PUBLIC SERVICE COMPANY
OF COLORADO

OUR ENERGY FUTURE: DESTINATION 2030

2021 ELECTRIC RESOURCE PLAN AND CLEAN ENERGY PLAN

Direct Testimony of Alice K. Jackson
CPUC Proceeding No. 21A-____E
March 31, 2021

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS 2021 ELECTRIC RESOURCE PLAN AND CLEAN ENERGY PLAN	**)**	**PROCEEDING NO. 21A-_____E**

DIRECT TESTIMONY AND ATTACHMENTS OF ALICE K. JACKSON

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

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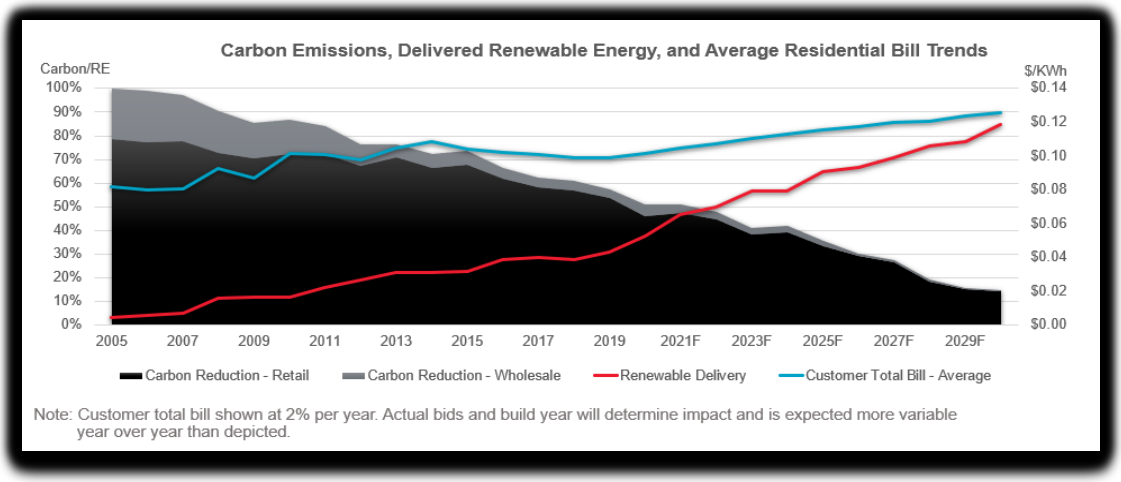
EXECUTIVE SUMMARY AND INTRODUCTION OF PUBLIC SERVICE COMPANY OF COLORADO'S 2021 ELECTRIC RESOURCE PLAN AND CLEAN ENERGY PLAN

Ms. Jackson, President of Public Service Company of Colorado ("Public Service" or "Company"), presents this Executive Summary as a preamble to her Direct Testimony. The Company is excited to present its 2021 Electric Resource Plan and Clean Energy Plan ("2021 ERP & CEP"). After many years of technical and system advancements, we are able to confidently present for consideration by the Colorado Public Utilities Commission ("Commission") a plan that would achieve by 2030 an estimated **85 percent reduction in carbon dioxide emissions** from 2005 levels and deliver nearly **80 percent of our customers' consumed energy from renewable resources**. What makes this plan even more extraordinary is it accomplishes these objectives without compromising the Company's longstanding focus on reliability and affordability.

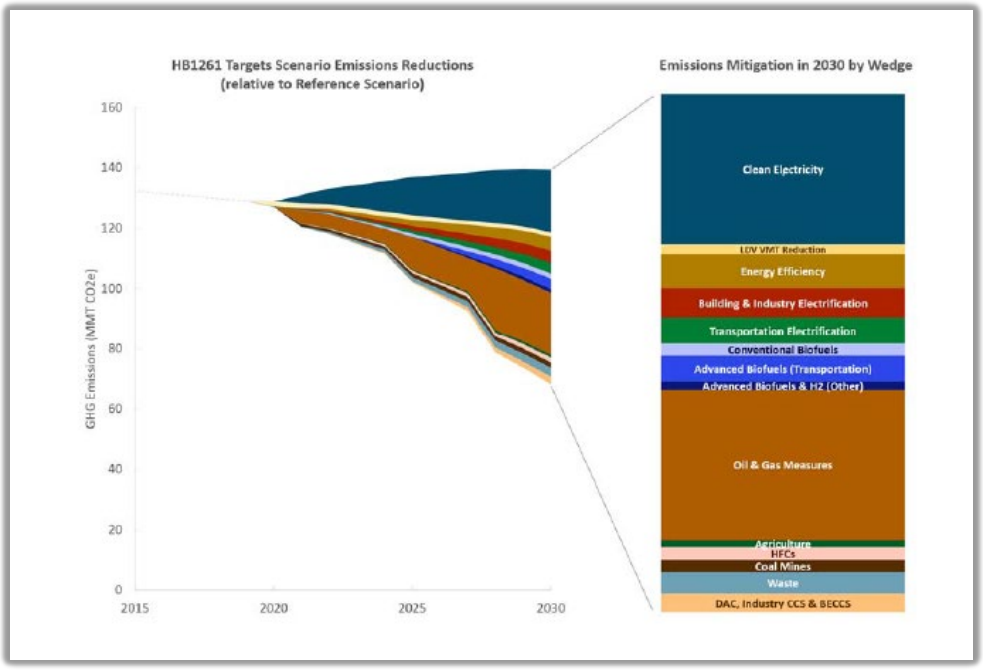
Colorado has been a leader in the clean energy transition for over two decades—with Public Service leading the way. As of 2020 we have reduced our emissions from the power sector by 46 percent since 2005 through a series of innovative initiatives while maintaining reliability and affordability for our customers. This graphic illustrates the advancements made to date, as well as those we can achieve through this 2021 ERP & CEP.



The filing of the 2021 ERP & CEP is a landmark moment for Colorado energy policy and climate policy nationally. Indeed, it is not only the largest resource plan in the 150-plus year history of our Company, but also creates a framework and sets an example for how other commissions and utilities can advance cost-effective emission reductions as we collectively work to address the challenge of a lifetime.

The root of this plan started on December 4, 2018, when Xcel Energy announced a first-of-its-kind commitment to reduce emissions 80 percent from 2005 levels by 2030 and deliver 100 percent carbon-free electricity to customers by 2050. Our national leadership on this issue spurred similar commitments across the utility sector, with over twenty utilities having since adopted similar pledges. Shortly after Xcel Energy's announcement, the Colorado General Assembly embarked on its 2019 legislative session, which made history with two landmark bills. House Bill 19-1261 set economywide emission reduction goals, while Senate Bill 19-236 established a pathway and guidance for large regulated utilities to achieve the same goals we announced using Colorado's ERP process. These bills created Colorado's first-ever comprehensive and aggressive climate law.

The State of Colorado continued this climate leadership by developing the Colorado Greenhouse Gas Pollution Reduction Roadmap ("Roadmap"), which represents the template for development of sector-specific approaches toward the achievement of the economy-wide emission reductions outlined in House Bill 19-1261. The Roadmap counts on the power sector to lead the way in the State's clean energy transition, and this 2021 ERP & CEP is foundational to achieving these broader economywide efforts. This is illustrated in the figure below, which shows clean electricity as one of the leading contributors to the state's targeted emissions reductions.



There are numerous factors to balance as we—the Company, our customers, our communities and stakeholders, the Commission, and the State—take the next, giant steps in the journey to a carbon-free future. Our direct case shows we are prepared to meet this charge—reliably and affordably. Simply put, we need to advance substantial emission reductions while maintaining reliability and affordability and advancing equitable access to clean energy. Doing so will require major changes to our distribution and transmission system, energy markets, and generation fleet, which in turn mean changes for our host communities in different parts of the State and a need to focus on a just transition. This human element—the fact that energy policy has significant and tangible impacts on communities and families—is as much a driver of our ERP as the analytics underlying it.

Against that backdrop, this ERP accelerates our transition away from coal-fired generation, adds substantial amounts of clean energy supported by flexible dispatchable generation, and ensures a planful and just transition for our host communities affected by the transition. Of course, we also need to execute this transition while maintaining system reliability, affordability, and Company health, consistent with the obligation to serve we have been entrusted with and have executed on for over 150 years.

Transitioning the Coal Fleet

The Company's plan addresses all of the remaining coal on the system in two ways: accelerating retirements and implementing conversions. First, the Company has negotiated accelerated retirement dates for Craig 2, Hayden 1, and Hayden 2 with our partners in those units. We bring those proposed retirement dates to the Commission for approval in this proceeding, and the accelerated retirement dates are all based on the regulatory and system requirements of all owners of these plants. Under this approach, Craig 2 will retire in 2028, Hayden 1 will retire in 2028, and Hayden 2 will retire in 2027.

At Comanche 3 in Pueblo, we propose to accelerate the retirement of the unit by 30 years, moving the retirement date from 2070 to 2040. In addition, we recommend that Public Service operate the unit with an annual capacity factor limitation of 33 percent beginning in 2030. This allows for lower emissions while providing cost-effective reliable operations for the Colorado system. In 2040 we recommend securitizing the undepreciated balance of the unit upon its retirement. The securitization tool, combined with limited operations beginning in 2030, provides a 20-year runway for our host Pueblo community, and strikes the right balance between emission reductions, reliability, and cost for our customers and the state.

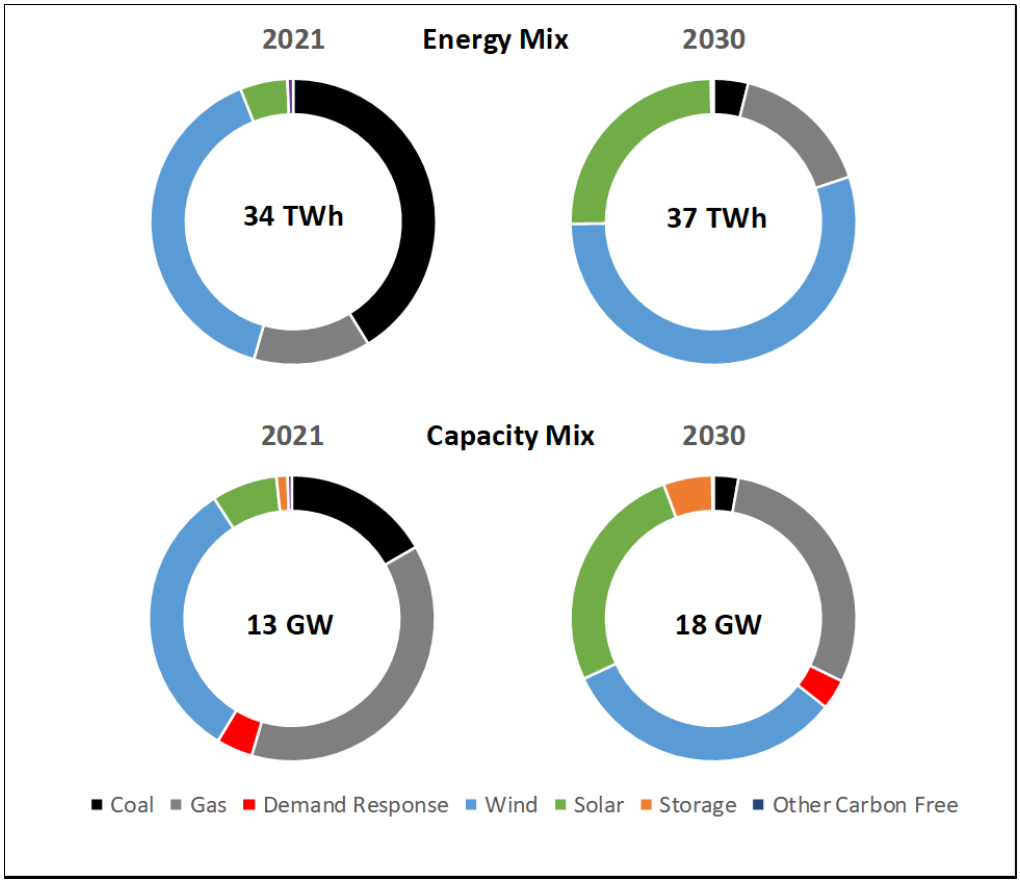
The plan also to takes advantage of a low-cost option to convert Pawnee to natural gas in 2028. This minimizes the workforce transition and community impacts of a standalone accelerated retirement in Morgan County, while also providing our system with a dispatchable generator to provide critical system reliability.

