

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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2008 DEC - 1 P11 4: 38

IN THE MATTER OF THE APPLICATION)
OF PUBLIC SERVICE COMPANY OF)
COLORADO FOR APPROVAL OF ITS)
2009 RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN)

Docket No. 08A-532E

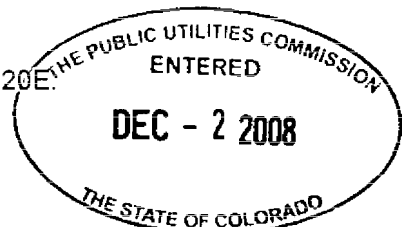
Agenda
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Adv
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APPLICATION FOR APPROVAL OF PUBLIC SERVICE
2009 RES COMPLIANCE PLAN

~~Public Service Company of Colorado hereby applies to the Commission for approval of its 2009 Renewable Energy Standard Compliance Plan ("Compliance Plan" or "Plan"). This Plan is timely filed in accord with Decision No. C08-1115 granting Public Service an extension of time to file its 2009 RES Compliance Plan.~~

~~In the Plan, Public Service projects the Eligible Energy that the Company is required to obtain to meet the Renewable Energy Standard ("RES") over the RES Planning Period of 2009 through 2020. The Plan uses the Company's October 2008 retail electricity sales forecast with Commission DSM Goals¹ to estimate the Renewable Energy Standard requirements for Solar Renewable Energy Credits ("S-RECs"), On-Site Solar RECs ("SO-RECs"), and Non-Solar RECs ("NS-RECs"). The Plan sets forth the Company's specific plans to acquire sufficient Eligible Energy to meet the requirements of the Renewable Energy Standard for 2009 and the Company's plans to fund additional Eligible Energy Resources for the years 2009 through 2020.~~

¹ Commission Decision No. C08-0560 (June 5, 2008), Docket No. 07A-420E.



~~deferred balance. In 2009 and henceforth, as explained by Mr. Ahrens in his testimony, the Company believes the more appropriate balancing account for trueing up projected costs to actual costs would be the ECA, given the large amount of intermittent Eligible Energy that will be added our system.~~

Second, as described by Mr. Ahrens, the Company proposes to resolve the “time fence” disputes from earlier dockets by locking down the incremental costs that will hit the RESA at the time of the Compliance Report filing or at the time of contracting (for the larger contracts). This will protect the RESA dollars from wide swings due to changes in gas prices over time and will allow for better planning for the acquisition of Eligible Energy Resources.

~~Third, the Plan shows how the Company’s new proposed Windsorce program, pending in Docket No. 08A-260E, would be incorporated into the annual RES Compliance Plan filings; the Plan projects how growth in Windsorce subscriptions will provide more dollars for the acquisition of additional Eligible Energy.~~

~~Finally, Public Service responds to the Commission’s request to address the issue of whether external AC disconnects need to be provided. Public Service is proposing to relieve 10 kW and smaller PV systems of the requirement to have an external AC disconnect switch (“EDS”). Upon reviewing a number of papers, OSHA regulations, and activities that have recently transpired in other states, Public Service believes that there is no longer a need to require an AC EDS for solar systems below 10 kW, so long as the solar system has an Underwriters Laboratory (“UL”) 1741 standard certified inverter. This is further discussed in Section 9 of the Plan~~



2009 Renewable Energy Standard Compliance Plan

Public Service Company of Colorado

Volume 1

December 1, 2008

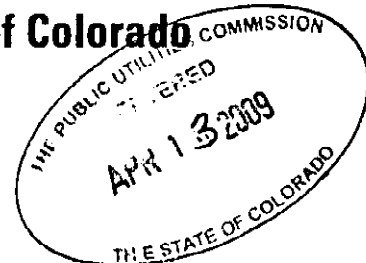


Exhibit	1
Case No	08R-532E
Witness	
Date	4/6/09

~~Resources in the RES Plan to meet the Company's capacity and energy requirements.~~

~~In developing the RES Plan for this 2009 RES Compliance Plan, Public Service included all of the Eligible Energy Resources that were included in the Company's 2007 Colorado Resource Plan. In developing the No RES Plan, the Company removed all of the new Eligible Energy Resources in the RES Plan that the Company will acquire after 2008. 200 MW of Concentrating Solar Power with Storage, with an in-service date of 2013 was assumed to be a Section 123 resource. As such, it was included in both the RES Plan and the No RES Plan, so that its costs would not impact the incremental cost calculation used to determine the retail rate impact.~~

~~The results of our Base Case are set forth on Tables 6-1 and 6-3.~~

In Docket No. 06A-478E, a concept called the "time fence" was brought up by Commission Staff. The time fence concept suggested that the Commission should determine a time after which the costs and benefits of renewable resources would be counted as new resources and before which all the costs and benefits would be considered as sunk resources. Only the costs and benefits of the new non Section 123 resources would factor into the retail rate impact calculation. Public Service agreed with the concept of the time fence so long as the four renewable resources that were winning bids in the 2005 All Source RFP were considered sunk resources. Public Service believes this time fence needs to be established to ensure the benefits of the Eligible Energy Resources at the time the acquisition decision is made are recognized in future years.

