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	**)**	**DOCKET NO. _____**
FOR APPROVAL OF ITS 2011 ELECTRIC	**)**	
RESOURCE PLAN	**)**	

DIRECT TESTIMONY AND EXHIBITS OF KURTIS J. HAEGER

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

October 31, 2011

LIST OF EXHIBITS

Exhibit No. KJH-1	Company's ERP Plan – Volumes 1, 2, and 3

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DIRECT TESTIMONY AND EXHIBITS OF KURTIS J. HAEGER

I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Kurtis J. Haeger. 1800 Larimer Street, Denver, Colorado 80202.

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

A. I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel Energy Inc., the registered public utility holding company parent of Public Service Company of Colorado ("Public Service", or "Company"). My title is Managing Director, Wholesale Planning. My qualifications are included as Attachment A to this direct testimony.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. I provide an overview of the 2011 Electric Resource Plan ("ERP") and I am the Company's primary sponsor of the plan, which I present as Exhibit No. KJH-1.

I also introduce the testimony of other Public Service witnesses. Several other Company witnesses will address various sections of this ERP in their testimonies.

Q. WHAT OTHER COMPANY WITNESSES FILED TESTIMONY WITH THIS APPLICATION?

A. Jim Hill, Director, Resource Planning, describes the selection of the Resource Acquisition Period ("RAP") and Planning Period, the assessment of need, the analysis of alternative plans including the basis for cost estimates used for generic renewable and generic battery technologies, and the proposed Phase 2 evaluation process. Jannell Marks, Director, Energy and Demand Forecasting, describes the demand and sales forecast methodology used in the ERP. Greg Ford, Director, Engineering and Design Services, describes the development of the cost estimates for the thermal generic resources used in the Company's modeling. Keith Parks, Senior Trading Analyst, discusses the development of the Company's 30 Minute Reserve Guideline for Wind Generation and why the Company has determined that we have adequate 30 minute reserves to accommodate the over 2,100 MW of wind that is expected to be operational on our system by the end of 2012. Gerry Stellern, Manager, Transmission Reliability Assessment, supports an assessment of the injection opportunities on the transmission system and the updated transmission studies.

Jack Ihle, Manager, Environmental Policy outlines the potential impact on the Company's operations from various environmental regulations and the proposed carbon proxy pricing that was used in the evaluation of alternative plans and will be used in the Company's Phase 2 bid evaluation process. Curt Dallinger, Director Gas Planning, discusses the Winter Generation

Adequacy Study that the Company is performing to assess the reliability of the Public Service power supply system to reliably meet winter peak loads. Mr. Dallinger also addresses the methodology by which gas transportation charges would be estimated on a portfolio basis in the Phase 2 bid evaluation process. Tim Carter, Director Gas Supply, discusses the Company's proposal for a Gas Price Volatility Mitigation adder.

II. OVERVIEW OF THE ERP

Q. PLEASE DESCRIBE THE 2011 ELECTRIC RESOURCE PLAN, YOUR EXHIBIT NO. KJH-1.

A. The 2011 ERP consists of three volumes of detailed information and alternative plans filed in compliance with the Commission's Resource Planning Rules ("RP Rules"). Volume 1 includes the executive summary, a discussion of the current industry landscape, the assessment of the need for additional resources and the analysis of alternative plans. Volume 2 is the technical appendix which includes much of the detailed information required by the ERP Rules, additional detail about the information provided in Volume 1 as well as supporting information and studies. Volume 3 contains the All-Source RFP and the associated model agreements.

The primary purpose of the 2011 ERP is to describe the current state of the Company's overall generation portfolio, the resource needs that have been identified for the Resource Acquisition Period ("RAP") years of 2012 to 2018, the Company's proposed method of acquiring the necessary resources, and the solicitation and evaluation process Public Service will employ to

select the resources necessary to ensure a economic and reliable generation portfolio that will also comply with the Colorado Renewable Energy Standard ("RES"). The 2011 ERP also dovetails with the Company's 2014 RES Compliance Plan that is also being filed in conjunction with this plan.