Adding Clean Energy and Flexible Resources

This resource plan is the largest and most climate-driven proposal brought forward in our Company's history. Indeed, after examining numerous portfolios and modeling options, Public Service has proposed a preferred plan featuring: **2,300 MW of wind, 1,600 MW of large-scale solar, 400 MW of battery storage, and 1,300 MW of flexible dispatchable generation.**[1] And to bring these resources forward, we will again harness the ERP all-source solicitation process, and expect a robust pool of bids enabled by the transmission solution of Colorado's Power Pathway 345 kV Transmission Project.

There are many drivers of these various resource acquisitions. One such driver is the social cost of carbon ("SCC") in our optimization. Between application of the SCC and the potential use of securitization, we are carefully but purposefully utilizing the tools provided by the General Assembly in Senate Bill 19-236 as a part of this plan.

The preferred plan will transition our system in a dramatic way from both an energy and capacity mix perspective, as shown below.

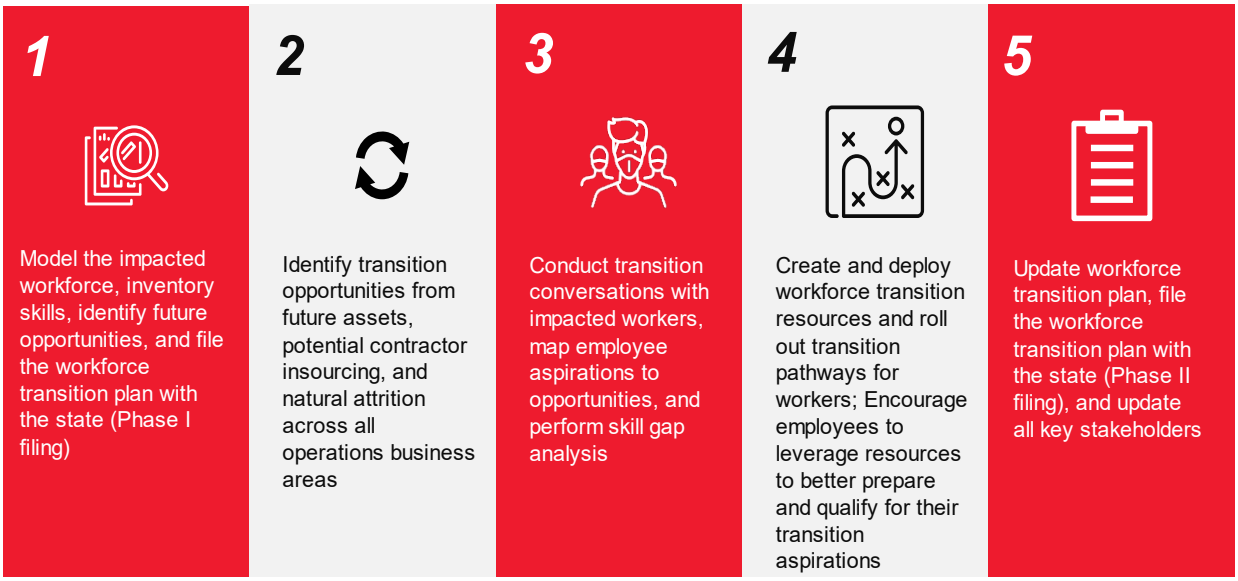


[1] In addition to these acquisitions, we have accounted for a robust distributed energy resource future as part of our plan, with 1,158 MW of resources modeled as coming online from 2021 through 2030.

A Planful and Just Transition

Taking the next step in the clean energy transition requires more than crunching the emission reduction numbers and ensuring reliability and affordability. While each of those items is important, it is also critical to recognize that this transition will impact people, both within the Company's workforce and in the communities we serve. To that end, our just transition efforts consist of workforce transition and community assistance components, consistent with the directives of Senate Bill 19-236.

Public Service addresses workforce transition at Hayden 1 and 2, Pawnee, and Comanche 3 with a specific workforce transition plan provided as part of this 2021 ERP & CEP. We have deep experience with developing and implementing successful, low-impact workforce transition plans for previous plant retirements and fuel-switching actions in Colorado. In fact, during the course of numerous accelerated plant retirements over the past two decades, we have not implemented layoffs or forced workforce reduction—and we are committed to a similar outcome for our valued employees here using the approach reflected below. The following figure represents the five basic steps of our workforce transition plan:



The Company also has a proud history of working with our host communities affected by accelerated retirements of coal plants, and we are proposing to build on that history here. In the 2016 ERP, for example, we worked closely with the Pueblo community on the Comanche 1 and 2 accelerated retirements to build stakeholder support for these retirements and find a win for the community. A centerpiece of that effort was the siting of economic solar generation within Pueblo County, which helped to restore the tax base lost as a result of the Comanche 1 and 2 accelerated retirements. Each community and accelerated retirement is different, however, and there is no community assistance blueprint that can fit each and every situation.

Our Leadership and Next Steps

Electric Resource Planning is one of the most important undertakings of a utility in collaboration with its utility commission and other stakeholders. Decisions made in this proceeding are critical to reliability and delivery of electric services, which are a foundational responsibility of any utility. Those same decisions determine a substantial portion of the long-term costs of electric services for customers, as well as utility economics and health. And now, as an even larger focus, the Clean Energy Plan drives emission reductions from the electric system and makes environmental impact one of the most substantial considerations in the selection of resources. There will be many considerations taken into account through the duration of this proceeding, and decisions regarding pathways, trajectories, and impacts will be part science, part analytics, and part art—all while considering the real impacts on real people and communities associated with our plan.

The preferred plan that we are presenting to the Commission in this 2021 ERP & CEP, along with robust data and information backup, is a balanced approach to a successful long-term future. This is truly a landmark plan that will take the next step in the energy transition, provide the State of Colorado with the emission reduction down-payment it is depending on from the power sector to advance toward economywide goals, and transition our workforce and host communities on an appropriate timetable. We need to develop a sensible and sensitive coal transition plan as part of this Phase I process and believe we have brought one forward here. Once the coal transition decisions are made in this phase of the proceeding, we will be positioned to use the well-established and high-functioning ERP competitive bidding process to build a portfolio that will not only meet but hopefully exceed the clean energy targets established for the Company by Senate Bill 19-236. We all have a lot of complicated work to do and it will take many stakeholders beyond just us to make this all come together. We are excited about the future of the Company and the State of Colorado, with this plan as the anchor of the implementation of one of the most robust climate policy agendas in the United States.

**BEFORE THE PUBLIC UTILITIES COMMISSION
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DIRECT TESTIMONY AND ATTACHMENTS OF ALICE K. JACKSON

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LIST OF ATTACHMENTS

Attachment AKJ-1	Volume 1 of the 2021 Electric Resource Plan and Clean Energy Plan (Plan Overview)
Attachment AKJ-2	Volume 2 of the 2021 Electric Resource Plan and Clean Energy Plan (Technical Appendix)
Attachment AKJ-3	Volume 3 of the 2021 Electric Resource Plan and Clean Energy Plan (Request for Proposals and Model Contracts)
Attachment AKJ-4	Colorado Greenhouse Gas Pollution Reduction Roadmap

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
2021 ERP & CEP	2021 Electric Resource Plan and Clean Energy Plan
BVEM	Best Value Employment Metrics
CED	Corporate Economic Development
CEPP	Colorado Energy Plan Portfolio
CEPR	Clean Energy Plan Rider
Commission	Colorado Public Utilities Commission
CPCN	Certificate of Public Convenience and Necessity
CT	Combustion Turbine
DER	Distributed Energy Resource
ECA	Electric Commodity Adjustment
ERCOT	Electric Reliability Council of Texas
ERP	Electric Resource Plan or Electric Resource Planning
EVRAZ	CF&I Steel, L.P. d/b/a EVRAZ Rocky Mountain Steel
GW	Gigawatts
HCE	Holy Cross Energy
IPP	Independent Power Producer
IREA	Intermountain Rural Electric Association
LSE	Load-Serving Entity
MW	Megawatts
OJT	Office of Just Transition
Oxy	Occidental Petroleum Corporation
Pathway Project	Colorado's Power Pathway 345 kV Transmission Project

Acronym/Defined Term	**Meaning**
PPA	Power Purchase Agreement
PRM	Planning Reserve Margin
Public Service or Company	Public Service Company of Colorado
RAP	Resource Acquisition Period
RESA	Renewable Energy Standard Adjustment
Roadmap	Colorado Greenhouse Gas Pollution Reduction Roadmap
RTO	Regional Transmission Organization
SCC	Social Cost of Carbon
SPP	Southwest Power Pool
SPS	Southwestern Public Service Company
SRP	Salt River Project
TCA	Transmission Cost Adjustment
Tri-State	Tri-State Generation and Transmission Association, Inc.
TWh	Terawatt-Hours
XES	Xcel Energy Services Inc.
Xcel Energy	Xcel Energy Inc.

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DIRECT TESTIMONY AND ATTACHMENTS OF ALICE K. JACKSON

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

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Alice K. Jackson. My business address is 1800 Larimer Street, Denver, Colorado 80202.

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

A. I am President of Public Service Company of Colorado ("Public Service" or the "Company").

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

A. I am testifying on behalf of Public Service.

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.

A. As President of Public Service, I am responsible for the overall operations of the Company. A description of my qualifications, duties, and responsibilities is set forth in my Statement of Qualifications at the conclusion of my Direct Testimony.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my Direct Testimony is to describe our transformative clean energy plan, the 2021 Electric Resource Plan and Clean Energy Plan ("2021 ERP & CEP"), which is projected to result in an estimated 85 percent emission reduction by 2030 from 2005 levels and deliver nearly 80 percent of our customers' energy by 2030 from renewable resources. I will describe the plan, the retirement of coal plants under the plan, and the extraordinary growth of clean energy. I will also discuss the steps we are taking to protect reliability by, among other things, investing in flexible and dispatchable resources. My testimony will also discuss the affordability aspects of the plan and describe how we are working to ensure a just transition for affected communities. Taken as a whole and combined with our transmission plan (Colorado's Power Pathway 345 kV Transmission Project or the "Pathway Project"), the plan we are presenting today will result in a cleaner, stronger and better electric system, one that meets State of Colorado energy policy and establishes the foundation for the zero-carbon energy future we envision.

Q. ARE ANY OTHER WITNESSES FILING POLICY TESTIMONY IN SUPPORT OF THIS PHASE I 2021 ERP & CEP FILING?

A. Yes. Company witnesses Mr. Jack W. Ihle and Ms. Brooke A. Trammell also provide policy testimony and take on some of the more traditional aspects of the policy or lead witness role. However, given the magnitude of this 2021 ERP & CEP for both our customers and the State as a whole, I felt it was essential as the President of Public Service to present our vision and support key components of this plan.

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

A. Yes. I am sponsoring Attachments AKJ-1 through AKJ-3, which are the three volumes of the Company's 2021 ERP & CEP. I am also sponsoring Attachment AKJ-4, which is a true and correct copy of the Colorado Greenhouse Gas Pollution Reduction Roadmap ("Roadmap").

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

A. I recommend that the Colorado Public Utilities Commission ("Commission") approve our Phase I 2021 ERP & CEP, including our preferred plan. As a component of this overall Phase I approval, I also specifically support and recommend the 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.

