrain to Canal Crossing) and the Fort St. Vrain Substation, construction will start in 2024 with an

estimated two-year construction duration. For Segments 4 (May Valley to Tundra) and 5 (Tundra to Harvest Mile) and the associated Tundra and Harvest Mile Substations, construction will start in 2025 with an estimated two-year construction duration.

12. The planned in-service date for Segments 2, 3, and the Pawnee, Canal Crossing, Goose Creek, and May Valley Substations is 2025. The planned in-service date for Segment 1 and the Fort St. Vrain Substation is 2026, and the planned in-service date for Segments 4, 5, and Tundra and Harvest Mile Substations is 2027. For the May Valley-Longhorn Extension, the planned construction start date is in 2023, with construction to take two years, for an in-service date of 2025.

13. The segments designed to be in-service in 2025 are to assist in capturing the benefits of recently-extended Federal tax credits to help ensure the forthcoming 2021 ERP & CEP results in cost-effective resource acquisitions.

**F. Vicinity Map (Rule 3102(b)(VI))**

14. Maps showing the general area and/or actual locations where facilities will be constructed, population centers, major highways, and county and state boundaries are provided in or attached to the Direct Testimonies of Ms. Trammell, Ms. King, and Ms. Rowe.

**G. Electric One-Line Diagram (Rule 3102(b)(VII))**

15. The Company provides one-line diagrams of the transmission and substation components of the Project attached to the Direct Testimony of Mr. Craig.

**H. Alternatives Studied (Rule 3102(b)(VIII))**

16. Ms. King describes the alternatives that the Company evaluated through the CCPG 80x30 TF. In addition to the alternatives studied in conjunction with the CCPG 80x30 TF, the Company also studied a “benchmark case” in which generation was added



at locations available on the system but without additional transmission, which is equivalent to a study of a “status quo” or “do nothing” alternative. The benchmark case shows that the existing transmission system, including planned additions through 2030, will be unable to reliably serve new generation in ERZs 1, 2, 3, and 5 and therefore unable to achieve the clean energy targets of SB19-236.

17. Turning to the six alternatives studied in conjunction with the CCPG 80x30 TF, these alternatives were not pursued for a variety of reasons. These reasons include not facilitating increased generation access in all of ERZs 1, 2, 3, and 5; reliability concerns; higher reactive power requirements than the chosen alternative; or requiring greater substation interconnects than the chosen alternative. In her Direct Testimony, Ms. King discusses these considerations in detail and explains how they support the Pathway Project.

18. Ms. King also discusses why the Company chose 345 kV for the Pathway Project’s line voltage. Ms. King explains that 345 kV properly balances a variety of considerations, including cost, compatibility with the Company’s existing transmission system within Colorado, project complexity, and ability to deliver large amounts of renewable energy.

**I. Prudent Avoidance Measures (Rule 3102(b)(IX) and (d))**

19. Mr. Craig discusses prudent avoidance measures the Company routinely incorporates into its transmission project construction and design, and which it has incorporated into this Project. For this Project, the design is sufficient to meet the magnetic field thresholds that are deemed reasonable by Commission Rule. Therefore, the Company does not plan to apply any additional prudent avoidance techniques to the Project design and construction.

**J. Finding of Reasonableness for Noise and Magnetic Fields (Rules 3102(b)(X), 3102(c), 3206(e), and 3206(f))**

20. The Company hired POWER Engineers, Inc. (“PEI”) to perform an analysis of the expected noise and magnetic field levels associated with the Pathway Project. Mr. Craig sponsors the results of the noise and magnetic field analyses that PEI performed for the Project and discusses how the noise and magnetic field levels associated with the Project are deemed reasonable by rule or should be found to be reasonable.

21. For its study of the noise levels on the transmission line and from substations, PEI used standard utility software programs in its analysis. PEI’s analysis demonstrates that the transmission line’s projected noise levels are deemed reasonable by rule. Regarding the Project’s substations, PEI’s analysis demonstrates that the maximum projected noise levels are deemed reasonable for the substations in areas zoned for industrial usage, and Mr. Craig explains why the Commission should find that the maximum projected audible noise levels from substations in areas zoned for agricultural use are also reasonable.

22. Regarding magnetic fields, PEI performed an analysis of the expected magnetic field levels for the Project’s transmission lines and substations. The expected magnetic field levels calculated at relevant locations from transmission lines and from the substations fall below the threshold deemed reasonable under Rule 3206(e)(III).