Time Fence

To assure that both costs and benefits are included in the RES scenario when they are compared to the No-RES scenario in determining the retail rate impact,

the Company proposes that a “time fence” be set or “locked down” once the net costs and benefits for a particular year have been quantified; those locked down net costs or benefits will be used from that point forward to assure that both the costs and the benefits are included in the RES Modeling.

Each time the RES/No RES modeling is performed there are new sets of assumptions, which if they had been the assumptions used at the time of earlier resource acquisition, could have altered the acquisition decision. It is not appropriate to continue to revisit acquisition decisions based upon later updated assumptions. The Company makes the best acquisitions it can, based upon the assumptions that are used at the time of acquisition. By locking down the costs and benefits of a new Eligible Energy resource at the time the acquisition decision is made, later changes in the modeling assumptions will not cause unintended consequences. When the Commission approves a RES Compliance Plan, acquisitions in accord with that plan are deemed prudent. Therefore, the assumed incremental costs or benefits associated with those acquisitions should remain constant over the life of that facility for purposes of calculating the incremental costs that must be charged against the RESA.

This “locking down” of net costs or net benefits is only performed to determine which Eligible Energy costs are recovered through the RESA and which costs are recovered through the ECA. Public Service will recover, through the combination of these two adjustment clauses, only the *actual* costs incurred. The only issue here is how much of the actual costs are charged against the RESA deferred account – an account that is limited by law to accumulations of no more than two percent annually on each customer’s bill. Public Service suggests that the RESA impacts should be determined at the time of resource acquisition, or at the time of the next compliance plan report, rather than have the RESA impacts revisited every year with each compliance plan.

To implement this new proposal, for the 2009 RES Plan, the ongoing net incremental costs (and net benefits) of the Eligible Energy Resources that have impacted the retail rate impact calculations in earlier RES Compliance Plans, namely the SunE Alamosa central solar facility and the on-site solar facilities were determined separately and "locked down". The incremental costs of these resources will not be recalculated next year. These costs will impact the retail rate impact calculation by being collected through the RESA, but they were not "recalculated" based upon the updated assumptions next year.

~~*Modeling the RES and No RES Plans*~~

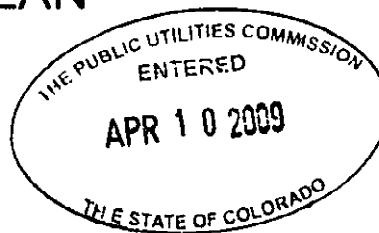
~~The modeling output of the RES Plan costs minus the No RES Plan costs provides the incremental cost of the New Eligible Energy Resources. These costs are shown on Tables 6-1, the Company's Base Case and 6-2, the Windsource Case in the column labeled "Incremental Costs." The avoided costs that matches the costs of the non-renewables is then "estimated" by subtracting the incremental costs from the projected total costs of the new Eligible Energy Resources.~~

~~The 2009 Compliance Plan consists of the resources identified in the 2007 Colorado Resource Plan as the Company's preferred plan which the Commission approved with modification, including the on-site solar facilities projected by Ms. Newell in her rebuttal testimony in Docket No. 07A-447E, updated to reflect the increased small program applications received by Public Service in the fourth quarter of 2008.~~

~~The following tables illustrate the resources in the RES and No RES models.~~



IN THE MATTER OF THE APPLICATION
OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009
RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN



DOCKET NO. 08A-_____E

DIRECT TESTIMONY AND EXHIBITS
OF
DANIEL S. AHRENS

Exhibit 3
Case No 08A-532E
Witness _____
Date 4/6/09

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE APPLICATION OF)
PUBLIC SERVICE COMPANY OF) DOCKET NO. 08A-____E
COLORADO FOR APPROVAL OF ITS 2009)
RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN)

DIRECT TESTIMONY OF
DANIEL S. AHRENS

1

I. INTRODUCTION

2

Q. ~~PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.~~

3

A. ~~My name is Daniel S. Ahrens. My business address is 1225 Seventeenth
Street, Suite 1000, Denver, Colorado 80202.~~

4

5

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

6

A. ~~I am employed by Xcel Energy Services, Inc., a wholly-owned subsidiary
of Xcel Energy Inc., the parent company of Public Service Company of
Colorado. My job title is Pricing Consultant, Pricing and Planning.~~

7

8

9

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

10

A. ~~I am testifying on behalf of Public Service Company of Colorado ("Public
Service" or the "Company").~~

11

12

Q. ~~HAVE YOU INCLUDED A DESCRIPTION OF YOUR QUALIFICATIONS,
DUTIES, AND RESPONSIBILITIES?~~

13

14

A. ~~Yes. A description of my qualifications, duties, and responsibilities is
included as Attachment A.~~

15

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

2 **A. ~~The purpose of my direct testimony is to:~~**

3 ~~1) Provide an overview of Public Service's 2009 Renewable Energy~~
4 ~~Standard Compliance Plan ("Compliance Plan" or "Plan") which I am~~
5 ~~sponsoring as Exhibit No. DSA-1;~~

6 ~~2) Introduce the witnesses responsible for certain sections of the~~
7 ~~Compliance Plan;~~

8 ~~3) Support the Company's proposed cost recovery mechanism;~~

9 4) Describe the Company's proposed "time fence", which is how the
10 Company proposes to measure the incremental costs (costs less benefits)
11 of acquiring eligible energy resources for purposes of compliance with the
12 statutory retail rate impact cap; and