These approvals will allow us to proceed to the Phase II competitive solicitation and bring the State of Colorado the emission reductions that are required to meet its emission reduction goals.

II. 2021 ERP & CEP OVERVIEW

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

A. The purpose of this section of my Direct Testimony is to provide an overview of our 2021 ERP & CEP. Colorado's Electric Resource Planning ("ERP") process is viewed as the gold standard for increasingly clean power procurement within the regulated model. In this case, we will put the well-established and high-functioning process to work to advance the State of Colorado's emission reduction objectives and energy policy goals.

Q. WHY DO YOU REFER TO THE COLORADO ERP PROCESS AS THE "GOLD STANDARD" FOR INTEGRATED RESOURCE PLANNING?

A. The last three ERP cycles, coupled with the emission reduction plan brought forward under the Clean Air-Clean Jobs Act, show the ERP process is a vehicle to advance the changes that customers and the State want and need from their utility. Through resource plans filed and approved by this Commission since 2007, the Company has retired or will retire over 1,500 megawatts ("MW") of coal-fired generation *before* even considering additional coal actions as part of this plan. The capacity and energy associated with these retirements has been replaced with renewable and gas resources. The last ERP alone added over 2,000 MW of clean energy and embedded storage to our system.

A. The Preferred Plan

Q. PLEASE DESCRIBE THE COMPANY'S PREFERRED PLAN.

A. This resource plan is the largest, most aggressive, and most climate-driven proposal brought forward in our Company's history, and almost certainly in the State of Colorado's history as well. The resource acquisition figures may change under various scenarios, but under our preferred plan the modeling results in the following proposed acquisitions during the resource acquisition period ("RAP"):[2]

- *2,300 MW of wind*
- *1,600 MW of large-scale solar*
- *400 MW of battery storage*
- *1,300 MW of flexible dispatchable generation*[3]

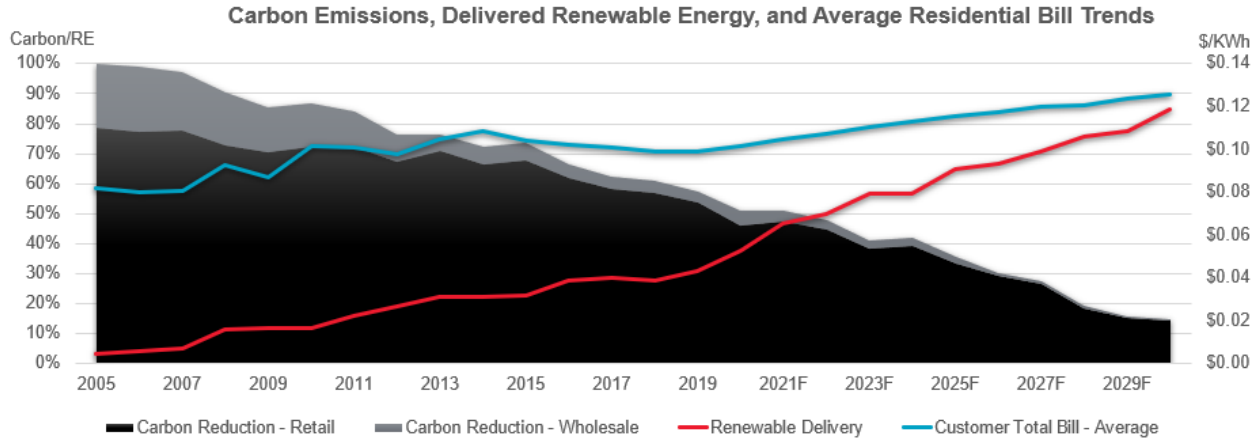
In addition, we have accounted for a robust distributed energy resource ("DER") future as part of our plan, with 1,158 MW of DERs coming online over the RAP between 2021 and 2030. There are many drivers of these various resource acquisitions, but it is important to point out that we have included the social cost of carbon ("SCC") in our optimization for the first time as required by Senate Bill 19-236. Our business is evolving, and this plan shows we are evolving our evaluation processes along with it.

[2] As supported by Company witness Mr. James F. Hill, the RAP in this 2021 ERP & CEP is 2021 through 2030.
[3] The figures above reflect our generic modeling results under our preferred resource plan. The Phase II competitive solicitation will be an all-source competitive solicitation, as we have conducted in the past.

Q. PLEASE DISCUSS ACHIEVED EMISSION REDUCTIONS, DELIVERED RENEWABLE ENERGY, AND BILL TRENDS FROM 2005 THROUGH 2030 UNDER THE PREFERRED PLAN.

A. Figure AKJ-D-1 below shows the evolution of our system, inclusive of the proposed coal transition and resource acquisitions prior to and as a part of this preferred plan, with renewable delivery and the average residential customer total bill overlaid on the Company's emission reduction trajectory.

Figure AKJ-D-1



Note: Customer total bill shown at 2% per year. Actual bids and build year will determine impact and is expected more variable year over year than depicted.

To me, Figure AKJ-D-1 shows that we have already made great progress in reducing emissions in an affordable way. Equally as important, it looks to the future and shows how, if done right through this ERP process, we can reduce emissions by approximately 85 percent from 2005 levels and bring delivered renewable energy to nearly 80 percent by 2030—all while keeping total bills low. This is the vision for the 2021 ERP & CEP. The two percent per year trend shown

in Figure AKJ-D-1 from 2021 through 2030 is an indicative number inclusive of the transmission included in the preferred plan along with assumptions for other non-ERP components of cost.

Q. HOW DOES YOUR PREFERRED PLAN FIT INTO THE BROADER LEGISLATIVE LANDSCAPE?

A. Senate Bill 19-236 and House Bill 19-1261 were both passed by the General Assembly and signed into law by Governor Polis as part of the historic 2019 legislative session. The State of Colorado has also developed the final Roadmap, provided as Attachment AKJ-4 to my Direct Testimony. The Roadmap represents the State of Colorado's template for its deliberative development of sector-specific approaches toward the achievement of economy-wide emission reductions of 50 percent by 2030 and 90 percent by 2050, consistent with the objectives of House Bill 19-1261. The State of Colorado has taken its own approach to developing a regulatory architecture to advance emission reductions across the economy, by pursuing sector-specific emission regulations that take into account the unique nature of the diverse segments of the economy regulated under any program. In many ways, this 2021 ERP & CEP is the centerpiece of these broader efforts—it will require contributions and changes from many, but the architecture developed by the General Assembly was built to have the power sector lead the way in the State's clean energy transition. Our preferred plan shows we are prepared to meet this charge.

Q. WHAT ARE THE NEEDS OF THE SYSTEM THAT HAVE BEEN IDENTIFIED FOR THIS RAP?

A. The loads and resources table shown below in Table AKJ-D-1 details the needs of the system by year over the course of the RAP.

Table AKJ-D-1

PSCo Summer L&R Table (MW)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Owned Coal	1,980	1,980	1,655	1,655	1,655	1,278	1,278	1,278	1,278	1,278
Purchased Coal	150	150	-	-	-	-	-	-	-	-
Total Coal-Fired Generation	**2,130**	**2,130**	**1,655**	**1,655**	**1,655**	**1,278**	**1,278**	**1,278**	**1,278**	**1,278**
Owned Gas Steam	310	310	310	310	310	310	310	-	-	-
Owned Gas Combined Cycle	1,855	1,941	1,968	1,968	1,968	1,968	1,968	1,968	1,968	1,968
Purchased Gas Combined Cycle	370	302	170	51	51	-	-	-	-	-
Owned Gas Combustion Turbine	805	1,067	1,067	1,067	1,067	1,067	896	896	896	896
Purchased Gas Combustion Turbine	1,013	758	758	758	758	733	458	238	238	238
Total Gas-Fired Generation	**4,352**	**4,378**	**4,273**	**4,155**	**4,155**	**4,078**	**3,632**	**3,102**	**3,102**	**3,102**
Owned Storage	162	243	276	276	276	276	276	276	276	276
Purchased Storage	-	-	199	199	199	199	199	199	199	199
Purchased Biomass	3	3	3	-	-	-	-	-	-	-
Owned Hydro	14	14	14	14	14	14	14	13	13	13
Purchased Hydro	18	18	18	18	17	17	9	-	-	-
Owned Solar	0.9	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Purchased Solar	202	363	673	669	666	663	659	653	650	647
Purchased BTM Solar	172	195	119	119	125	130	136	144	153	164
Purchased Community Solar	71	111	102	103	121	138	155	171	186	201
Owned Wind	131	131	147	147	147	147	147	147	147	147
Purchased Wind	360	360	402	402	402	394	384	316	316	313
Total Renewable/Other Generation	**1,134**	**1,439**	**1,953**	**1,948**	**1,967**	**1,979**	**1,980**	**1,920**	**1,942**	**1,961**
TOTAL ACCREDITED CAPACITY	**7,616**	**7,947**	**7,881**	**7,758**	**7,777**	**7,335**	**6,891**	**6,300**	**6,322**	**6,342**
Native Load Forecast - Winter2020	6,856	6,973	6,951	6,978	7,031	6,906	6,986	7,063	7,130	7,219
Demand Response	(527)	(527)	(561)	(561)	(561)	(586)	(586)	(586)	(586)	(605)
FIRM OBLIGATION LOAD	**6,329**	**6,446**	**6,390**	**6,417**	**6,470**	**6,320**	**6,400**	**6,477**	**6,544**	**6,614**
Target Planning Reserve Margin	1,139	1,160	1,233	1,232	1,242	1,207	1,152	1,166	1,178	1,191
IREA & HCEA Backup Reserves	45	45	48	48	48	11	11	11	11	11
TOTAL PLANNING RESERVE MARGIN TARGET	**1,184**	**1,205**	**1,281**	**1,280**	**1,290**	**1,219**	**1,163**	**1,177**	**1,189**	**1,201**
Actual Reserve Margin	1,287	1,501	1,492	1,341	1,307	1,016	491	(177)	(222)	(272)
CAPACITY POSITION: LONG/(SHORT)	**102**	**296**	**210**	**61**	**17**	**(203)**	**(672)**	**(1,354)**	**(1,411)**	**(1,474)**