Q. IS THE 2011 ERP SIMILAR TO OTHER RESOURCE PLANS THE COMPANY HAS FILED OVER THE LAST TEN YEARS?

No, the 2011 ERP is a very different plan from the resource plans filed in 2004 and in 2007. In previous plans the Company faced a need to add significant new sources of generation to meet the Company's growing peak day demands. In past plans we also needed substantial amounts of new renewable energy resources to meet the increasing requirements of Colorado's RES. But in this ERP, we face a very different set of conditions over the next five to ten years, resulting in a relatively low need for additional generation capacity (292 MW by 2018) to meet our planning reserve margin targets and *no* absolute need for additional renewable resources beyond the Company's proposed retail distributed generation ("retail DG") acquisition to meet Colorado's RES. In addition, due to the large quantity of Purchase Power Agreements ("PPAs") that will be expiring during the RAP of this plan, Public Service does not anticipate the need for anyone (neither the Company nor another entity) to construct new generation facilities to meet Public Service's resource needs through 2018.

Q. WHAT ARE THE PRIMARY OBJECTIVES FOR THE 2011 ERP?

We had five major factors that guided the development of our 2011 plan. First, we sought to develop a plan that reliably meets the electric energy needs of our customers in the most cost-effective manner. Second, given this era of economic and regulatory uncertainty, we wanted to ensure the plan was very flexible, avoiding long-term commitments and instead seeking shorter term resources that would allow us the flexibility to adapt to changing conditions over the next five to ten year period. Third, we wanted to take advantage of the overbuilt capacity markets that exist today in the front range of Colorado, by avoiding the need to construct new generation resources. Fourth, we wanted to use the flexibility provided us by our aggressive early acquisitions of very reasonably priced renewable energy to be more selective in future renewable energy acquisitions, by taking advantage of market and political conditions (e.g., federal tax policy) when they are favorable to the Company. Five, we sought to take advantage of the continued operation of some of our older generating units that will be fuel-switched to natural gas, providing a low cost option for meeting our capacity needs.

Q. WHAT HAS CHANGED IN THE LAST 12 MONTHS TO IMPACT THE 2011 PLAN SO SIGNIFICANTLY?

A. A combination of a very weak economy and the success of our DSM and Solar*Rewards programs has resulted in a reduction of over 500 MW of generation capacity need in the just the past year. In mid 2010, we were forecasting a firm resource need in excess of 800 MW by 2018. Now that resource need stands at 292 MW. At the same time 1,200 MW of Public

Service's purchase power agreements are terminating and we expect a large percentage of those resources will be available to compete for the Company's resource needs.

In addition to the reduced need and overbuilt capacity markets, the existing price and expected future price of natural gas continues to be low in comparison to where it was just three years ago. Furthermore, as a result of the drawn-out budget battles in Washington DC over the last nine months, including the formation of a super-committee to look for ways to reduce the federal deficit, it now appears that Congress will most likely *not* extend the Production Tax Credits (PTC) for wind projects beyond the end of 2012. The low gas prices and the expiring PTCs make it more difficult for the cheapest renewable energy resource – wind -- to be considered an economic alternative. Large solar resources are even more expensive.

Finally, there is a much greater sense of uncertainty in a number of areas that impact our industry and our resource planning. To list just a few of the uncertainties facing us today, they include: when will the economy rebound, will the City of Boulder leave the Public Service system, when will we see carbon dioxide regulation and what form will it take, will we see significant technological advancements in generation technologies (particularly renewable resource technology), and how will the changing accounting standards require Public Service to account for long term power purchase agreements. With these and other uncertainties looming, and given the fact that there will be substantial already-built generation capacity in the

front range of Colorado likely available to serve Public Service's limited additional resource need between now and 2018, we believe that Public Service should make only short-term resource decisions in this 2011 ERP. We would then expect to make longer term decisions in our next quadrennial resource plan filing in 2015. By that point in time we would hope to have more definitive information about these issues.