**K. Other Information Required by Rule 3206(g) and (h)**

23. As Mr. Craig testifies, consistent with Rule 3206(g), Public Service will install and maintain service connections from transmission extensions as applicable consistent with the conditions set forth in its electric tariff.

24. Ms. Trammell explains in her Direct Testimony how the Project is consistent with the utility's ten-year transmission plan filed under Rule 3627. Portions of the Pathway Project have their origins within the Lamar-Front Range ("LFR") Project. The LFR Project was first conceptualized and studied in 2012-2013 as a project intended to deliver power consistent with the timing of the development of beneficial energy resources in or near designated ERZs. While the LFR Project has been refined over the years, it has been included as a conceptual transmission project in filings at the Commission since 2013. The LFR Project was first included in Public Service's SB07-100 status reports and has continued to be included in Public Service's and Tri-State's long-range transmission plans reported in Rule 3627 filings (most recently in Proceeding No. 20M-0008E).

25. Additionally, the Company is filing concurrently with this application a Supplemental Rule 3206 Report identifying the Pathway Project. The Company intends to include the Pathway Project in its 2021 Rule 3206 Report, but the need for the Pathway Project is time-sensitive given the Company's forthcoming 2021 ERP & CEP. For this reason, the Company is filing the Supplemental Rule 3206 Report ahead of its Rule 3206 Report filing for 2021 and concurrently with this Application.

### **III. SITING, PERMITTING, AND OUTREACH**

26. Section 40-5-101(3), C.R.S., vests local governments rather than the Commission with authority over siting. Consistent with Colorado law, local governments will review and approve the development of all utility facilities associated with the Project through various local land use permitting processes. While the Company is not seeking specific Commission approval of the siting in its Application, Company witness Ms. Rowe

provides context on these issues, discussing the siting, permitting, and land rights activities associated with the Project in her Direct Testimony.

27. As Ms. Rowe explains, the Pathway Project could traverse up to 13 counties, and the May Valley-Longhorn Extension would cross two counties, and the Company will need to comply with each of these counties' local land use and zoning ordinances. Ms. Rowe provides a table in her Direct Testimony detailing the local land use requirements triggered by each segment or substation component of the Project. Ms. Rowe also provides representative anticipated schedules of the time necessary to secure land rights and permits in her Direct Testimony.

28. Ms. Rowe explains that the Company will need to secure 150-foot-wide rights of way under non-exclusive easement agreements for the transmission line segments. The Company will also need to acquire land in fee for two new substations: the Goose Creek Substation and the May Valley Substation, as well as the Longhorn Substation for the May Valley-Longhorn Extension. Existing Company-owned property will be used for substation expansions required at Fort St. Vrain, Pawnee, Tundra, and Harvest Mile, and for the new Canal Creek Substation which is essentially an expansion of the existing Pawnee Substation. Constraints on the land where the existing Pawnee Substation is located require new facilities for the Pathway Project to be sited on adjacent Company-owned land.

29. In addition to the costs of acquiring these land rights, the Company anticipates incurring other land use costs, including, for instance, costs for permitting and outreach, legal and consultant support (e.g., environmental specialists, land surveyors, title work, appraisers, etc.), and construction-related payments.

30. The Company plans to begin landowner outreach and easement acquisition activities concurrent with permitting activities for each Project segment starting in the third or fourth quarter of 2021. Landowner outreach and negotiations will also commence concurrent with permitting activities for fee acquisition required for the new Goose Creek Substation and the new May Valley Substation, and the Longhorn Substation. After routes have been identified for each transmission line segment, the Company will begin gathering parcel ownership information along each segment, purchasing parcel data from various counties, procuring real estate market analyses, and ordering title reports. The Company will also commence fee acquisition negotiations for the new greenfield substations. Land rights acquisition, routing and siting, and permitting activities will be planned to ensure timely commencement of construction.

31. As part of the routing and siting studies, the Company will conduct jurisdictional outreach to each county or municipality anticipated to be crossed by a transmission line route or where Project endpoint substations are located to solicit feedback and discuss potential land use permits that may be required for each Project Segment and substation. Given the Project consists of constructing a new 345 kV transmission line outside of existing ROW, the Company anticipates that the Project will trigger land use permitting requirements in most jurisdictions. Permitting requirements are subject to change based on identification and selection of final routes, the sites identified for the new Goose Creek and May Valley Substations, as well as the Longhorn Substation, other identified modifications to existing substations, and coordination with the jurisdictions. To date, no meetings have been held with officials from the potential jurisdictions to discuss the Project.