13 ~~4) Describe how the Windsource program would affect the Renewable~~
14 ~~Energy Standard Adjustment ("RESA") should the Commission approve~~
15 ~~the Company's pending Windsource proposal in Docket No. 08A-260E.~~

16 **II. PLAN OVERVIEW**

17 **Q. ~~COULD YOU PLEASE DESCRIBE THE RENEWABLE ENERGY~~**
18 **~~STANDARD ("RES") RULES?~~**

19 **A. ~~Yes. The Commission enacted the Renewable Energy Standard Rules, 4~~**
20 **~~CCR 723-3-3650 et. seq, ("RES Rules") to implement Amendment 37 as~~**
21 **~~amended, most recently by House Bill 07 1281 (codified at C.R.S. §40-2-~~**
22 **~~124). The Commission issued its current RES Rules on July 23, 2007 in~~**
23 **~~Decision No. C07-0622.~~**

1 Q. ~~LOOKING AT TABLE 6-4, IT APPEARS IN THE EARLY YEARS THAT~~
2 ~~THE WINDSOURCE COSTS ARE AT TIMES GREATER THAN THE~~
3 ~~PREMIUMS. IS THAT CORRECT?~~

4 A. ~~The Windsorce costs in Column F1 identify the estimated total~~
5 ~~Windsorce revenue requirement for the existing Windsorce portfolio,~~
6 ~~whereas the premiums are based on the incremental renewable costs (on~~
7 ~~a \$/kWh basis) times the projected. It is not an apples-to-apples~~
8 ~~comparison.~~

9 V. TIME FENCE

10 Q. IN THE PAST TWO PLANS, THE ISSUE OF A TIME FENCE HAS BEEN
11 RAISED. PLEASE DESCRIBE THIS TIME FENCE ISSUE.

12 A. The current rules ^{to DSA} do not treat the costs and the benefits symmetrically
13 between RES and No-Res scenarios. Specifically:

14 The last sentence of Rule 3661(h)(i) states:

15 For purposes of this rule, new eligible renewable energy means
16 eligible energy from resources, which are not commercially
17 operational at the time these two modeling scenarios are
18 performed.

19 The last sentence of Rule 3661(h) (ii) provides:

20 in calculating the annual net retail rate impact in each compliance
21 plan of the first compliance year of the RES planning period, the
22 QRU shall take into account the on-going annual costs of all
23 eligible energy that the QRU has contracted to acquire under the
24 standard rebate offer under rule 3658 and all eligible energy from
25 resources that were constructed by the QRU or contracted for by
26 the QRU after the effective date of these rules.
27

1 The Commission recognized this conflict and granted Public Service a
2 permanent waiver to 3661(h)(1) to ensure that both the costs and benefits
3 of new Eligible Energy resources are taken into consideration in the RES
4 Plan/ No RES Plan analyses.

5 Public Service believes further clarification through defining a “time
6 fence” is necessary to ensure the costs and benefits of Eligible Energy
7 resources at the time of acquisition are maintained throughout the life of
8 that resource. While the waiver granted in the 2008 RES Plan docket took
9 care of the concern that the existing rules would count the costs, but not
10 the benefits of the resources that Public Service has acquired to meet the
11 Renewable Energy Standard, the Company now has a new concern that it
12 impacts our ability to acquire renewable resources.

13 **Q. WHAT IS THAT NEW CONCERN?**

14 **A.** We are concerned that we will project at the time of resource acquisition
15 that an Eligible Energy resource has a specific net incremental cost to our
16 system over the cost of a non-renewable resource and allocate RESA
17 dollars based upon that projection. However, it may turn out that the
18 incremental cost of the acquisition is greater than projected (because gas
19 prices turn out to be lower than projected). As we contract for and build
20 more and more Eligible Energy Resources, we are concerned that if
21 forced to continually recalculate incremental costs that are driven by
22 uncertain gas price projections, we could be in a situation where the
23 RESA funds become inadequate to pay for those incremental costs.

1 We believe this issue is similar to the regulatory issue of prudent
2 investment. That principle judges a utility action by reviewing the
3 information reasonably available at the time that the investment decision
4 had to be made. We think that the same principle should apply here,
5 namely, the impact on the RESA from the acquisition of an Eligible Energy
6 Resource should be calculated at the time that the acquisition decision is
7 made (and not continually revisited). In this way, if gas prices decrease
8 from forecasted values, the RESA funds are not impacted. Similarly, if
9 natural gas prices are higher than projected, the RESA funds are not
10 impacted.

11 **Q. HOW DOES THE COMPANY PROPOSE TO ACCOUNT FOR THIS**
12 **“LOCKING DOWN” OF THE INCREMENTAL COST OF A NEW**
13 **ELIGIBLE ENERGY RESOURCE?**

14 A. Each time the RES/No RES modeling is performed, the incremental costs
15 of proposed resource acquisitions will be determined. When the
16 Commission approves a RES Compliance Plan, acquisitions in
17 accordance with that plan are deemed prudent. Therefore, the
18 incremental costs that affect the RESA (the net costs over benefits
19 associated with those acquisitions) should be set for the life of that facility.