Q. ARE THERE OTHER CONSIDERATIONS FOR DEFERRING LONG-TERM RESOURCE DECISIONS AT THIS TIME?

A. Yes, as a result of the 2007 ERP and the 2010 CACJA proceedings, the Company made commitments that will significantly alter the makeup of our power supply system. In the 2007 ERP the Company committed to acquiring an additional 701 MW of wind and 60 MW of large PV solar. We have also proposed to acquire an additional 200 MW of wind from the Limon II facility to capture the energy savings benefits from that facility. In the 2010 CACJA, the Company committed to retiring 600 MW of metro area coal-fired plants and replacing them with a new combined cycle natural gas plant, fuel switching two other coal plants and adding emissions controls to three additional coal plants. Implementation of both of these plans over the next five to seven years is a significant challenge for the Company. The operational impacts of the changing resource mix will require our system operators to operate a fundamentally different integrated Colorado electric system and we want to make sure we fully understand all of the ramifications of these changes

before making additional long-term resource commitments. Our first priority is always reliable operation.

Q. DO THESE NEW CIRCUMSTANCES FACING THE COMPANY CALL INTO QUESTION ANY OF THE RECENT DECISIONS MADE UNDER THE CLEAN AIR CLEAN JOBS ACT OR THE RECENT LARGE ACQUISITIONS OF RENEWABLE RESOURCES?

A. No. The CACJA proceeding did not increase the generation capacity on our electric system. The thrust of that legislation was to replace older coal plants with newer gas-fired facilities to address in a comprehensive way the expected tightening of federal air emission requirements. We believe that the approved CACJA plan will prove to have been a valuable plan for our customers, saving substantial expense in the long term. However, as I just described, the closing of the coal plants that formed the anchors of our Denver metropolitan electric system will present a new operational paradigm for our system operators. We are thankful that we will have some "breathing room" over the next few years to operate this new system without having to add substantial amounts of new generation capacity at the same time.

With respect to our large new renewable energy purchases, these purchases will provide needed renewable energy credits to meet the increased Renewable Energy Standard created by HB10-1001, will provide lower air emissions and other environmental benefits to Colorado, and were acquired at relatively low prices subsidized by federal tax incentives. These will likewise prove to be beneficial additions to our electric system.

Q. IN THE CACJA PROCEEDING, THE COMMISSION ORDERED THE COMPANY TO EVALUATE ALTERNATIVES TO KEEPING ARAPAHOE 4 AND CHEROKEE 4 OPERATING ON NATURAL GAS FOR TRANSMISSION RELIABILITY. HAS THE COMPANY COMPLETED THIS EVALUATION?

A. Yes, but before I delve directly into the results, I think it is valuable to provide some background on the issues that led up to the Commission's CACJA order to evaluate the continued operation of Arapahoe 4 and Cherokee 4 on natural gas. In the CACJA docket, Public Service presented transmission studies that indicated a need for additional sources of generation at Cherokee station, in addition to the Cherokee 2 x 1 and the synchronous condenser, if the four Cherokee generation units were retired; we also discussed the possible transmission stability and reliability benefits of generation remaining at our Arapahoe site. The Commission approved the retirement of Cherokee units 1, 2, and 3 and their replacement by a 2x1 combined cycle gas facility at Cherokee, but requested that the Company conduct additional transmission studies to determine whether there were solutions to the Denver metro transmission issues that did not require additional generation at Cherokee station. In the meantime, the Commission approved switching the fuel burned at Cherokee 4, before the end of 2017, from coal to natural gas. The Commission also requested further study be completed on the transmission benefits provided by retaining generation at Arapahoe station, and in the

meantime approved the switching of the fuel burned at Arapahoe 4 from coal before the end of 2013.

During the CACJA hearings, the Company had presented evidence that fuel switching Cherokee 4 to natural gas with a must-run condition would still allow the Company to cease coal operations at Cherokee 4 by the end of 2017 and maintain transmission reliability. But, due to the relatively high heat rate and variable cost of Cherokee 4 operating on natural gas with a must run condition, this alternative was not necessarily a desirable long-term solution. As a result, the Commission ordered the Company to present alternatives to the Cherokee 4 must run option and present our findings in this resource plan. A similar concern was expressed about the continued operation of Arapahoe 4 on natural gas if the Company needed to maintain a must run condition of that facility for transmission reliability.