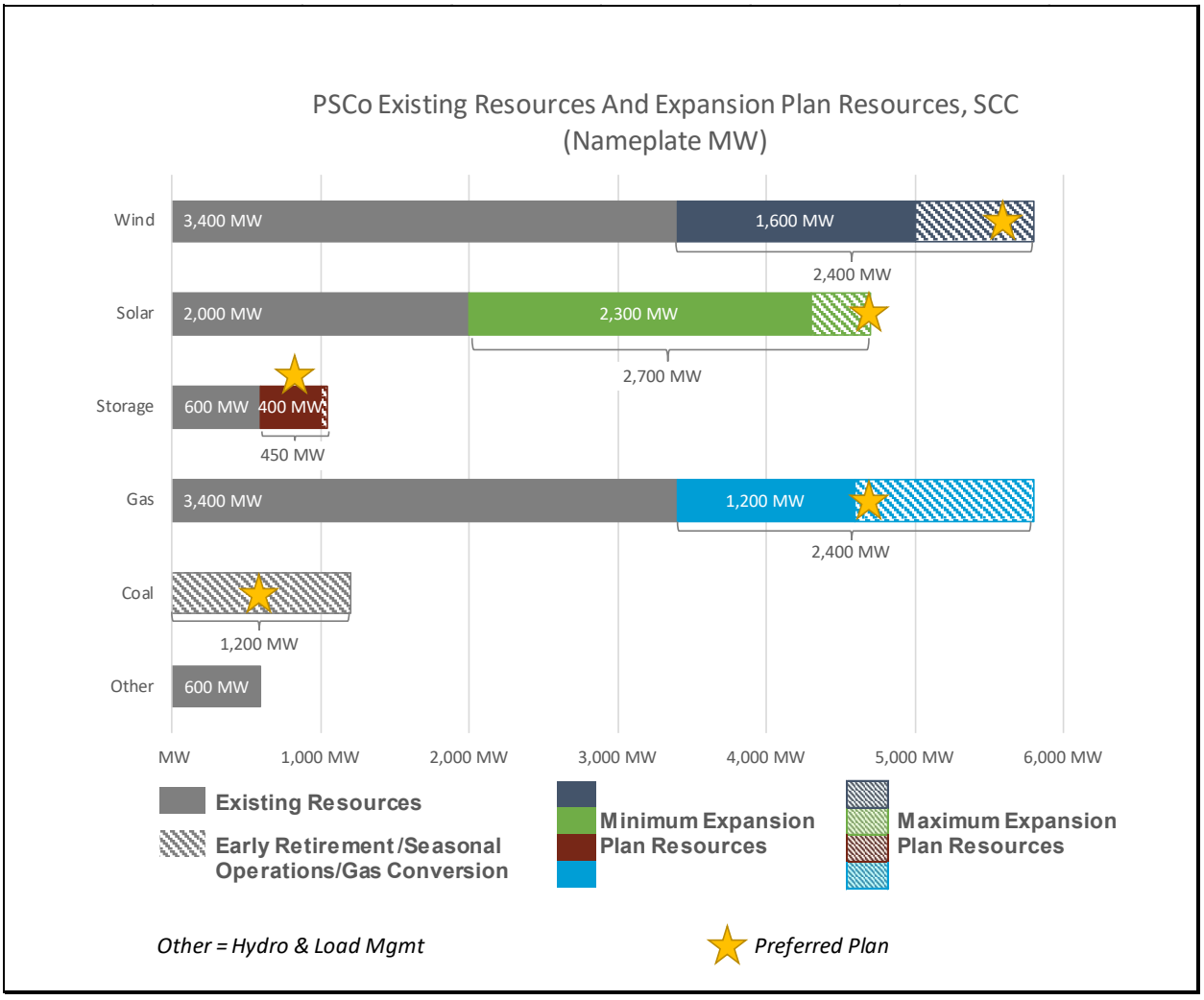
Announced Early Coal Retirements	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Craig 2									(40)	(40)
Hayden 1									(135)	(135)
Hayden 2								(98)	(98)	(98)
PREFERRED PLAN CAPACITY POSITION: LONG/(SHORT)	**102**	**296**	**210**	**61**	**17**	**(203)**	**(672)**	**(1,452)**	**(1,684)**	**(1,747)**

Q. HOW DO THE RESOURCES FROM THE PREFERRED PLAN LAYER ON TO THE EXISTING RESOURCES ON THE SYSTEM?

A. As with any resource planning process, our resource needs will be driven by a combination of native demand, retiring resources, and accelerated retirement of other resources. Through evaluating what should be presented as the preferred plan, the Company looked at multiple scenarios. Many of these scenarios are

presented in this 2021 ERP & CEP as detailed by Company witness Mr. James F. Hill. Figure AKJ-D-2 below shows our existing system resources by resource type as of 2030 (accounting for resources that are retiring and power purchase agreements ("PPAs") that are expiring), with the range of outcomes from the multiple scenarios presented here. I have then overlaid a star where our preferred plan fits for each resource type.

Figure AKJ-D-2

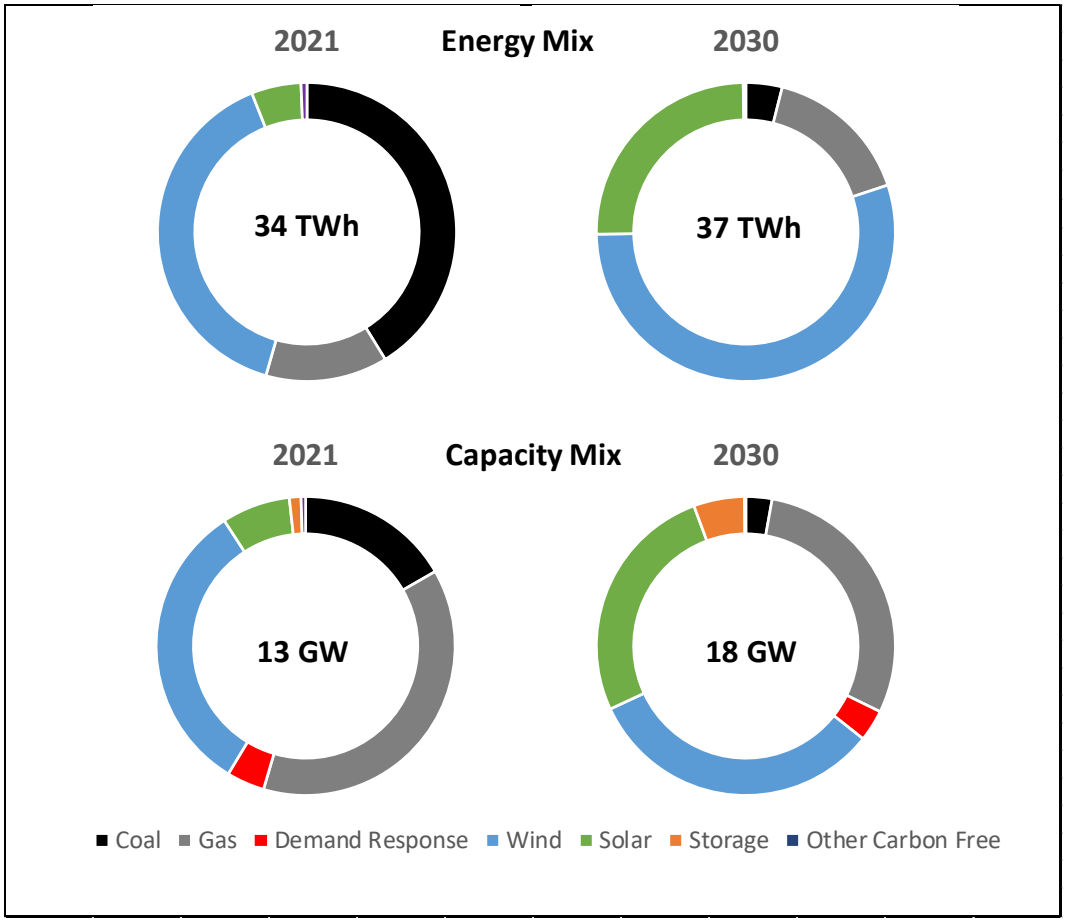


The Company is planning for a peak load of 7,800 MW in 2030 net of demand response and inclusive of the Planning Reserve Margin ("PRM") proposed as part of this case. In addition to the proposed accelerated retirements through our preferred coal transitions, the figure above reflects the expiration or retirement of approximately 2,200 MW of resources between now and 2030—namely, the retirement or expiration of approximately 1,400 MW of natural gas resources. Therefore, if the preferred plan is approved, the total natural gas resources owned or under contract in 2030 would be less than what we have today.

Q. WHAT ARE SOME OF THE KEY OUTCOMES OF THE PREFERRED PLAN?

A. The preferred plan will transition our system in a dramatic way from both an energy and capacity perspective. Figure AKJ-D-3 below shows the change in energy and capacity mix from 2021 to 2030.

Figure AKJ-D-3



Q. PLEASE EXPLAIN HOW THIS FIGURE ILLUSTRATES THE OUTCOMES OF THE PREFERRED PLAN.

A. The energy mix reflects the system's operational characteristics as we run the clean resources as much as reliably possible, while the capacity side delivers our options to maintain reliability, providing us flexibility if carbon-free resources are not available. The top-level energy "donuts" show the change between 2021 and 2030 for total system generation, and this graphic reflects a major reduction in fossil fueled energy delivered to customers, with wind and solar being the primary source of energy by the time we reach 2030. It also reflects growth on the system

as generation increases from 34 terawatt-hours ("TWh") to 37 TWh. The bottom level "donuts" reflect system capacity changes over the same period, with a significant reduction in capacity from coal-fired generation and the primary sources of installed capacity on the system being wind, solar, gas, and some storage. In my opinion, these figures illustrate the substantial change that this plan will bring to our system from an energy and capacity standpoint.

One other area that I reflect on is the growth in native system energy versus the smaller growth in peak demand. The native peak load on our system in 2030 is approximately 7,200 MW. This represents an increase of approximately five percent in total native load from expected 2021 levels. Native system energy, on the other hand, grows from 33.0 TWh projected in 2021 to 35.6 TWh in 2030, reflecting an eight percent growth. This is reflective of off-peak energy consumption increasing due to things like charging electric vehicles or more heating load on the electric system.

Finally, I look at what these previous reflections mean from a reliability standpoint—namely, that while we have substantial installed dispatchable resources, they do not operate at high capacity factors. Nonetheless, they are essential to provide an insurance policy at the least for our customers, that we will be able to reliably operate the system in normal conditions as well as abnormal conditions. I believe that the stress testing performed by Company witnesses Mr. Hill and Mr. John T. Welch, and discussed in their testimony, lends a clear picture of this point.

Q. WILL THE OUTCOME OF THE PHASE II COMPETITIVE SOLICITATION LOOK EXACTLY LIKE THE PREFERRED PLAN FROM A GENERATION MIX PERSPECTIVE?

A. No, but I expect it to be directionally consistent. We will not have carve-outs for specific resource types and will instead conduct an open all-source solicitation. In the last ERP cycle we saw over 400 bids brought forward, and we will once again harness the benefit of the robust competitive process in Colorado to bring forward a cost-effective portfolio of new resources through the 2021 ERP & CEP. The Company is hopeful that we will see the technology advancement or "surprises" that we saw in the Phase II competitive solicitation for the Colorado Energy Plan in our 2016 ERP. I expect tax-advantaged wind and solar to once again anchor the 2021 ERP & CEP from a clean energy perspective, and we have advanced the Pathway Project in Proceeding No. 21A-0096E to bring these clean energy projects to life in a timely way. But we are hopeful we will also see innovation and dispatchable carbon-free generation to fill the need for flexible dispatchable generation to keep our system reliable as we integrate an increasingly large proportion of variable renewable resources.

Q. WILL THE COMPANY ADD NATURAL GAS AS PART OF THE PREFERRED PORTFOLIO IN PHASE II?

A. This will depend on the bids received, but as discussed above we are currently projecting that the preferred plan will result in the need to acquire approximately 1,300 MW of flexible dispatchable resources. That is not to say that the only flexible dispatchable generation will be combustion turbines ("CTs"), and I

anticipate that we will see bids for other types of innovative, zero-emission dispatchable generation. We will likely have CTs as part of the preferred portfolio, however, and I think a few things bear mentioning here.

First, we have approximately 1,400 MW of gas either on expiring PPAs or retiring, so the amount of *incremental* flexible dispatchable generation projected is roughly 100 MW less than what we have installed today. I fully expect that, as with the Colorado Energy Plan, we will see very competitive bids from existing gas generators that can help to lower the cost of our plan. We will also need new, modern flexible generation resources to meet the needs of the system with our ever-increasing levels of variable clean energy.

Second, and as explained in more detail by Company witness Mr. Ihle, we will take affirmative steps to ensure that gas additions are compatible with our future goals and State energy policy objectives to the extent possible. We are encouraging bids in the Phase II competitive solicitation for new-build natural gas resources that are capable of combusting at least 30 percent hydrogen on a volumetric basis, with the potential for higher percentages as we move through time. While this is not a requirement, it is something we propose to consider in our bid evaluation process. Further, as Mr. Ihle explains, we will analyze obtaining any natural gas associated with new gas additions from “certified” or “responsibly-sourced” natural gas sources. This purchasing approach would use third-party measurement and certification to ensure that our sourcing of natural gas would come from producers that are responsibly controlling upstream methane emissions.