20 **Q. WHEN DOES THE COMPANY PROPOSE TO “LOCK DOWN” THE**
21 **BENEFITS?**

22 A. The Company proposes to lock down the Net Costs (or Net Benefits) of
23 each Eligible Energy Resource at either the time we files our Compliance

1 ^{Plan DSA} Report or at the time we sign a contract. The purpose of allowing for
2 these two options is administrative feasibility. For the smaller additions, it
3 does not make sense to continually re-run computer models to identify the
4 net benefits of each small resource addition. For larger projects, the
5 Company may wish to lock the net costs or net benefits at the time we
6 sign a power purchase agreement or contract for the major components of
7 a self-build project. Irrespective of whether the lock-in occurs at the time
8 ^{of DSA} of the annual compliance ^{Plan DSA} report of earlier, the calculations supporting the
9 lock-ins will be provided with the annual compliance ^{Plan DSA} reports.

10 Q. DOES THIS 2009 COMPLIANCE PLAN FILING INCLUDE ANY
11 LOCKED-IN NET COSTS OR NET BENEFITS?

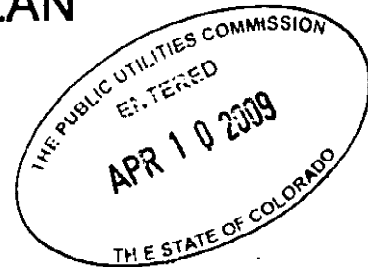
12 A. Yes. As Mr. Art Warren describes, he projected the net costs (costs over
13 benefits) of the SunE Alamosa facility and the on-site solar projects that
14 the Company will acquire through December 31, 2008. These are shown
15 on his Tables 6-1 and 6-2 in the last column of each exhibit. These net
16 costs are then imported into Mr. Walsh's Tables 6-3 and 6-4 and are
17 recovered with RESA dollars.

18 VI. WINDSOURCE

19 Q. ~~IN DOCKET NO. 08A-260E THE COMPANY FILED WITH THE~~
20 ~~COMMISSION AN APPLICATION TO CHANGE THE PRICING AND~~
21 ~~ACCOUNTING OF OUR VOLUNTARY RENEWABLE ENERGY RATE,~~
22 ~~BETTER KNOWN AS WINDSOURCE. COULD YOU PLEASE~~
23 ~~SUMMARIZE THE COMPANY'S PROPOSAL IN THAT DOCKET?~~



IN THE MATTER OF THE APPLICATION
OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009
RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN



DOCKET NO. 08A-532E

REBUTTAL TESTIMONY AND EXHIBITS

OF

DANIEL S. AHRENS

Handwritten notes and stamps at the bottom right of the page. It includes a large handwritten 'A' above a line, with '08A-532E' written below it. Below that, the word 'Witness' is written, followed by a signature that appears to be 'A/A/O.S.' and another line.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE APPLICATION OF)
PUBLIC SERVICE COMPANY OF) DOCKET NO. 08A- 532E
COLORADO FOR APPROVAL OF ITS 2009)
RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN)

REBUTTAL TESTIMONY AND EXHIBITS OF
DANIEL S. AHRENS

1

~~I. INTRODUCTION~~

2

~~Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.~~

3

~~A. My name is Daniel S. Ahrens. My business address is 1225 Seventeenth
Street, Suite 1000, Denver, Colorado 80202.~~

4

5

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

6

~~A. I am employed by Xcel Energy Services, Inc., a wholly-owned subsidiary
of Xcel Energy Inc., the parent company of Public Service Company of
Colorado. My job title is Pricing Consultant, Rates and Regulatory Affairs.~~

7

8

9

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

10

~~A. I am testifying on behalf of Public Service Company of Colorado ("Public
Service" or the "Company").~~

11

12

~~Q. HAVE YOU FILED DIRECT TESTIMONY IN THIS CASE?~~

13

~~A. Yes.~~

1 ~~or to contact customers about HomeSmart's solar offering. HomeSmart~~
2 ~~has access to CRS only for the following limited purposes:~~

- 3 • ~~To assure customers are paying their HomeSmart Service~~
4 ~~charges or Appliance Repair service portion of a~~
5 ~~HomeSmart customer's bill,~~
- 6 • ~~To issue HomeSmart related credits to customer bills, and~~
- 7 • ~~Cancel HomeSmart charges for customers who cancel~~
8 ~~HomeSmart services.~~
- 9 • ~~To verify a HomeSmart customer's account status prior to~~
10 ~~making a service call.~~

11 **Q. ON PAGE 5, LINE 1, OCC WITNESS MR. SHAFER SUGGESTS THAT**
12 **CARBON COSTS SHOULD BE EXCLUDED FROM THE "LOCK**
13 **DOWN" CALCULATION THAT YOU HAVE PROPOSED. WHAT IS HIS**
14 **REASONING?**

15 **A.** Mr. Shafer is concerned that by adding the carbon to the "lock down"
16 calculation, that the benefits of the renewable resources are over-stated.
17 Since the lockdown calculation is identifying the benefits by comparing the
18 RES and No-RES, including the carbon, Mr. Shafer is concerned that a
19 larger delta between the two scenarios would result. Mr. Shafer
20 acknowledges that the RES Rules require the utility to use the same
21 methodologies and assumption used in the most recent approved
22 resource plan when calculating the retail rate impact (again, the difference

1 between the RES and No-RES), *unless otherwise approved by the*
2 *Commission.* He suggests that the Commission exercise the option to
3 approve something other than the same assumptions that were used in
4 the least-cost plan since customers do not pay for carbon costs.