The Company has completed the reevaluation of the need for our transmission system to maintain certain levels of generation at the Arapahoe and Cherokee sites. Our most recent transmission studies indicate that while additional generation at Cherokee, above and beyond the need for the Cherokee 2 x1 Combined Cycle facility and the synchronous condenser, may be desirable for operational reasons, it does not appear to be necessary to require another source of generation at the Cherokee site that is expected to operate at a fairly high load factor (must run). In addition, these studies also suggest that a must run condition at the Arapahoe site is also not needed for

transmission reliability. As a result, the Company no longer believes it is necessary to require a must run requirement for Arapahoe 4 or Cherokee 4.

Q. WHAT IS THE COMPANY'S PROPOSAL IN THIS PLAN WITH RESPECT TO ARAPAHOE 4 AND CHEROKEE 4?

A. Public Service proposes to switch these units from burning coal to burning natural gas at the times approved by the Commission in its CACJA order, i.e., Arapahoe 4 by the end of 2013 and Cherokee 4 by the end of 2017. We plan to operate these plants as natural gas peaking plants (without must run requirements) through 2023 and 2028 respectively, unless a less expensive alternative is presented in response to our All Source RFP. With our reduced energy forecast and the ability to operate these plants as natural gas peaking plants at a very low cost, Arapahoe 4 and Cherokee 4 become ideal, low cost resource options through their expected remaining plant lives. These plants will allow Public Service to meet our resource needs in a very economical fashion in the short-term, while preserving the option to make longer-term decisions in the future.

Q. HOW DOES PUBLIC SERVICE PROPOSE TO DETERMINE IF THERE ARE LESS EXPENSIVE ALTERNATIVES TO THE CONTINUED OPERATION OF ARAPAHOE 4 AND CHEROKEE 4?

As more thoroughly discussed in the direct testimony of Company witness Hill, prior to computer modeling of bids in the Phase 2 All-Source evaluation, Public Service will implement a process where the cost of short-term bids from existing natural gas resources submitted in the All-Source will be

compared to the cost of continued operation of Arapahoe 4 and Cherokee 4 on natural gas. Once this comparison has been completed, the Company will determine whether the continued operation of Arapahoe 4 and Cherokee 4 on gas remains economical. To the extent the operation of Arapahoe 4 and Cherokee 4 remains economical in comparison to other short-term alternatives, all of the bids, both short-term and long-term, will be included in the All-Source bid evaluation process and compete to satisfy the Company's resource needs in 2017 and 2018. To the extent one or more of these short-term alternatives proves to be a more cost-effective alternative than continued operation of Arapahoe 4 or Cherokee 4 on gas, the Company will include those bids in the Company's base computer model representation of for the All-Source bid evaluation process.

Q. WHY IS THE COMPANY ALLOWING ONLY SHORT-TERM BIDS FROM EXISTING GAS-FIRED GENERATION UNITS TO BE COMPARED AGAINST THE CONTINUED OPERATION OF ARAPAHOE 4 AND CHEROKEE 4?

A. Due to the overall uncertainty that I previously discussed, short-term commitments will preserve the opportunity to make longer-term resource decisions at a later date when some of the uncertainty should be resolved. Operating Cherokee 4 and Arapahoe 4 as peaking units on gas during this interim period is a very low cost way to meet our load.

Q. WHAT IS THE COMPANY'S OUTLOOK FOR THE NEED FOR ADDITIONAL RENEWABLE ENERGY IN THIS PLAN?

A. Public Service is filing concurrently with this ERP a RES Plan for 2014. Our RES Plan for 2012 and 2013 is pending before the Commission in Docket No. 11A-418E. The RES Plans address the Company's plans for acquiring retail distributed generation.