Accordingly, as we move forward with this Phase I proceeding and into the Phase II proceeding, several items are important to consider: (1) flexible dispatchable generation can come in many forms and we will evaluate anything that comes in; (2) the incremental level of gas and the book life of that gas must be considered in evaluating gas additions; and (3) we will take steps to ensure that both any new gas and our gas procurement processes are consistent with our vision for a clean energy future.

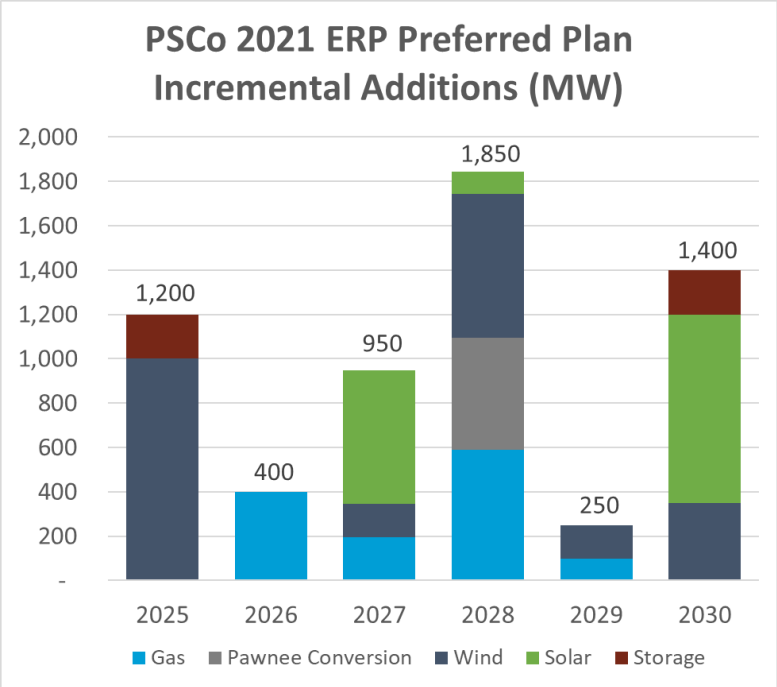
As I touched on above, dispatchable generation assets are the "insurance policy" to a reliable grid. We expect these generators will operate at very low capacity factors and correspondingly low levels of emissions. If the wind blows and the sun shines across all hours, then the emissions from our reliability assets will be *de minimis*. However, in the reverse scenario—when the wind and sun do not meet expectations—we will need these generators to maintain a reliable and affordable energy mix. Until we as the power sector and as a global community develop the technology for a non-emitting, dispatchable generation resource, Public Service believes that a modest amount of gas-fired CTs can provide the reliable and affordable energy we require to run our electric grid with the levels of reliability that our customers expect.

Q. PLEASE BRIEFLY ADDRESS THE TIMING OF THE RESOURCE ACQUISITIONS CONTEMPLATED BY THE GENERIC MODELING FOR THE PREFERRED PLAN.

A. Figure AKJ-D-4 below provides a picture of the timing of the various acquisitions and activities under the preferred plan. It shows the need for early action to bring

tax-advantaged clean energy resources online and begin to advance early emission reductions—two of the primary reasons why we have brought the Pathway Project before the Commission in a separate Certificate of Public Convenience and Necessity ("CPCN") proceeding and have requested a decision on that CPCN prior to the Phase I decision in this proceeding. Further, Figure AKJ-D-4 provides some general sequencing for the Company's other contemplated actions, both for resource acquisitions and the coal fleet.

Figure AKJ-D-4



Q. IS THE ADDITION OF CLEAN ENERGY AND ACHIEVEMENT OF EMISSION REDUCTIONS THE ONLY CONSIDERATION IN BUILDING RESOURCE PLANS?

A. No. This is the first ERP in which we will build plans to meet explicit emission reduction targets. As we move forward, affordability and reliability will be of critical

importance—just as they were in our December 2018 announcement and in the language of Senate Bill 19-236 and House Bill 19-1261, respectively. We understand that technologies and economics can support significant further progress on emission reductions in the power sector in an affordable way, and the cleaner our electricity mix gets while maintaining reliability and affordability, the more progress the economy as a whole can make toward the State's economywide emission reduction goals. We take on that mission with a full sense of what is expected of the power sector and of the Company itself as the State's largest electric utility, and this is why we are proposing a pathway under our 2021 ERP & CEP to exceed the aggressive clean energy target under Senate Bill 19-236. We have thus far transitioned our system toward a carbon-free future while maintaining rates below the national average as well as high system reliability, but we cannot take this for granted. We must continue to keep reliability and affordability top of mind as we move forward.

B. The Reliability of the Preferred Plan

Q. PLEASE GENERALLY DESCRIBE HOW THE COMPANY IS TESTING THE RELIABILITY OF ITS PREFERRED PLAN.

A. Senate Bill 19-236 requires the Company to "describe the effect of the actions and investments included in the clean energy plan on the safety, reliability, renewable energy integration, and resilience of electric service in the state of Colorado."[4] This amounts, in my view, to a reliability check on the preferred plan—a process that

[4] § 40-2-125.5(4)(a)(V), C.R.S.

will continue into the Phase II bid evaluation when we have actual resources and locations. Our reliability check process for now, however, starts with the important endeavor of developing a PRM, and the Company has developed a proposed PRM for use in our resource planning efforts based on a study performed by Astrapé Consulting and sponsored by Company witness Mr. Kevin D. Carden in his Direct Testimony. The PRM was then utilized in assessing resource needs under different scenarios, including our preferred coal transitions. Our Commercial Operations team picked it up from there, reviewing multiple iterations of hourly results with a focus on reliable and realistic operations, reachable emission reductions, and resilience. Company witness Mr. Welch testifies that, based on this assessment, the Company's preferred plan—inclusive of the transition of the coal fleet—is feasible, reliable, and resilient.

Q. IS THE COMPANY EVALUATING RELIABILITY FROM THE PERSPECTIVE OF A SUMMER-PEAKING SYSTEM?

A. This is a complicated question. As explained by Mr. Welch, the current system is not that different from a reliability and planning perspective than the system we planned for ten years ago. To be sure, there is more uncertainty associated with increasing levels of variable renewable energy, requiring advancement and modification in forecasting, operational flexibility, and market interactions. Nevertheless, the system remains largely a summer-peaking system—like it was a decade ago. And this has led to a summer peaking bias, which has served the Company well from a planning perspective for a long time.

This paradigm will change, however, over the course of the RAP, which runs out to 2030. Real operational experience across the country is evolving to show that "summer peaking" or "winter peaking" is almost an antiquated concept. Now, with resource variability and the characteristics of wind and solar, we must evolve to different planning paradigms with smaller planning windows. Mr. Welch's analysis shows that going forward, with 4.5 gigawatts ("GW") of solar and 5 GW of wind on the system, most of the net peaks will continue to occur in the summer but a full third will occur in the winter, i.e., November to February. This makes the winter season of increasing concern and requires our planning to account for a critical new scenario—the winter doldrums. Mr. Welch carries the details, but between this analysis and recent extreme weather events like Winter Strom Uri, winter planning is as important as ever as we go through this proceeding.

Q. WHAT STEPS IS THE COMPANY TAKING ON THE WINTER RELIABILITY FRONT GIVEN THESE DYNAMICS?

A. We are taking four actions to maintain and increase winter reliability, as explained in more detail by Mr. Welch. These steps will result in concrete action toward assurance of winter reliability from both dispatchable and variable resources acquired through this ERP process:

(1) We recommend that the Company require firm fuel delivery for any dispatchable resources selected through the Phase II competitive solicitation.

(2) We will request that dispatchable resource bids in the 2021 ERP & CEP provide a winter reliability plan detailing actions the bidder will take, and any equipment that will be installed, to ensure reliable winter operations.

(3) As we increase our variable renewable generation, the resulting faster and sharper ramps of gas generation may require investments in existing gas storage infrastructure or other equivalent flexible gas service. We have modeled this cost when developing our portfolios, and will continue to evaluate this need and these costs going forward into Phase II and implementation of this 2021 ERP & CEP.

(4) Finally, we will require new or repowered wind generation to have a winterization package that allows for turbine operation at temperatures as low as negative 30 degrees Celsius or negative 22 degrees Fahrenheit.

C. <u>The Affordability of the Preferred Plan</u>

Q. PLEASE BRIEFLY ADDRESS THE AFFORDABILITY ASPECTS OF THE COMPANY'S PREFERRED PLAN.

A. Just as in our December 4, 2018 announcement we focused on reliability and affordability, these two important factors of the clean energy transition also are reflected in the language incorporated in Senate Bill 19-236 regarding the ERP and CEP process. We continue to focus strongly on reliability. Keeping bills low for our customers is a central feature and core strategic principle of our Company. I would argue that in Colorado we have been doing an excellent job on the affordability front and the proof is in the pudding. Currently, our Colorado residential customers enjoy a total bill that is well below the national average.

Additionally, as shown in Figure AKJ-D-1, our residential customers' average total bill in 2020 is below the average total bill they paid as far back as 2014. This success from our customers' pocketbook perspective was achieved because of a variety of factors, ranging from fuel costs to energy efficiency adoption, good fiscal management of our operations and maintenance expenses, and the addition of cost-effective generation resources including wind and solar.

We are looking to continue this affordability aspect of our energy costs with the preferred plan presented here. Specifically, the codified legislative declaration for Senate Bill 19-236 provides that one of the stated goals articulated by the General Assembly for the ERP and CEP portion of that legislation is to "allow Coloradans to enjoy the benefits of reliable clean energy at an affordable cost."[5]

When evaluating the impact of the preferred plan on our customers' bills, we fully anticipate that the total bill impact will be no more than the rate of inflation—at or below approximately two percent per year. In this Phase I portion of the 2021 ERP & CEP, we utilize generic pricing in the preferred plan; however, in the Phase II presentation to the Commission on customer costs, we will use *actual* bids and actual portfolios that are proposed for Commission approval. Historically, our Phase II resource acquisition process has resulted in prices that were more favorable than the generic pricing, and we are hopeful that we will see that here again and be able to provide our customers an even more affordable clean energy transition.

[5] § 40-2-125.5(1)(e), C.R.S.

Q. WHAT ARE THE PROJECTED RATE IMPACTS OF THE DIFFERENT SCENARIOS, INCLUDING THE PREFERRED PLAN?

A. Table AKJ-D-2 below shows the rate impacts of the different SCC scenarios under consideration.

Table AKJ-D-2

Portfolio	SCC 1	SCC 2	SCC 3	SCC 4	SCC 5	SCC 6	SCC 7	SCC 8
Resource Need:	ERP	CEP	CEP	CEP	CEP	CEP	CEP Preferred	CEP
Pawnee Action:	Retire EOY 2041	Retire EOY 2028	Retire EOY 2028	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2024
Comanche 3 Action:	Retire EOY 2069	Retire EOY 2029	Retire EOY 2039 Red Ops	Convert Nat Gas EOY 2027	Retire EOY 2029	Retire EOY 2039	Retire EOY 2039 Red Ops	Retire EOY 2039 Red Ops
Average Annual Rate Impact								
2024-2030 (%)	2.1%	3.1%	2.8%	2.8%	2.9%	2.4%	2.6%	2.5%
2024-2040 (%)	1.5%	1.5%	1.6%	1.5%	1.5%	1.6%	1.5%	1.6%
2024-2055 (%)	1.7%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%

The preferred plan is SCC 7 in this table. Across the generic portfolios, the table shows customer impacts at their highest levels between years 2024-2030 when resources are acquired to meet the 2030 clean energy target. While the costs for clean energy actions to achieve the 80 percent clean energy target continue beyond 2030, the additional costs year over year tend to decrease, resulting in lower average annual rate impacts. The preferred plan is one of the lower-cost plans from an average annual rate impact perspective for 2024-2030, and the plans are generally about the same for the other timeframes. The good news from the standpoint of our customers is that this impact analysis reflects the cost impacts of these plans in a vacuum. It does not reflect the cost impacts net of other changes on the system or account for existing cost recovery mechanisms that would fund portions of these costs.