5 **Q. DO YOU AGREE?**

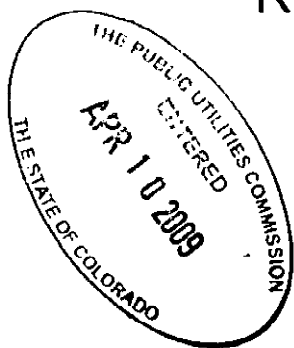
6 A. I believe it is appropriate to incorporate carbon costs in the "lock-down"
7 calculations. Public Service believes that there will be carbon costs in the
8 future and that the Commission approved carbon cost proxy of \$20 per
9 ton starting in 2010 is a reasonable proxy for what that cost is likely to be.
10 I don't believe it would be consistent to include a carbon cost for purposes
11 of determining the retail rate impact, but ignore the same cost for
12 purposes of calculating the "lock down".

13 The Commission has agreed with the Company that we should be
14 making future resource acquisition decisions based upon assumptions of
15 future carbon emission costs, even though the form these costs will take
16 is yet unknown. As such, it is appropriate to use these expected costs in
17 the RES- No RES modeling, which determines the retail rate impact of the
18 acquisition of renewable resources. Further, it is appropriate to use these
19 expected costs in the lock-down of the costs that are charged against the
20 RESA, as the Company proposes. Otherwise, there will be uncertainty as
21 to how many RESA dollars are available for future resource acquisitions,
22 thereby hampering utility resource planning.

23 ~~Q. HAVE YOU INCLUDED A CORRECTED TABLE 4-4?~~



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COMPLIANCE PLAN



DOCKET NO. 08A-_____E

DIRECT TESTIMONY

OF

KENNAN J. WALSH

13
08A-532E
4/6/09

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 2009)
RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN)

DOCKET NO. 08A-532E

DIRECT TESTIMONY OF
KENNAN J. WALSH

- 1 Q. ~~PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.~~
- 2 A. ~~My name is Kennan J. Walsh. My business address is 1225 17th Street,~~
3 ~~Denver, Colorado 80202.~~
- 4 Q. ~~BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?~~
- 5 A. ~~I am employed by Xcel Energy Services, Inc., a wholly-owned subsidiary~~
6 ~~of Xcel Energy Inc., the parent company of Public Service Company of~~
7 ~~Colorado. My job title is Senior Rate Analyst.~~
- 8 Q. ~~ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?~~
- 9 A. ~~I am testifying on behalf of Public Service Company of Colorado ("Public~~
10 ~~Service" or the "Company").~~
- 11 Q. ~~HAVE YOU INCLUDED A DESCRIPTION OF YOUR QUALIFICATIONS,~~
12 ~~DUTIES, AND RESPONSIBILITIES?~~
- 13 A. ~~Yes. A description of my qualifications, duties, and responsibilities is~~
14 ~~included as Attachment A.~~
- 15 Q. ~~WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?~~

1 including the Solar Thermal with gas backup. Column D, "Wind Energy
2 Costs," sets forth the projected costs of wind energy resources. Column
3 E, "Other Renewable Costs," includes the costs of the non-solar, non wind
4 "new" Renewable Resources, in this case the expected 4 MW biomass, 3
5 MW Erie Landfill and 20 MW Geothermal facility. Column F reflects the
6 costs for the Company owned PV described in Section 5. Column F1 on
7 Table 6-4 represents Windsorce costs.

8 Column G, "Total Renewable Energy Costs," is the summation of
9 the costs included in Columns B, C, D, E and F. The costs shown in
10 Column G represent the total costs to the Company of the "new" Eligible
11 Energy Resources that are in the RES Plan, and not in the No RES Plan.

12 Column H, "Modeled Incremental Costs " are the cost differences
13 in each year between the RES Plan and the No RES Plan, as determined
14 by the Strategist modeling and as set forth on Tables 6-1 and 6-2.

15 Column I, "Estimated ECA Costs " are the differences between the
16 Total Renewable Energy Costs in the RES Plan found in Column G and
17 the "Modeled Incremental Costs" from Column H. They are the avoided
18 costs of the non-renewable resources that are in the No RES Plan that
19 are displaced by renewable resources in the RES Plan.

20 Column J, "Ongoing Incremental Costs," shows the net costs and
21 benefits of the New Eligible Energy Resources that is locked down under
22 the "time fence" process. Column J reflects the accumulation of time
23 fence net costs and benefits each annual Eligible Energy Resource
24 portfolio from year to year.

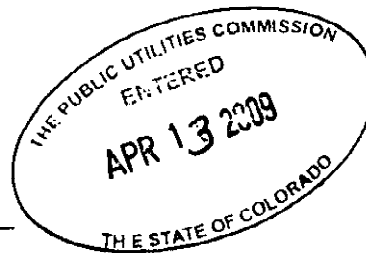
**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

* * *

IN THE MATTER OF THE APPLICATION OF PUBLIC)
SERVICE COMPANY OF COLORADO FOR APPROVAL OF) Docket No. 08A-532E
ITS 2009 RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN.)