With respect to wholesale distributed generation ("wholesale DG") and utility-scale generation ("non-DG"), as demonstrated in a number of recent regulatory proceedings, the Company projects no need for additional non-DG and wholesale DG renewable resources to comply with the RES until approximately 2028. As a result of our success in acquiring reasonably-priced renewable energy ahead of the minimum RES compliance schedule while federal tax incentives were still available, the Company is in the fortunate position of being able to now selectively add more renewable energy to our system if and when the price of that energy will provide a benefit to customers. In addition, due to the fact that the RESA deferred balance is projected to be negative into 2015, Public Service is proposing to acquire only those additional wholesale DG and non-DG renewable resources that will not negatively impact the RESA deferred balance. Further, because we have a strong existing renewable energy portfolio and a current negative RESA deferred balance, the Company is not proposing to target, or set aside, any specific level of additional renewable energy or section 123 renewable resources in the 2011 ERP.

Q. HOW IS THE COMPANY PROPOSING TO EVALUATE THE ACQUISITION OF ADDITIONAL RENEWABLE ENERGY IN THIS PLAN?

A. Public Service is proposing to let all forms of renewable energy compete in the All-Source solicitation against all of the other bids.

Q. HOW IS THE COMPANY PROPOSING TO TAKE ADVANTAGE OF FAVORABLE MARKET CONDITIONS FOR RENEWABLE ENERGY IN THE FUTURE?

Over the past ten years the Company has watched wind prices respond to changing regulatory and market conditions across the country. Throughout the period of 2005 to 2010, as states began to implement new and higher renewable energy standards, the supply of renewables increased. In 2008, renewable prices climbed as the possibility of carbon regulation rose. In 2007 and 2008, the rise in natural gas prices also allowed the cost of renewable resources to track upwards. In contrast, in 2010 and 2011, with the likelihood of near-term carbon regulation slipping away and the drop in natural gas prices, we have witnessed a significant drop in the price of renewable energy. Wind prices have also fluctuated as short-term federal tax incentives reached the end of their terms or were reenacted.

Going forward, we anticipate similar gyrations will occur in the market and that the price of renewable energy will respond accordingly. With the Company's current strong REC position relative to our RES compliance requirements, the Company is in a favorable position where we can watch the renewables market and take advantage of any dips in market prices to the benefit of our customers. To implement this proposed strategy, we have requested in our 2011 ERP to use targeted acquisition processes from time to

time over the Resource Acquisition Period to acquire additional renewable energy when it makes economic sense to do so. Public Service proposes to submit the bid evaluation results and selected winners from these targeted solicitations to the Commission for review and approval.

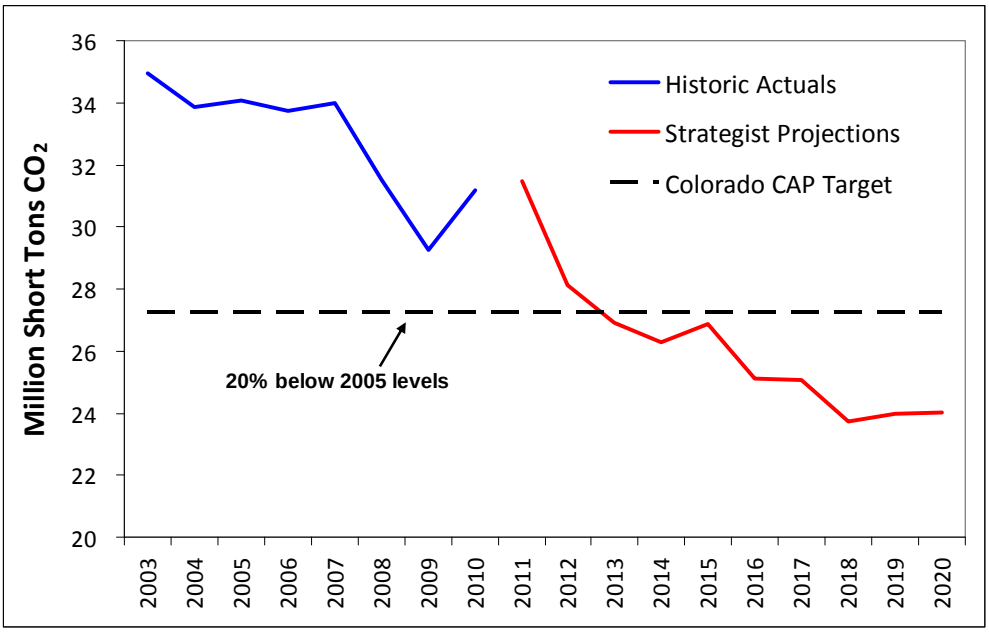
Q. WHAT RESOURCES DOES THE 2011 ERP ADD OVER THE RESOURCE ACQUISITION PERIOD?

