

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

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<b>IN THE MATTER OF THE</b>	)	
<b>APPLICATION OF PUBLIC SERVICE</b>	)	
<b>COMPANY OF COLORADO FOR</b>	)	
<b>APPROVAL OF ITS 2021 ELECTRIC</b>	)	<b>PROCEEDING NO. 21A-____E</b>
<b>RESOURCE PLAN AND CLEAN</b>	)	
<b>ENERGY PLAN</b>	)	

**VERIFIED APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR  
APPROVAL OF ITS 2021 ELECTRIC RESOURCE PLAN AND  
CLEAN ENERGY PLAN**

Pursuant to Colorado Public Utilities Commission (“Commission”) Rules 3002(a)(XVI), 3603, and 3617, Public Service Company of Colorado (“Public Service” or the “Company”) hereby applies for a Commission order approving Phase I of the Company’s 2021 Electric Resource Plan and Clean Energy Plan (“2021 ERP & CEP”).

Public Service is filing this Application supported by seventeen Direct Testimonies, discussed further below, and the three volumes of its 2021 ERP & CEP. Volume 1 contains an Executive Summary and high-level overview that outlines the essential elements of the Company’s 2021 ERP & CEP. Volume 2 contains the Technical Appendix that provides detailed information required by the Commission’s Electric Resource Planning Rules and additional technical information supporting the Company’s 2021 ERP & CEP. Volume 3 contains the Request for Proposals (“RFPs”) and model contracts for use in the proposed Phase II competitive solicitation process.

Public Service is concurrently filing a motion for extraordinary protection addressing the Highly Confidential Information that is included in its 2021 ERP & CEP,

including the specific protections the Company requests for this information, in accordance with Rules 3603(b) and 3604(j). The Company is also seeking specific waivers related to its 2021 ERP & CEP as detailed in its motion.

**I. BACKGROUND**

1. House Bill 19-1261, which was passed by the General Assembly in 2019, established economywide greenhouse gas emission reduction goals for the State of Colorado of 50 percent by 2030 and 90 percent by 2050, relative to 2005 levels. Also passed in 2019, Senate Bill 19-236 established power sector-specific emission reduction goals, and required that the Company include in its next Electric Resource Plan (“ERP”) filing a Clean Energy Plan (“CEP”) that would achieve a reduction in carbon emissions associated with its electricity sales by 80 percent relative to 2005 levels by 2030 and make progress toward achieving one hundred percent clean energy by 2050.

2. As set forth in the Company’s Direct Testimony, in addition to complying with the standard ERP requirements set forth in the Commission’s Rules, the Company’s 2021 ERP & CEP was designed with these goals in mind. Under Public Service’s preferred plan for Phase I aimed at meeting or exceeding the requirements of Senate Bill 19-236, the Company has modeled the acquisition of 2,300 MW of wind, 1,600 of solar, 400 MW of storage, and 1,300 MW of flexible dispatchable generation, with 1,300 MW of distributed energy resources coming online by 2030.

3. In furtherance of the State’s clean energy transition, the Company has also proposed a transition plan addressing its remaining coal fleet (Craig 2, Hayden 1 and 2, Pawnee, and Comanche 3). The Company’s preferred coal transition plan will facilitate

key emission reductions while also balancing the need to protect Colorado workers and communities most impacted by this transition.

4. The 2021 ERP & CEP will set the Company and the State on a path toward achieving their respective emission reduction goals, while still maintaining the focus on reliability and affordability that has been the cornerstone of the Commission's resource planning process for years.

5. In support of this Application and the Company's 2021 ERP & CEP, the Company is providing the Direct Testimony and Attachments of seventeen witnesses.

The following table identifies these witnesses and select topics covered by each witness:

<b>Witness</b>	<b>Summary of Testimony</b>
<p>Alice K. Jackson President of Public Service Company of Colorado</p>	<p>Ms. Jackson outlines the near- and long-term vision for the Company's generation system including transitioning the coal fleet, adding clean energy resources coupled with necessary flexible resources, and how the Company approached building a planful and just transition, as well as how while focusing on these key areas the Company did not compromise on its need to deliver a reliable and affordable electric system in order to achieve Colorado's energy policy goals and the Company's own emission reduction efforts.</p>
<p>Jack W. Ihle Director, Regulatory and Strategic Analysis</p>	<p>Mr. Ihle introduces the Company witnesses filing testimony in support of the Company's 2021 ERP &amp; CEP and provides policy testimony across several key areas associated with the Company's filing, including applicable legislation, the interplay of the ERP process with other Commission processes, relevant external studies and comparing them to the preferred plan, and other issues as the Company plans for a carbon-free future.</p>