**ANSWER TESTIMONY AND EXHIBITS OF FRANK SHAFER ON BEHALF OF
THE COLORADO OFFICE OF CONSUMER COUNSEL**

EXHIBIT # 15
DOCKET # 08A-532E
WITNESS _____
DATE 4/2/09
REPORTER [Signature]



February 23, 2009

1 ~~Q. HAS THE OCC DEVELOPED A METHOD TO ALLOCATE THE COSTS~~
2 ~~CREATED BY VARIANCES IN PROJECTED GENERATION VERSE ACTUAL~~
3 ~~GENERATION AS YOU HAVE SUGGESTED?~~

4 ~~A. No, but if the Commission agrees with the concept, then it could require Public~~
5 ~~Service to include a method which assigns some of the costs due to variances in Eligible~~
6 ~~Energy production to both the RESA and ECA in its next Compliance Plan filing.~~

7 C. Request to Use Resource Planning Assumptions in the Calculation of the
8 Retail Rate Impact and the “Lock Down” Calculation

9 Q. PLEASE DESCRIBE THE COMPANY’S LOCK DOWN PROPOSAL.

10 A. Starting on page 19, line 9 of his Direct Testimony, Mr. Ahrens describes the concept
11 of a time fence and how it factors into the determination of the costs and benefits of Eligible
12 Energy resources. He explains that at the time of acquisition of an Eligible Energy resource,
13 the Company estimates the associated net incremental cost. However, without a “lock down,”
14 this resource’s net incremental cost will likely change in the future Compliance Plans due to
15 the fluctuations in natural gas prices. Mr. Ahrens contends that if the Company is forced to
16 continually recalculate incremental costs that are driven by unavoidably imprecise gas price
17 forecasts, there could be a situation where the RESA funds will be inadequate to pay for those
18 incremental costs. To avoid the possible changes in the net costs or net benefits, it proposes
19 to lock down for each Eligible Energy resource—at either the time it files its Compliance
20 Report or at the time it signs a contract—that resource’s net cost or net benefit.

Q. WHAT IS THE OCC'S CONCERN WITH THE LOCK DOWN PROPOSAL?

1 **A.** We are concerned that the resource acquisition planning assumption regarding the
2 carbon cost adder should not be included in the lock down calculation until the actual carbon
3 costs become “known and measurable.” To help better explain this concept, I have prepared
4 three diagrams as Exhibit FCS-1. I should first mention that the values shown on pages 2 and
5 3 of these diagrams are not based on actual numbers nor are the relative changes between the
6 two scenarios (with and without a carbon cost adder) intended to be reflective of actual
7 differences between the two. However, I think they reasonably represent how carbon costs
8 factor into the determination of what has been called “headroom,” which is the amount of
9 Eligible Energy resources that can be added before the two percent retail rate cap is reached.

10 However, I would like to start with Page 1 of 3 of Exhibit FCS-1 to provide an
11 overview of how a carbon adder affects the retail rate impact calculation. This bar graph
12 begins with the first green bar on the left-hand-side and it represents the No-RES plan with a
13 carbon adder. It has a height of 100 units. The second green bar is the RES plan with a
14 carbon adder. It has a height of 102 units. Under the retail rate impact cap, the RES plan can
15 be up to two percent greater in cost than the No-RES plan's cost,¹ that is why it has a height
16 of 102 units (100 units X 1.02). The first blue bar is the No-RES plan without a carbon adder.
17 It has a height of 98 units. I arbitrarily picked a value of two units to represent the lower cost
18 of the portfolio when there is no carbon adder. The second blue bar is the RES plan without a
19 carbon adder. It has a height of 99.96 units. Its height is the product of 98 units times the
20 1.02 factor explain previously. The red arrow between the top of the second blue bar (the
21 RES Plan without a carbon adder) and the dashed green line, which represents the top of the

¹ The associated RESA program administrative costs are in both scenarios, but have been ignored for this explanation.

1 second green bar (the RES Plan with a carbon adder) indicates that 2.04 units of headroom is
2 created by including a carbon adder in the determination of the retail rate impact calculation.
3 The practical effect of this additional headroom is that more Eligible Energy resources can be
4 acquired when a carbon adder is included in the retail rate impact calculation.

5 Page 2 of 3 of Exhibit FCS-1 shows the additional headroom concept and the
6 additional Eligible Energy resources available when a carbon adder is included in a line graph
7 format. Beginning on the left-hand-side (in green text) of Page 2 of 3, Exhibit FCS-1 shows
8 that the No-RES costs with a carbon cost adder is 26 on the hypothetical scale. The same
9 starting point on the right-hand-side (in blue text) for the No-RES costs without a carbon cost
10 adder is 24. In both scenarios, the cost of the resource portfolio after some fossil fuel
11 resources are removed results in either a value of 21 under the carbon cost adder scenario or a
12 value of 22 under the without a carbon cost adder scenario. In the final step, Eligible Energy
13 resources are added until the two percent retail rate cap is reached. Again focusing on the
14 hypothetical scale, the RES costs with a carbon cost adder reaches a cost of 29, while the RES
15 costs without a carbon cost adder reaches a cost of 27. Therefore the headroom created by the
16 carbon cost adder is 8 units (29 - 21), while the headroom created without a carbon cost adder
17 is 5 units (27 - 22).