#### **IV. COST RECOVERY**

32. As Ms. Trammell explains, the Company plans to include the retail costs associated with the Pathway Project and the May Valley-Longhorn Extension (if applicable) in a future Transmission Cost Adjustment (“TCA”) filing for recovery through the TCA Rider. For wholesale transmission customers, Public Service will recover the share of costs associated with the Pathway Project through its FERC-jurisdictional transmission rates.

#### **V. PROPOSED PROCESS REGARDING POTENTIAL PARTNER CPCNS**

33. Public Service, Tri-State, BHE, CSU, and PRPA began discussing possible joint participation or partnership in the Project as it was studied at CCPG. Additional details regarding the potential partnership are explained above and in the Direct Testimonies of Ms. Jackson and Ms. Trammell, respectively, but the Company and the other jurisdictional utilities believe the following process would allow this proceeding to advance in a timely way toward a CPCN for each entity.

34. The Company is requesting that the Commission hear this proceeding *en banc*, and is making that request by separate pleading.

35. The Company requests that the Commission notice this Application as soon as possible and set a 30-day notice and intervention period.

36. Within 45 days of the Company’s filing, assuming the partnership continues to advance, participating Commission-regulated utilities would file their own CPCNs for the Project detailing their participation and requesting their own CPCN to facilitate that participation. These applications would address: (1) project purpose and need from their perspectives; (2) each utility’s own needs and how the Project meets those needs; (3)

each utility's interest in the Project and additional details concerning segment responsibilities, if applicable; (4) any additional facilities each utility proposes to construct in connection with its participation in and use of the Project and for which they would need a CPCN; and (5) any additional studies (such as noise and magnetic field studies) to support the utility-specific facilities. However, these applications would rely on the instant Application for: (1) the overall Project purpose and need; (2) the alternatives considered; (3) the preferred alternative; (4) the engineering and design information; and (5) the Project schedule and costs.

37. Each filing utility would request a shortened notice and intervention period (e.g., 10 days). The utilities would also seek consolidation of the CPCN proceedings into a single proceeding, with all intervenors granted intervention in this proceeding also granted status as intervenors in the consolidated proceeding.

38. While the Company requests that the Commission notice this proceeding and move forward with the intervention period, the Company requests that the Commission not deem this application complete until after either: (1) these subsequent CPCNs are filed with the Commission; or (2) the Company files a notice with the Commission that the partnership will not move forward for the Project. In the latter instance, the Company will continue to seek a CPCN for the Project.

39. This approach allows for the Commission to adjudicate this proceeding on a 250-day statutory timeline pursuant to § 40-6-109.5(1), C.R.S., while simultaneously providing additional time on the front-end of this proceeding to allow for the additional potential CPCN application filings and potential consolidation of the CPCN proceedings.

40. It also allows discovery to commence in a timely way on the core elements of the Project in this proceeding. If and when the participating utilities file their CPCN applications, as part of the motions to consolidate the proceedings—the filing utilities would also propose a procedural schedule to conclude the proceeding within the 250-day time provided under § 40-6-109.5(1), C.R.S.

41. CSU and PRPA may participate in the consolidated proceeding, at their discretion, but will not file CPCNs as they are non-jurisdictional utilities.

**VI. ADDITIONAL INFORMATION REQUIRED BY RULE 3002(b) AND (c)**

42. Name and Address of Applicant. Public Service is an operating public utility subject to the jurisdiction of this Commission, engaged, inter alia, in the transmission, distribution and purchase of electricity and gas in various areas in the State of Colorado.

The name and address of the Applicant is:

Public Service Company of Colorado  
1800 Larimer Street, Suite 1400  
Denver, CO 80202-5533

43. Name Under Which Applicant Provides Service in Colorado. All operations conducted by the Company in Colorado are conducted under the name of Public Service Company of Colorado, under the trade name of Xcel Energy.

44. Representatives to Whom Inquiries Concerning the Application Should Be Made. Please send copies of all inquiries, notices, pleadings, correspondence, and other documents regarding this filing to:



Brooke Trammell  
Regional Vice President, Rates &  
Regulatory Affairs  
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[cshields@wbklaw.com](mailto:cshields@wbklaw.com)

45. Agreement to Comply with 4 CCR 723-3-3002(b)(IV) through (VI). Public Service has read, and agrees to abide by, the provisions of subparagraphs (b)(IV) through (VI) of Rule 3002.

46. Description of Existing Operations and General Colorado Service Area. Public Service's existing operations and general service areas in Colorado are set forth in the Company's tariffs on file with the Commission.