Witness	Summary of Testimony
<p>Brooke A. Trammell</p> <p>Regional Vice President, Rates and Regulatory Affairs</p>	<p>Ms. Trammell summarizes the policies that support the Company's proposed cost recovery mechanisms for the early retirement of certain coal generating stations that will be retired early as part of the Company's coal action plan and the incremental costs associated with the CEP. Ms. Trammell also discusses the importance of the Company's Colorado Power Pathway transmission project as a foundational component to the Company's CEP. Ms. Trammell discusses the Company's proposed framework for incorporating the Commission's stated interest in performance-based regulation into this 2021 ERP &amp; CEP process. Ms. Trammell also discusses the need for ratemaking authorizations associated with investigating the feasibility of potential future resources with multi-year development times extending beyond this ERP. Finally, Ms. Trammell presents the expenses incurred or to be incurred by the Company in connection with this 2021 ERP &amp; CEP.</p>
<p>James F. Hill</p> <p>Director, Resource Planning</p>	<p>Mr. Hill summarizes the Company's resource planning process, including the foundational elements of planning: such as the resource acquisition period, the resource need, how a CEP is selected, the proposed coal action plan, and the difference between Phase I and Phase II of the ERP process. Mr. Hill also discusses what alternative scenarios were considered when selecting the Company's preferred plan and how those alternatives influenced the process.</p>
<p>Jon T. Landrum</p> <p>Manager, Resource Planning Analytics</p>	<p>Mr. Landrum discusses the Company's new modeling tool that we are using for this 2021 ERP &amp; CEP called EnCompass and explains its capabilities and how the functionality of the EnCompass model differs from the former Strategist model. Mr. Landrum also describes how the model runs were performed for purposes of the Company's Phase I modeling and explains several of the key inputs and assumptions that went into the model.</p>
<p>John T. Welch</p> <p>Vice President, Commercial Power Operations</p>	<p>Mr. Welch discusses how the Company verified that the Preferred CEP will result in reliable system operations, how generation planning ensures a reliable system, third-party standards for reliability, and how the system will need to evolve to manage greater amounts of renewable energy.</p>

<b>Witness</b>	<b>Summary of Testimony</b>
<p>Hari Singh Principal Engineer</p>	<p>Mr. Singh provides an overview of the Company's transmission system and the additional investments needed to support the Company's Preferred CEP.</p>
<p>Lauren W. Quillian Energy and Environmental Policy Manager</p>	<p>Ms. Quillian provides a summary of the Company's support of carbon reduction policies, its carbon reduction targets, and the Air Quality Control Commission ("AQCC")/Colorado Department of Public Health and Environment ("CDPHE")'s process for determining and verifying these emissions. Ms. Quillian also discusses other greenhouse gas ("GHG") emissions and how those emissions are accounted for.</p>
<p>John M. Goodenough Manager, Energy Forecasting</p>	<p>Mr. Goodenough summarizes the Company's base forecast for future energy sales and peak demand. He also discusses the sensitivities that provide alternative views of future sales and demand under different policy considerations.</p>
<p>Scott A. Watson Director, Operating Company Finance</p>	<p>Mr. Watson summarizes the approaches to asset recovery including accelerated depreciation, the use of regulatory assets, and securitization. He also provides the technical analysis that supports the Company's proposed use of regulatory assets and securitization for the early retirement of certain coal generating stations.</p>
<p>Alex G. Trowbridge Pricing Consultant</p>	<p>Mr. Trowbridge provides the technical analysis of the Company's Renewable Energy Standard Adjustment ("RESA") and CEP Rider ("CEPR") cost recovery mechanisms.</p>
<p>Hollie J. Velasquez Horvath Senior Director, State Affairs and Community Relations</p>	<p>Ms. Velasquez Horvath discusses the Company's community assistance plans that support the accelerated retirement of Hayden 1 and 2 and Comanche 3.</p>
<p>Holly L. Stanton Manager, Workforce Relations</p>	<p>Ms. Stanton provides a summary of the Company's workforce transition plan related to the early retirement or conversion of certain generating stations associated with the Company's coal action plan.</p>

Witness	Summary of Testimony
Kent L. Scholl Senior Resource Planning Analyst	Mr. Scholl provides a summary of the studies conducted to support the Company's ERP and CEP including the Solar and Wind Integration studies, the Effective Load Carrying Capability Study, the Coal Cycling Study, and the Flex Reserve Study.
Kevin D. Carden Director, Astrapé Consulting	Mr. Carden provides a summary of the Planning Reserve Margin study.
Richard L. Belt Director of Chemistry and Water Resources	Mr. Belt provides a summary of the impact on water usage and water rights of certain coal facilities proposed for retirement or conversion as part of the Company coal action plan.
Tara Fowler Manager, Renewable Energy Power Purchases	Ms. Fowler introduces a new model power purchase agreement ("PPA") for standalone energy storage and provides background on material changes to the model dispatchable PPA, renewable energy PPA, and solar with storage PPA.