Q. WHAT TOOLS DID SENATE BILL 19-236 PROVIDE TO GUIDE TRACKING OF AFFORDABILITY AND PROVIDE FOR COST RECOVERY OF THE CEP?

A. To meet the requirements of this language we have several tools at our disposal, as reflected in Table AKJ-D-3 below. These tools include a new mechanism, the Clean Energy Plan Rider ("CEPR") provided by Senate Bill 19-236, as well as existing or repurposed mechanisms, e.g., the Renewable Energy Standard Adjustment ("RESA") for select incremental costs, the Electric Commodity Adjustment ("ECA") for fuel costs and other items, the Transmission Cost Adjustment ("TCA") for network transmission costs, and of course base rates.

Table AKJ-D-3

Mechanism	***Scope of Recovery***
CEPR (SB 19-236)	CEP capital investments and operating and related expenses *exclusive* of fuel costs, transmission costs, ERP portfolio costs, eligible energy resource incremental costs, clean energy resource and directly related interconnection facilities incremental costs
RESA (SB 19-236)	Incremental costs of clean energy resources and directly related interconnection facilities (one-half of annual RESA collections plus accrued funds)
RESA (Traditional)	Incremental costs of eligible energy resources (all remaining RESA funds)
ECA	Fuel costs plus other approved items
TCA	Network transmission costs
Base rates	All other costs

Company witnesses Ms. Brooke A. Trammell, Mr. Alexander G. Trowbridge, and others address this cost recovery framework in more detail, and we will be in a position to more fully address these impacts in the Phase II process when we have actual bids and portfolios.

D. Resource Planning, Legislative, and Policy Considerations

Q. WHAT ARE THE IMPORTANT CONCEPTS THAT UNDERLIE THE ERP PROCESS?

A. The ERP process embraces and balances two important concepts: (1) the use of competitive power procurement to develop cost-effective and increasingly clean power; and (2) the maintenance of a financially healthy, fully regulated utility that can serve as a key partner to advance the State's energy policy objectives. The all-source Phase II competitive solicitations buttress the first concept. As to the second, the Commission must remain vigilant in all cases where the utility is before it that the Company stay financially healthy. The Company's leadership in the clean energy transition and our prioritization of both economics and the environment in providing electric service is important, but that is not the end of the story. The Company's financial health and credit ratings affect customers and shareholders—and they also ultimately affect State of Colorado energy policy. Constructive treatment from a financial metric standpoint—e.g., considering the Company's return on equity, the impact of high levels of PPAs on our balance sheet, and other considerations—is fundamental to allow the Company to continue to play the role it has played for years now in helping position Colorado as a national leader in transitioning the system in a cost-effective manner. The commitment to these two concepts is what makes the ERP process a success and a blueprint for other states to follow.

Q. HAS THE GENERAL ASSEMBLY CODIFIED THESE TWO CONCEPTS IN YOUR VIEW?

A. I am not a lawyer but in my opinion the answer is yes. The General Assembly has recognized these two foundational concepts by carving out the ERP process from House Bill 19-1261's broader economywide emission reduction program as a tool to advance decarbonization—with express reliability, affordability, and generation ownership provisions. The ERP process can do more by harnessing both competition and the benefits of the regulated model, and the combined statutory structure of Senate Bill 19-236 and House Bill 19-1261 recognizes exactly that. In addition, the General Assembly mandated the use of competitive bidding while codifying ownership percentage targets between utilities and independent power producers ("IPPs") for the 2021 ERP & CEP.

Q. HOW IS THE PROVISION OF SENATE BILL 19-236 REGARDING COMPETITIVE BIDDING AND OWNERSHIP TARGETS CONSISTENT WITH THE TWO CONCEPTS YOU DESCRIBED THAT UNDERLIE THE ERP PROCESS?

A. First, Senate Bill 19-236 provides that the Company "shall utilize a competitive bidding process, as defined by the commission in rules, to procure any energy resources to fill the cumulative resource need derived from the electric resource plan and the clean energy plan …."[6] This is directly in line with the competition concept I described above.

[6] § 40-2-125.5(5)(b), C.R.S.

Second, the ownership targets codified by Senate Bill 19-236 build on the Commission's long record of supporting balanced generation ownership. For example, Decision No. C08-0929 addressing our 2007 ERP provides as follows:

> We find that both utility and IPP ownership provide significant benefits to ratepayers. Utilities have access to inexpensive capital, and utility plants provide long-term benefits to customers. IPP contracts insulate ratepayers from many risks, and IPPs provide a wealth of experience in constructing and operating plants. Together, a portfolio of utility-owned and IPP generation can provide the best overall value to consumers. In fact, ratepayers are at risk if either the IPP or utility ownership mechanisms are impaired. It is important to maintain a vibrant environment for both utility and IPP generation so that both can continue to advance technological efficiencies, and so that they keep each other sharp through competition.[7]

Further, in our last ERP approving the Colorado Energy Plan, the Commission held that "[t]he CEP Portfolio also offers a reasonable mix of utility and IPP ownership. Consistent with the CEP Presentation Decision, it is in the public interest for Public Service's generation fleet to achieve a reasonable balance of the utility-owned and IPP-owned generation resources."[8] Senate Bill 19-236 codifies the well-established proposition of balanced ownership with a 50 percent utility ownership target, and it is a provision of law that is directly related to the financial health of the utility. As we take the next step in our clean energy transition, the opportunity to invest in and own new generation will help to ensure that the Company remains financially viable—even while taking on weight on our balance sheet for the expected PPAs coming out of this plan and voluntarily retiring

[7] Proceeding No. 07A-0447E, Decision No. C08-0929, at ¶ 177 (mailed Sept. 19, 2008).
[8] Proceeding No. 16A-0396E, Decision No. C18-0761, at ¶ 105 (mailed Sept. 10, 2018).

utility assets that are earning a return as determined by previous Commission decisions.

Q. HOW, IF AT ALL, WOULD MEMBERSHIP IN A REGIONAL TRANSMISSION ORGANIZATION ("RTO") IMPACT THE COMPANY'S RESOURCE PLANNING?

A. It would not. Even in an RTO structure, at least in the types of structures that we would potentially be a part of, each load-serving entity ("LSE") is responsible for meeting its respective load obligations. Put another way, we would still do resource planning and make resource decisions in the type of process we are doing here. It could, however, affect the dispatch of our fleet which may or may not be consistent with the State of Colorado's emission reduction and energy policy objectives. Moreover, I think it is also important to note that even if we had an RTO selected today, we would still have a substantial period of time to effectuate that membership and it is not anticipated to allow for any meaningful transmission development that could be used to meet the resource needs associated with this RAP. We did run an increased import and export sensitivity to test the robustness of our preferred plan by mimicking participation in a broader regional market construct, which is addressed in more detail by Company witness Mr. Hill and in our 2021 ERP & CEP. In sum, I believe the actions in this 2021 ERP & CEP to advance State of Colorado energy policy objectives are prudent and needed regardless of what ultimately comes to fruition from a regional market perspective.

E. Looking to a Zero-Carbon Future

Q. IS THE COMPANY "DONE" WITH ITS CLEAN ENERGY TRANSITION WHEN THIS 2021 ERP & CEP IS IMPLEMENTED?

A. No. Meeting the 2030 clean energy target of an 80 percent reduction in emissions from 2005 levels is an important milestone, but does not mean we are done with our clean energy transition. In our 2018 announcement, we also focused on a carbon-free system by 2050. The work we are doing here will make significant strides towards this 2050 goal. There is more work to be done, however, and advancements in technology are necessary to maintain the reliability that our customers demand and deserve while moving to a carbon-free electric generation system.

Q. THERE HAVE BEEN A NUMBER OF REPORTS OR THIRD-PARTY ENTITIES THAT STATE A CARBON-FREE SYSTEM IS POSSIBLE MUCH EARLIER THAN 2050. HOW DO YOU RESPOND?

A. I think these studies are helpful for policy discourse, but it bears to keep in mind that entities conducting these studies are not electric system operators. Here, as part of our direct case and in the Direct Testimony of Company witness Mr. Ihle, we address some of these studies and assess their analysis and assumptions. At the end of the day, our focus must be on reliability and affordability first.

Q. IS THERE ANYTHING IN THIS 2021 ERP & CEP THAT OPENS THE DOOR FOR PROGRESS BEYOND THE 2030 GOAL AND MOVEMENT TOWARD THE 2050 GOAL?

A. Absolutely. Clearly, we need to continue evaluating the technology gaps that remain to achieving the 2050 goal of a carbon-free system and iterating to solve these outstanding issues on our path towards that objective. In 2004, with the ballot initiative that established the Renewable Portfolio Standard, and in each successive legislative action that increased those percentages, we were adding resources to the system that brought unknowns and were uneconomic. They nevertheless broke the path to large-scale clean energy transition that we are on now. We will need to explore doing that again here with a new set of technologies to achieve the 2050 targets. Wind, solar, and battery storage are not enough to close the gap and achieve a carbon-free system reliably and affordably. Therefore, through this 2021 ERP & CEP, we suggest some pathways and ask the Commission to provide guidance on how we should explore these important factors in the 2021 ERP & CEP—and in future ERPs. We specifically suggest development steps for technologies such as hydrogen and advanced storage that can be applied to other technologies as they come along. It is imperative that we begin to act now and establish a process to evaluate these important technologies that, in this earlier stage, may not be economic, just like our early wind and solar contracts were not economic. These nascent technologies hold the key to unlock a carbon-free, reliable, and affordable energy future for our customers and the State of Colorado.

III. TRANSITIONING THE COAL FLEET AND ENSURING A JUST TRANSITION

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

A. The purpose of this section of my Direct Testimony is to address our proposed actions for the remaining coal fleet, which consists of analyzing actions for Craig 2, Hayden 1 and 2, Pawnee, and Comanche 3. We have a plan of action for each, and the Company's coal action plan addresses *all* of the remaining coal generation facilities on the system. In taking the next step in the clean energy transition, we also go beyond crunching the emission reduction numbers and ensuring reliability and affordability. Each of those items are important to Public Service as a fully regulated utility with an obligation to serve. However, this transition will impact real people, both within the Company's workforce and in the communities we serve. There are two general aspects of just transition in the power sector, i.e., workforce transition and community transition. Our direct case outlines our plans for both. Company witnesses Ms. Holly L. Stanton and Ms. Hollie J. Velasquez Horvath provide more details regarding these plans, but in this section of my testimony I will provide a high-level overview of our approach to this important aspect of our transition plans.

A. Transitioning the Coal Fleet

Q. ARE ALL OF THE COMPANY'S REMAINING COAL UNITS TRANSITIONED THROUGH THE COMPANY'S PLAN?

A. Yes. Our transition plan addresses each remaining unit in the coal fleet.

Q. PLEASE DESCRIBE THE PROPOSED ACTION FOR CRAIG 2.

A. Craig Station is a 1,285 MW, three-unit generating facility in Moffat County. Craig 1 and 2 are known as the Yampa Project, and we share ownership with four other utilities: PacifiCorp, Platte River Power Authority, Salt River Project ("SRP"), and Tri-State Generation and Transmission Association, Inc. ("Tri-State"). The Company has a 10 percent share in the Yampa Project, and the Yampa Project owners previously announced the retirement of the 427 MW Craig 1 unit by the end of 2025. Craig 3 is 448 MW and owned solely by Tri-State; this unit will retire by 2030. After months of analysis and discussion among the partners, we reached a unanimous decision to retire the 410 MW Craig 2 unit by September 30, 2028. This decision was reached as a result of the careful balancing of each utility's regulatory obligations and system requirements.