47. Location of Hearing. Public Service requests that this Application be granted without hearing. However, if a hearing is held, Public Service requests that it be held at the Commission's offices—or through videoconferencing if still necessary—in Denver, Colorado.

48. Acknowledgement. Public Service acknowledges the Company has read and agrees to abide by the provisions of 4 CCR 723-3-3002(b)(XI)(A) through (C).

49. Statement Under Oath. Ms. Brooke A. Trammell, Regional Vice President, Rates & Regulatory Affairs for Xcel Energy Services, states under penalty of perjury that the contents of this Application are true, accurate, and correct to the best of her knowledge. Her affidavit is attached to this Application.

50. Information Required by Rule 3002(b)(IX) and (c). Pursuant to 3002(c) of the Commission's Electric Rules, Public Service hereby incorporates by reference the following information, which is on file with the Commission in Proceeding No. 06M-525EG:

- a. A copy of Public Service's Amended Articles of Incorporation, which was last filed on October 3, 2006;

- b. The name, business address and title of each of Public Service's officers and directors, which was last filed on March 31, 2020;
- c. The names and addresses of affiliated companies that conduct business with Public Service, which was last filed on March 31, 2020;
- d. The name and address of Public Service's agent for service of process, which was last filed on March 31, 2020; and
- e. A copy of Public Service's most recent audited balance sheet, income statement, and statement of retained earnings, and statement of cash flows, which were last filed on March 31, 2020.

## **VII. CONCLUSION**

Wherefore, Public Service Company of Colorado respectfully requests that the Commission: (1) issue Public Service a CPCN for the approximately 560-mile 345 kV, double circuit Pathway Project and associated substation expansions and additions; (2) find that the Project is reasonable and in the public interest, supported by the Company's cost estimate of approximately \$1.7 billion for the Project, consistent with recent Commission findings; and, (3) find that, consistent with Commission Rule 3206(e) and (f), the expected maximum magnetic field and noise levels associated with the Pathway Project are reasonable and require no further mitigation or prudent avoidance measures.

Additionally, Public Service recommends the Commission consider issuing a CPCN for the May Valley-Longhorn Extension. If the Commission decides a CPCN should be granted for the May Valley-Longhorn Project, the Company requests the Commission find the Project is reasonable and in the public interest, supported by the

Company's cost estimate of approximately \$250 million, and that the expected maximum magnetic field and noise levels associated with the May Valley-Longhorn Extension are reasonable and require no further mitigation or prudent avoidance measures.

Dated this 2nd day of March 2021.

Respectfully submitted,

By: /s/ Christopher Irby  
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Christopher Irby, #35778  
Assistant General Counsel  
Xcel Energy Services, Inc.  
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and

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**ATTORNEYS FOR PUBLIC SERVICE  
COMPANY OF COLORADO**

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

\*\*\*\*\*

IN THE MATTER OF THE APPLICATION OF )  
PUBLIC SERVICE COMPANY OF COLORADO )  
FOR A CERTIFICATE OF PUBLIC )  
CONVENIENCE AND NECESSITY FOR )  
COLORADO'S POWER PATHWAY 345 KV )  
TRANSMISSION PROJECT AND )  
ASSOCIATED FINDINGS REGARDING NOISE )  
AND MAGNETIC FIELD REASONABLENESS )

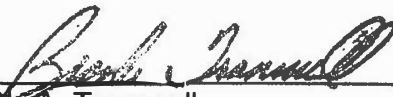
PROCEEDING NO. 21A-XXXXE

VERIFICATION

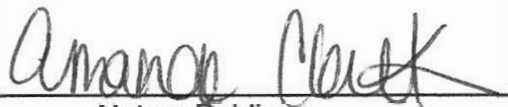
STATE OF COLORADO )  
CITY AND )  
COUNTY OF DENVER )

SS:

I, Brooke A. Trammell, being duly sworn, do hereby depose and state that I am Regional Vice President, Rates & Regulatory Affairs for Xcel Energy Services Inc.; that I am an authorized agent for Public Service Company of Colorado, Applicant in the foregoing Application; that I have read the foregoing Application; and that the facts set forth therein are true, accurate, and correct to the best of my knowledge, information, and belief.

  
\_\_\_\_\_  
Brooke A. Trammell  
Regional Vice President, Rates & Regulatory Affairs

Subscribed and sworn to before me this 15<sup>th</sup> day of May, 2021.

Witness my hand and official seal.   
\_\_\_\_\_  
Notary Public

AMANDA CLARK  
Notary Public  
State of Colorado  
Notary ID # 20164004880  
My Commission Expires 03-25-2024

My Commission expires:  
3/25/2024