A. Our resource plan includes in the resource acquisition period from October 2011 through the end of October 2018 and incorporates the level of DSM agreed to in the Company's Strategic Issues filing Docket No. 10A-554EG and the level of Retail DG proposed by Public Service in the Company's 2012 RES Compliance Plan, Docket No. 11A-418E, and in our 2014 RES Compliance plan. Based on our initial modeling, the total resource need, including a 16.3% reserve margin, is 292 MW by 2018; this resource need is most economically served by alternatives with low annual fixed charges (demand payments) and relatively higher energy costs, representative of gas peaking plants. This resource need matches up well with the existing resources that are expected to be available in the Colorado market in 2017 and 2018.

Q. DOES THE COMPANY'S PROPOSED 2011 ERP CONTINUE TO STRIVE TO MEET THE LEVEL OF CARBON DIOXIDE EMISSIONS REDUCTIONS IDENTIFIED IN THE STATE'S 2007 CLIMATE ACTION PLAN?

A. Yes. In conjunction with the implementation of the actions agreed to in the 2007 ERP, the CACJA, and the Company's DSM and Retail DG programs,

Public Service anticipates our overall carbon reduction from 2005 levels will be approximately 30% by 2020. Below is a graph that demonstrates the anticipated carbon dioxide emission reductions that will be achieved from 2012 to 2020.



Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Attachment A

Kurtis J. Haeger

Statement of Qualifications

I graduated from the University of Colorado, Boulder, in 1982 with a Bachelor of Science Degree in Civil Engineering and from the University of Colorado, Denver, in 1987, with a Master of Business Administration in Finance.

I began my employment with Public Service Company of Colorado in June 1982, as a Gas Distribution Engineer. In June 1988, I was promoted to Supervisor, Gas Utilization and Testing. In May 1990, I was promoted to System Planning & Forecasting Manager, and, in October 1994, I was promoted to Gas Supply and Planning Manager. Upon the merger between Public Service Company of Colorado and Southwestern Public Service Company in August 1997, I assumed the same position with New Century Services, Inc., the service company subsidiary of New Century Energies, Inc. In March 1999, I assumed the position of Director, Gas Business Support. Upon the merger between New Century Energies, Inc. and Northern States Power Company in August 2000, I was appointed to the position of Director, Gas Supply and Supply Planning for Xcel Energy Services Inc. In May 2004, I was promoted to the position of Managing Director, Wholesale Planning, the position I currently hold.

Since 1990, my responsibilities have included the development of forecasts of annual and daily gas requirements, long term price of gas forecasts, cost of gas budgets, business planning, strategic planning, long range gas supply planning and gas integrated resource planning, gas supply purchasing, the purchasing of gas

transportation and storage services and electric resource planning for Public Service Company, Northern States Power Company and Southwestern Public Service. In my present position, I am responsible for the resource planning activities for electric generation, the gas supply planning functions for both the local gas distribution and the electric generation requirements, and the administration of the upstream gas transportation and storage contracts for the Xcel Energy operating companies.

I have presented testimony before the Colorado Public Utilities Commission in Docket Nos. 93A-561G, 94A-447G, 93S-001EG (95I-394G), 02A-267G, 98S-518G, 00A-415G, 97A-622G, 99A-549E, 00A-415G, 01A-181E, 02A-267G, 02S-315EG, 02A-541E, 03A-489EG and Application No. 34815. I have also sponsored testimony before the Federal Energy Regulatory Commission in Colorado Interstate Gas Co.'s rate case Docket Nos. RP93-99 and RP96-190, Northern Natural Gas Co.'s rate case Docket No. RP03-398 and before the Wyoming Public Service Commission in Docket No. 30005-GR-97-51.