Q. PLEASE DESCRIBE THE PROPOSED ACTION FOR HAYDEN 1 AND 2.

A. As with Craig 2, the Company has partners in Hayden 1 and 2. Hayden 1 and 2 are 179 MW and 262 MW, respectively, and the Company owns the units along with PacifiCorp and SRP. However, unlike at Craig, the Company is the majority owner and operator of the Hayden Generating Station, owning about 75 percent of Hayden 1 and 37.5 percent of Hayden 2. SRP owns 50 percent of Hayden 2 and PacifiCorp owns the remainder of Hayden 1 and 2. The planned retirement date for Hayden 1 was 2030, while the retirement date of Hayden 2 was 2036. Earlier this year, and again after extensive discussions and negotiations with PacifiCorp and SRP, we collectively agreed to accelerate the retirement of Hayden 2 to the end of 2027 and Hayden 1 to 2028.

Q. IS THE COMPANY SEEKING COMMISSION APPROVAL OF THE COAL ACTIONS FOR CRAIG 2, HAYDEN 1, AND HAYDEN 2?

A. Yes. While we have agreed with our partners on a proposed path, we understand we need Commission approval to retire these units and will need to file limited-scope CPCN applications in the future with regard to these retirements. Given the negotiations with our partners, however, I would note that the accelerated retirement dates are all carefully crafted based on the regulatory and system requirements of all owners of these plants. Because of the negotiated agreements to accelerate the retirements, we have included these retirements in the modeling of our reference case for the ERP.

Q. HOW DOES THE COMPANY ADDRESS THE REMAINING UNITS IN THE COAL FLEET?

A. To transition the remaining coal units, Pawnee, and Comanche 3, the Company proposes to convert Pawnee to natural gas in 2028 and accelerate the retirement of Comanche 3 to 2040 from 2070. In addition, we are recommending that beginning at the end of 2029, Comanche 3 will be on an operational limitation where its operations cannot exceed a 33 percent annual capacity factor. The Company reached this proposal after a robust evaluation of different actions and pairings of actions, analyzing combinations of accelerated retirement, gas conversions, and operational limitations for these plants to develop different pathways to meet our 2030 clean energy target. Pawnee is a 505 MW coal plant with a book life that runs through 2041, while Comanche 3 is a 750 MW coal plant with a book life through 2070. There are numerous considerations in determining

the best path for Pawnee and Comanche 3, from cost to emission reduction trajectory, but we also cannot lose sight of the human element of our coal actions.

Q. WHY IS THE COMPANY PROPOSING TO CONVERT PAWNEE TO NATURAL GAS?

A. This proposed approach seizes on the relatively low conversion cost for Pawnee, which is estimated at approximately $44 million. Pawnee is also located near existing natural gas pipeline infrastructure, and therefore only requires a pipeline connection of roughly a half mile that will connect the plant to an existing pipeline. The conversion can avoid new gas investment that would lock the Company into higher levels of fossil investments longer into the future. Under the proposed approach with Pawnee, the unit would be retired in 2041—its current retirement date. The Company also evaluated a closure of Pawnee at the end of 2029, but this proposed conversion approach avoids the community impacts associated with an accelerated retirement and retains a generator on the Company's system that can support the system when there is low or no production from our variable energy resources on the system. Due to the relatively low cost, Pawnee's location, and avoidance of new gas investments, the Company proposes to convert Pawnee to natural gas.

Q. PLEASE EXPLAIN THE BASIS FOR THE COMPANY'S APPROACH FOR COMANCHE 3.

A. Comanche 3 still has a long useful life remaining out to 2070. It is a plant that has been a key contributor to the reliable and affordable operation of our system since it was brought online in 2010. Comanche 3 was approved by the Commission in

2004, construction began in the fall of 2005, and the unit went into service in July 2010. Its fuel source is low-sulfur coal from the Powder River Basin near Gillette, Wyoming. The Company has two partners in Comanche 3: Intermountain Rural Electric Association ("IREA") and Holy Cross Energy ("HCE"). IREA owns 25.33 percent of the unit, while HCE owns eight percent of the unit.[9] The Company owns the remainder and operates the plant.

Q. WHY DID THE COMPANY DECIDE ON A 2040 ACCELERATED RETIREMENT DATE FOR COMANCHE 3?

A. This date gives our Pueblo host community a longer runway to prepare for the closure of Comanche 3 as compared to an earlier accelerated retirement. Beginning in 2030, the unit will also be on limited operations of a 33 percent annual capacity factor. This limits Comanche 3's post-2030 emissions while keeping it online to provide reliable operations for the system. If deemed appropriate by the Commission, we intend to securitize Comanche 3 in 2040. The securitization tool, combined with limited operations beginning in 2030 and a 20-year runway for the Pueblo community, strikes the right balance between emission reductions and providing a reasonable pathway for the transition of our host community.

Q. ARE THERE OTHER BENEFITS ASSOCIATED WITH THIS APPROACH?

A. Yes. It provides option value and operational flexibility—critical considerations in each step of the transition—for the Company in a rapidly changing environment by not making an irreversible and premature retirement decision here. At the same

[9] We have been in discussions with our co-owners and will continue those conversations through the pendency of this proceeding. They have not yet formally agreed on the path forward for Comanche 3.

time, the operational limitation will put a cap on the emissions from the plant post-2030. As we position ourselves for a carbon-free future—a future that is a bet on innovation and on dispatchable, carbon-free generation technologies becoming available to support our increasing levels of variable clean energy resources—we need to move forward carefully. Earlier retirements may result in the need for additional investment in dispatchable generation *now*—generation that likely will not be carbon-free and will have an even longer book life or contract term than the coal units they would be replacing. Keeping some existing coal and operating it in the limited way proposed by the Company avoids locking in additional fossil investment while also providing appropriate and just runways for communities that will be affected by the energy transition. The Comanche 3 and Pawnee approaches taken together can limit the need for additional gas-fired capacity as a part of the Phase II competitive solicitation, all while exceeding the clean energy target of Senate Bill 19-236 and giving our Morgan County and Pueblo County host communities time to transition—a transition we will work hand in hand with them on. In this way, we are maintaining option value in the future on potential technology and market developments, all while keeping transition costs low for a critical and large resource on our system.

Q. HOW IS THE COMPANY PROPOSING TO RECOVER THE COSTS ASSOCIATED WITH EACH OF THE COAL ACTIONS?

A. The cost recovery approach is explained in more detail by Company witness Mr. Scott A. Watson, but the Company is proposing to use regulatory assets for the Craig 2 and Hayden 1 and 2 retirements, and for the Pawnee conversion costs.

For Comanche 3, the Company is proposing to use the securitization tool beginning in 2040. The size of the Comanche 3 net book value, as explained by Mr. Watson, makes this unit a good candidate for securitization.

B. Ensuring a Just Transition

Q. DOES SENATE BILL 19-236 ADDRESS JUST TRANSITION?

A. Yes. Senate Bill 19-236 generally provides that for any accelerated retirement of an existing generating facility, the utility must address workforce transition and community assistance. The legislation further provides that the utility may propose a cost recovery mechanism to recover the costs associated with these plans.

Q. WHAT IS THE COMPANY PROVIDING IN THIS FILING TO ADDRESS THESE REQUIREMENTS?

A. Public Service addresses workforce transition at Hayden 1 and 2, Pawnee, and Comanche 3 with a specific workforce transition plan explained in more detail by Company witness Ms. Stanton. The estimated projected costs to date of this workforce transition plan are included within our generic modeling, and we propose to include these costs in modeling portfolios as part of the Phase II bid evaluation as well. In addition, the Company is providing community assistance plans for Hayden 1 and 2 and Comanche 3. Pawnee would stay online under our preferred plan, but in the event that there were an accelerated retirement of Pawnee, we would develop a community assistance plan for Brush and Morgan County, too. The Company has not provided workforce transition plans for Craig 2 as it is not the operator of that plant, and we anticipate that community assistance for Craig 2 will be addressed through the Tri-State ERP. To the extent there is an opportunity

for synergies between the community assistance plans for Hayden 1 and 2 and Craig 2, however, I believe we can continue to work with Tri-State and the Office of Just Transition ("OJT") established by the General Assembly to ensure the plans work together.

Q. ARE THESE WORKFORCE TRANSITION AND COMMUNITY ASSISTANCE PLANS "FINAL PRODUCTS"?

A. I would not refer to them as "final products"—they will evolve with our transition planning. This Phase I process will determine the Company's coal action plan for each of its remaining coal units, which in turn drives the specifics of the workforce transition and community assistance plans. What we have provided, however, is an overview of our general approaches to workforce transition plans and community assistance plans; we will work with our employees and host communities to build out the contours of these plans once a coal transition approach is finalized by the Commission through this Phase I process.

Q. HAS THE COMPANY PROPOSED A COST RECOVERY MECHANISM FOR WORKFORCE TRANSITION PLANS AND COMMUNITY ASSISTANCE PLANS AS PART OF THIS FILING?

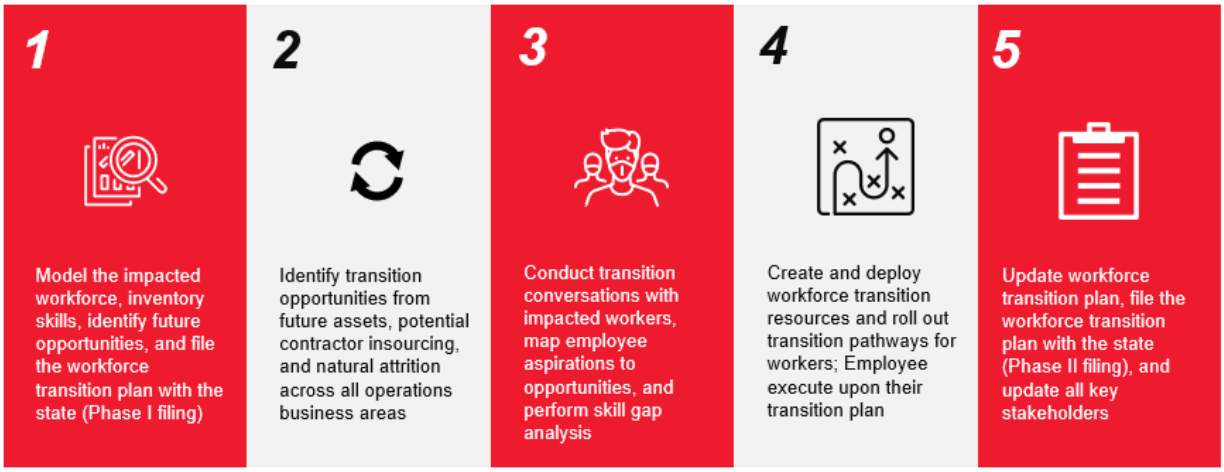
A. No. Again, because the workforce transition plan and community assistance plan costs are driven by the Commission's decisions to transition the coal fleet in this Phase I proceeding, it is premature to do so. I anticipate that we will bring forward post-Phase II follow-on applications to establish cost recovery mechanisms once these costs are established with greater certainty through this ERP process. This

could come in the form of one application or multiple applications depending upon the status of these efforts.

Q. PLEASE DESCRIBE THE COMPANY'S WORKFORCE TRANSITION PLAN APPROACH FOR PURPOSES OF THIS PHASE I FILING.

A. Public Service has deep experience with developing and implementing successful, low-impact workforce transition plans for previous plant retirements and fuel switching actions in Colorado. Over the course of numerous accelerated retirements over the past decade-plus, we have not implemented an official layoff or forced workforce reduction—and we are committed to a similar outcome for our valued employees here. As explained by Company witness Ms. Stanton, we have coordinated employee vacancy replacements at our other generating facilities or other operations areas across the organization to absorb employees affected by these retirements. The replacement of existing generation staff at other locations by fully trained employees utilizes our training investments in these skilled resources, which achieves beneficial efficiencies. Further, the Company has historically offered a relocation option for the affected employees to maximize the benefit of retaining these trained and skilled employees. Our workforce transition planning approach consists of five phases, as described by Ms. Stanton and outlined in the Figure AKJ-D-5 below.