## II. REQUESTED APPROVALS AND FINDINGS

6. By this Application, the Company requests that the Commission approve Phase I of the Company's 2021 ERP & CEP and make the following specific approvals, findings, and determinations, as further discussed in the Company's Direct Testimony:

- Approval of the Company's 2021 ERP & CEP (Attachments AKJ-1 through AKJ-3), inclusive of the sub-approvals set forth below:
  - *Sub-approval:* Approval of the Company's proposed Phase II all-source competitive acquisition and bid evaluation process to acquire generation resources to meet the Company's resource needs in this proceeding;
  - *Sub-approval:* Approval of the RFPs and model contracts set forth in Volume 3 (Attachment AKJ-3);
  - *Sub-approval:* Approval of the modeling inputs, assumptions, and methodologies included in the Company's Phase I filing;

- *Sub-approval:* Approval of the updated studies to be used in the Phase II bid evaluation process, including the: (1) Planning Reserve Margin Study; (2) Wind and Solar Integration Study; (3) Effective Load Carrying Capability Study; and (4) Flex Reserve Study and Supplemental Flex Reserve Study;
- *Sub-approval:* Approval of the Company's preferred coal transitions, including approval to:
  - Accelerate the retirement of Hayden 2 to 2027 and Hayden 1 to 2028 consistent with the agreement reached among the joint owners;
  - Accelerate the retirement of Craig 2 to September 30, 2028 consistent with the agreement reached among the joint owners;
  - Convert Pawnee from coal to natural gas by the end of 2028; and
  - Reduce operations of Comanche 3 to an approximately 33 percent capacity factor beginning in 2030 and accelerate retirement of the unit to 2040;
- *Sub-approval:* A finding that coal cycling costs are not a necessary model input for the Phase II bid evaluation;
- Approval of the regulatory asset recovery method for: (1) Craig 2; (2) Hayden 1; (3) Hayden 2; and (4) the retired portion of Pawnee;
- A finding that the Company's plan to securitize the costs associated with the accelerated retirement of Comanche 3 is reasonable and in the public interest to enable the Company to begin a series of actions over the next two decades to effectuate the securitized refinancing, which will involve subsequent regulatory filings and Commission approvals;
- Approval of the proposed "time fence" and associated locking of certain resources consistent with the RESA, as well as approval of the recording of incremental costs based upon a calculation of the average avoided cost determined by resource type as determined in this Phase I proceeding;
- Approval to initiate the CEPR after the issuance of the Phase II decision in this proceeding;
- Approval to track and defer costs incurred in association with preparing and litigating this proceeding into a non-interest-bearing regulatory asset to be reviewed for recovery purposes in a future rate proceeding;
- Approval of the proposed Emissions Reduction Performance Incentive Mechanism;

- A finding that the Commission recognizes the financial implications of adding stand-alone battery storage resources in this ERP and accordingly authorizes future rate base inclusion of capital leases as necessary to effectuate the acquisition of certain stand-alone battery resources. Alternatively, the Company requests the Commission affirmatively state that it will not accept bids for unrestricted stand-alone battery storage resources in the competitive solicitation; and,
- A finding that the Commission encourages the Company to investigate the feasibility of certain long-lead time generation resources to achieve carbon reductions beyond 2030 and authorize a certain ratemaking treatment for associated costs.

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

7. 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

8. 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.

9. 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:

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Regional Vice President, Rates &  
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10. 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.

11. 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.

12. 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.

13. 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).

14. 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.

15. Information Required by Rule 3002(b)(IX) and (c). Pursuant to Rule 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.

**IV. CONCLUSION**

WHEREFORE, Public Service respectfully requests the Commission issue an order: (1) approving Phase I of the Company's 2021 ERP & CEP, and (2) granting the Company's specific requested approvals, findings, and determinations, as set forth herein.

Dated this 31st day of March 2021.

Respectfully submitted,

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