18 On page 3 of 3 of Exhibit FCS-1, I develop the same type of comparative diagram for
19 the development of the lock down. On the left-hand-side, in green text, the No-RES with a
20 carbon cost adder scenario starts at 28, while on the right-hand-side, in blue text, the No-RES
21 without a carbon cost adder scenario starts at 27. Once the equivalent sized fossil fuel
22 resource is removed the cost of the portfolio drops to 24 under the scenario with a carbon cost
23 adder, while the cost of the portfolio without a carbon cost adder drops to 25. Thus the ability

1 for an Eligible Energy resource to achieve net benefits is greater since there is more
2 “distance” when a carbon cost adder is included (4 units or 28 – 24) as compared to the
3 scenario when no carbon cost adder is included (2 units or 27 – 25).

4 **Q. SO WHY DOES IT MATTER THAT MORE HEADROOM IS BEING**
5 **CREATED BY THE CARBON ADDER?**

6 **A.** Because imputing a carbon cost when no actual carbon costs are currently being paid
7 for by the customers on their bills artificially creates headroom that does not exist in the “real
8 world.” The OCC believes that the method used to calculate the retail rate impact and the
9 associated lock down amount should be based on assumptions which are more closely tied to
10 what is actually impacting customer bills and not on resource planning assumptions which are
11 used in the selection process of resources.

12 **Q. MR. SHAFER PLEASE DESCRIBE RES RULE 3661(E).**

13 **A.** This RES Rule² provides that for purposes of calculating the retail rate impact, the
14 utility shall use the same methodologies and assumptions it used in its most recently approved
15 least-cost planning³ case unless otherwise approved by the Commission.

16 **Q. DO YOU KNOW WHAT CARBON COSTS WERE RECENTLY APPROVED**
17 **BY THE COMMISSION IN PUBLIC SERVICE’S MOST RECENT ELECTRIC**
18 **RESOURCE PLANNING PROCESS?**

19 **A.** I believe the Commission approved a carbon tax of \$20 per ton starting in 2010 and
20 escalating at seven percent per year.⁴

² The RES Rules are found at 4 Code of Colorado Regulations 723-3-3650 to 723-3-3665.

³ There is a pending RES Rulemaking case, Docket No. 08R-424E, where the reference to the Commission’s least-cost planning process is changed to the current electric resource planning process.

⁴ See, Decision No. C08-0929, paragraph 270.

1 **Q. IS THE OCC BASING ITS POSITION ON EXCLUDING THE CARBON**
2 **COST ADDER FROM THE RETAIL RATE IMPACT CALCULATION ON THE**
3 **LAST PHRASE IN YOUR EARLIER ANSWER REGARDING ‘UNLESS**
4 **OTHERWISE APPROVED BY THE COMMISSION’?**

5 **A.** Yes and let me explain why. To help put this into context, I want to discuss how the
6 Electric Resource Planning (“ERP”) assumption regarding natural gas prices differ from a
7 carbon cost adder assumption. In the ERP process, the Commission does not approve specific
8 natural gas prices, but instead approves a methodology, which is updated at the time the utility
9 begins its resource selection process after it has received bids. While it is unlikely that the
10 updated natural gas prices will reflect actual prices when the resource comes on-line, it does
11 not matter because customers ultimately pay whatever the actual natural gas prices are
12 through the ECA and not the updated natural gas price that was used in the selection resource
13 process. However, carbon costs are not analogous to updated natural gas prices because, at
14 least as of today, customers do not ultimately pay for the carbon costs that were used in the
15 screening process or pay for the carbon costs included on their bills.

16 I am aware of a similar situation where an imputed value was used in the resource
17 selection process, but when the actual costs of the wind resources were included in the
18 RES/No-RES modeling it had the unintentional consequence of increasing the incremental
19 energy costs recovered through the RESA.⁵ The imputed value was an \$8.75 per MWh
20 Renewable Energy Credit (“REC”) for all renewable resources. Attached as Exhibit FCS- 2 is
21 OCC Discovery Question 2-1 where I asked Public Service to confirm my understanding of
22 this outcome. This exchange is presented in sub-part G of OCC Discovery Question 2-1. In

⁵ Docket No 07A-462E.

1 my opinion, this demonstrates why using imputed value or costs which are not being
2 recovered through actual customer bills can present problems.

3 **Q. WHAT DOES THE OCC PROPOSE THE COMPANY DO FOR ITS 2009 RES**
4 **COMPLIANCE PLAN AS IT RELATES TO THE LOCK DOWN CALCULATION OF**
5 **NET COSTS OR NET BENEFITS OF ELIGIBLE ENERGY RESOURCES?**

6 **A.** Public Service should be allowed to calculate an associated lock down for an Eligible
7 Energy resource's net cost or net benefits as it has proposed with the exception that no carbon
8 cost adder be included in the analysis. We would also suggest that the Company be required
9 to retain the associated data and modeling files used in these net cost or net benefit lock down
10 calculations such that when carbon costs become more known and measurable, the associated
11 lock downs can be recalculated for all prior Eligible Energy resources. Then the updated lock
12 down figures can be factored into future Compliance Plans.