Figure AKJ-D-5



I would also note that, as in the past, we will work closely with IBEW Local 111 on workforce transition planning. The specifics of workforce transition actions regarding union employees will be managed in accordance with the Company's collective bargaining agreement.

Q. TURNING TO COMMUNITY ASSISTANCE PLANS, HOW HAS THE COMPANY APPROACHED THESE PLANS FOR PURPOSES OF THIS FILING?

A. I am proud of the Company's history in working with our host communities affected by accelerated retirements of coal plants, and we build on that here. In the last ERP, we worked closely with the Pueblo community on the Comanche 1 and 2 accelerated retirements to build stakeholder support for these retirements and make the community whole. A centerpiece of that effort was the siting of replacement solar generation within Pueblo County as part of the final approved Colorado Energy Plan Portfolio ("CEPP"), which helped to restore the tax base lost as a result of the Comanche 1 and 2 accelerated retirements. Each accelerated retirement is different, however, and there is no community assistance blueprint

that can fit each situation. Rather, the community assistance plan must account for the specifics of the situation.

Q. PLEASE EXPLAIN.

A. I am not an expert in economic development. Nevertheless, I did start the Company's Corporate Economic Development team, and I run a large organization with experts on community engagement and have worked with our communities extensively in my roles with the Company. I highlight this only to color what I am about to say regarding the philosophy of community assistance that we bring to this case. In my view, there are two ways of going about community assistance and transition and neither is wrong. One way is to provide a community with a cash payment or nest egg for the community's use in its discretion in transition efforts. The other way, broadly speaking, is to develop sustainable longer-term strategies to make the community whole over time. This latter strategy can involve the siting of replacement generation and other infrastructure along with other community-based activities. I subscribe to this latter notion for our host communities when we accelerate the retirement of generating units.

Q. ARE THERE RECENT EXAMPLES OF THIS USE OF REPLACEMENT GENERATION AS A COMMUNITY ASSISTANCE ANCHOR?

A. Yes. The Colorado Energy Plan is a good example of this approach in action. We were fortunate that some of the most cost-effective solar projects bid into the Phase II competitive solicitation for the last ERP were located in Pueblo County due to the strong solar resources in southern Colorado. This resulted in a substantial amount of new solar and solar plus storage resources included within

the approved CEPP. In addition, CF&I Steel, L.P. d/b/a EVRAZ Rocky Mountain Steel ("EVRAZ"), an employer of approximately 1,000 people in Pueblo, was looking at potentially relocating its steel operations to another state. EVRAZ is also the Company's largest customer, and EVRAZ's decisions regarding its future in Pueblo would have a significant impact in southern Colorado. We worked closely with EVRAZ to develop a 240 MW customer-sited solar facility and statutory contract, keeping EVRAZ in Pueblo and allowing them to expand operations. We remain committed to work hand in hand with customers and communities to develop solutions that work for them, and our approach will be no different here in this 2021 ERP & CEP.

Q. DOES THE COMPANY INTEND TO TRY AND USE REPLACEMENT GENERATION AS A KEY COMPONENT OF ITS COMMUNITY ASSISTANCE EFFORTS?

A. Yes. In Routt County at the site of Hayden 1 and 2, Public Service screened a broad set of options to provide investment opportunities in the local community, as explained in more detail by Company witness Ms. Velasquez Horvath. This bears some similarities, in my view, to our approach with the Colorado Energy Plan in that these projects could restore the tax base lost due to the accelerated retirement of Hayden 1 and 2. Any generation projects will need to be selected in the Phase II competitive solicitation, and we will work with community partners to advance them to a point where we can bid them in. Other solutions may require other Commission approvals outside of this proceeding, and it will be an iterative process to advance these concepts and bring them forward.

Q. DO YOU THINK THE COMMISSION SHOULD CONSIDER JUST TRANSITION BENEFITS IN EVALUATING BIDS IN THE PHASE II COMPETITIVE SOLICITATION?

A. I do. The projects we are analyzing for potential development at the Hayden site will not be least-cost solutions—but they may present win-win opportunities. It bears reiterating, however, that least-cost planning is not the sole touchstone in Colorado. Instead, we seek cost-effective resource plans that—under the current version of Rule 3601—"give the fullest possible consideration to the cost-effective implementation of new clean energy and energy-efficient technologies."[10] These types of projects can provide just transition benefits and position the Company to meet both its 2030 and 2050 clean energy targets. They merit a hard look in the Phase II process, as will any other innovative technology projects that can position the system for a carbon-free and reliable future.

Q. WILL THE COMPANY LOOK AT SIMILAR PROJECTS AT THE COMANCHE SITE?

A. Yes. Our preferred plan provides a longer runway to develop a holistic community solution in southern Colorado; nevertheless, I think these types of projects in future ERP cycles can serve a similar purpose to that described at Hayden.

[10] 4 CCR 723-3-3601.

Q. ARE REPLACEMENT GENERATION PROJECTS THE ONLY TYPE OF COMMUNITY ASSISTANCE THE COMPANY WILL LOOK AT?

A. No. If our preferred coal action plan is approved, we will continue the work we have already started in our host communities and with the OJT to try and find win-win solutions for these communities and our broader customer base. Senate Bill 19-236 provides for separate cost recovery for workforce and community transition, and as I stated above, I envision a post-ERP filing to start to lay out how these activities and the cost recovery can be addressed by the Commission. We are not in a position now to bring these requests forward as we do not yet know the coal action plan that will be approved by the Commission. What I can say is that work and community engagement is already underway, and we intend to effectuate a robust community transition in northwestern Colorado and southern Colorado, building on our prior success with the Colorado Energy Plan.

Q. DO BEST VALUE EMPLOYMENT METRICS ("BVEM") FIT INTO THE JUST TRANSITION ASPECTS OF THIS PLAN?

A. Yes, I believe that they do. Senate Bill 19-236 also made changes to § 40-2-129, C.R.S., and we will again request provision of BVEM as part of all bids submitted in the Phase II competitive solicitation consistent with these enhanced requirements. I want to put the bidding community on notice that we will take BVEM requirements very seriously in the bid evaluation process. In the past, BVEM provided by bidders has been a mixed bag. We can and will disqualify bids that provide lackluster BVEM as part of their bid packages. I believe that projects

with strong BVEM can indirectly support our just transition efforts in the State of Colorado.

Q. ARE THERE OTHER WORKFORCE-RELATED PROVISIONS OF SENATE BILL 19-236 APPLICABLE TO THIS PLAN THAT YOU WOULD HIGHLIGHT?

A. Yes. Senate Bill 19-236 also resulted in the addition of workforce requirements for carbon-free utility-owned generation *following* its development or acquisition in the ERP process. More specifically, the statute requires, under certain circumstances, that "the utility shall use utility employees or qualified contractors if the contractors' employees have access to an apprenticeship program registered with the United States department of labor's office of apprenticeship or by a state apprenticeship council recognized by that office …."[11] This provides assurances that, post-acquisition, utility-owned generation will be supported by workers under robust workforce requirements—adding to the just transition elements of this plan.

[11] § 40-2-129, C.R.S.

IV. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING COMMENTS?

A. The preferred plan that we are presenting to the Commission in this 2021 ERP & CEP, along with robust data and information backup, is a balanced approach to a successful long-term future. This is truly a landmark plan that will take the next step in the energy transition, provide the State of Colorado with the emission reduction down-payment it is depending on from the power sector to advance toward economywide goals, and transition our workforce and host communities on an appropriate timetable. We need to develop a sensible and sensitive coal transition plan as part of this Phase I process, and I believe we have brought one forward here. Once the coal transition decisions are made in this phase of the proceeding, we will be positioned to use the well-established and high-functioning ERP competitive bidding process to build a portfolio that will not only meet but hopefully exceed the clean energy targets established for the Company by Senate Bill 19-236. We have a lot of work to do, but I am excited about the future of the Company and the State of Colorado, with this plan as the anchor of the implementation of one of the most robust climate policy agendas in the United States.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the Commission approve our Phase I 2021 ERP & CEP, including the Company's preferred coal action plan, to allow us to proceed to the

Phase II competitive solicitation and bring the State of Colorado the emission reductions that it depends on to meet its goals.

Q. DOES THIS CONCLUDE YOU DIRECT TESTIMONY?

A. Yes, it does.

Statement of Qualifications

Alice K. Jackson

I am President of Public Service Company of Colorado and responsible for the utility's overall operations. Before being promoted to President, I served as Vice President, Strategic Revenue Initiatives. As Vice President, Strategic Revenue Initiatives, I led a growing team of six individuals focused on primarily two areas: corporate economic development ("CED") and strategic revenue opportunities. Under our CED function, my team collaborated with the Operating Companies' Customer and Community Relations organizations to enhance Xcel Energy's presence at the national level in economic development activities as well as assisted our internal teams on business retention and expansion. Pursuant to our strategic revenue opportunity activities we actively examined new technologies and new non-merger and acquisition business transactions which could result in revenue opportunities.

As the former Regional Vice President of Rates and Regulatory Affairs, I was responsible for providing leadership, direction, and technical expertise related to regulatory processes and functions for Public Service. My duties included the design and implementation of Public Service's regulatory strategy and programs, and directing and supervising Public Service's regulatory activities, including oversight of rate cases. Those duties included: administration of regulatory tariffs, rules, and forms; regulatory case direction and administration; compliance reporting; complaint response; and working with regulatory staffs and agencies.

I accepted the RVP position with Public Service in November 2013 after holding the same position in another Xcel Energy Inc. ("Xcel Energy") subsidiary, Southwestern

Public Service Company ("SPS"). In May 2011, I accepted a position with Xcel Energy Services Inc. ("XES") as Director, Regulatory Administration, and the position was transferred to SPS effective January 1, 2012. I was subsequently promoted to Regional Vice-President, Rates and Regulatory Affairs, and in that capacity, I devoted my time to regulatory issues in SPS's Texas, New Mexico, and FERC jurisdictions.

From December 2001, through May 2010 I was employed by various subsidiaries of Occidental Petroleum Corporation ("Oxy"). Throughout my time at Oxy, I held positions of increasing responsibility from software programming supporting the trading organization within Oxy operations, to directing and operating Oxy's wholly owned REP in the ERCOT ("Electric Reliability Council of Texas") region and leading various regulatory activities of Oxy's facilities located within the New York Independent System Operator, the Southwest Power Pool ("SPP"), and ERCOT. In 2001, I began my professional career in the energy industry through my employment with Enron Energy Services, where I provided software application design and support to a variety of departments within that company.

I graduated from Texas A&M University in 2001, receiving a Bachelor of Business Administration degree with a major in information and operations management. I have testified before this Commission and the New Mexico Public Regulation Commission and provided written testimony a number of times before the Public Utility Commission of Texas. In July 2017 I completed the Program for Leadership Development at Harvard Business School in Boston, MA.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

* * * * *

IN THE MATTER OF THE APPLICATION	)	
OF PUBLIC SERVICE COMPANY OF	)	
COLORADO FOR APPROVAL OF ITS	)	**PROCEEDING NO. 21A-XXXXE**
2021 ELECTRIC RESOURCE PLAN	)	
AND CLEAN ENERGY PLAN	)	

AFFIDAVIT OF ALICE K. JACKSON
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO

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

Dated at Denver, Colorado, this 30th day of May 2021.

Alice K. Jackson
President, Public Service Company of Colorado

Subscribed and sworn to before me this 30th day of May, 2021.

Amanda Clark
Notary Public

My Commission expires 3/25/2024

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