13 **Q. IS THE OCC OPPOSED TO A UTILITY GETTING MORE ELIGIBLE**
14 **ENERGY RESOURCES FOR CUSTOMERS?**

15 **A.** No. We are concerned that the carbon cost adder should remain as a planning
16 assumption for resource modeling purposes and should not be included in a net cost/benefit
17 calculation until it becomes a known and measurable cost which customers pay.

18 **Q. ARE CARBON COSTS INCLUDED IN OTHER ANALYSES WITHIN**
19 **PUBLIC SERVICE 2009 COMPLIANCE PLAN?**

20 **A.** Yes. The use of the carbon cost adder is also factored into the revenue figures Public
21 Service presents in Table 6-3. Exhibit FCS-3 is OCC Discovery Question 1-12. It shows that
22 starting in 2010, the Company has estimated an additional \$2,621,000 of additional RESA

1 revenues attributable to the additional carbon dioxide costs above the 20 percent level and the
2 additional carbon cost related revenues continue through the RES Planning Period of 2020.

3 **Q. IS THE OCC TAKING ISSUE WITH THIS ASPECT OF THE COMPANY'S**
4 **2009 COMPLIANCE PLAN?**

5 **A.** No. Because the effects of this inclusion does not start until 2010, I believe the 2010
6 Compliance Plan docket is the proper venue to discuss this issue.

7 **Q. IN ONE OF YOUR EARLIER ANSWERS YOU MENTIONED THAT**
8 **BECAUSE THE CARBON ADDER IS NOT PART OF THE "REAL WORLD" IN**
9 **TERMS OF CUSTOMERS' BILLS THEN IT SHOULD NOT BE INCLUDED IN THE**
10 **RETAIL RATE IMPACT CALCULATION. DID I ACCURATELY REPRESENT**
11 **YOUR POSITION ON THIS POINT?**

12 **A.** Yes.

13 **Q. MAY I TAKE THIS NEXT PORTION OF OUR DISCUSSION INTO THE**
14 **REAL WORLD, AS YOU USE THAT TERM?**

15 **A.** Fair enough.

16 **Q. ISN'T THE COLLECTION OF ACTUAL RESA FUNDS SIMPLY THE RESA**
17 **RIDER PERCENTAGE TIMES THE TOTAL VALUE OF A CUSTOMER'S**
18 **ELECTRIC BILL?**

19 **A.** Yes.

Q. SO WHY DOES IT MATTER THAT THERE COULD BE MORE HEADROOM AND THUS MORE ELIGIBLE ENERGY RESOURCES DEPLOYED UNDER A SCENARIO WHEN A CARBON ADDER IS INCLUDED IF THE MAXIMUM RESA CHARGE ON A CUSTOMER'S BILL IS FIXED AT TWO PERCENT?

1 A. Described below is my current working theory of the interplay between the RESA
2 modeling headroom and actual RESA collection through customer bills. Using Page 1 of 3 of
3 Exhibit FCS-1 as a way to put this into a visual context, although the differences between
4 both the blue bars (1.96 units) and both the green bars (2 units) is two percent of the
5 respective scenarios the relevant difference is between the two RES scenarios which is 2.04
6 units. For purposes of the retail rate impact calculation with a carbon adder, we are using a
7 larger base upon which to measure two percent from and to acquire more Eligible Energy
8 resources. However, in the real world that larger base does not exist because customers are
9 not paying the associated carbon costs which made the green RES bar higher. My suspicion
10 is that by allowing more Eligible Energy resources to be acquired because carbon costs have
11 been included, that in subsequent RESA Account reconciliations (comparing actual RESA
12 collections from customers to the modeled incremental costs shown in Column H of Table 6-
13 3) it might turn out that actual RESA collections will fall short of the model incremental costs
14 of the Eligible Energy resources. This would mean that the retail rate impact cap has been
15 exceeded. This is visually demonstrated on Page 1 of 3 with the modeling headroom of 2.04
16 units, but with the real world headroom (because carbon costs are not currently being charged
17 to customers) of only 1.96 units.

~~1 We are also concerned that the allocation percentages for the WiP between the Xcel
2 operating companies is being fixed as of the 2008 values. The OCC believes that it would be
3 appropriate to update the allocation percentages at some future point in time during the WiP's
4 useful life. The Company has indicated that the WiP Forecasting Tool has a five-year useful
5 life. The OCC recommends that the allocation percentages to Xcel's operating companies be
6 recomputed in third year of the WiP's useful life based on a more current relative penetration
7 rate of wind on each of the Xcel operating companies' system or based on whichever method
8 the Commission adopts in this proceeding. Under this recommendation years four and five of
9 the WiP's useful life would use updated allocation percentages.~~

10 **E. Concluding Comment**

11 **Q. IS THERE SOMETHING ELSE YOU WANT TO SAY?**

12 **A.** Yes. The common theme through my testimony is that I am challenging proposals
13 that Public Service has made in this Compliance Plan filing which helps the RESA and the
14 retail rate impact cap calculation. I contended that: 1) the variations in generation between
15 forecasts and actual need to be shared between the deferred accounts for the RESA and the
16 ECA instead of being exclusively assigned only to the ECA; and 2) that carbon costs should
17 not be included in the retail rate impact calculation or the lock down calculation until they are
18 known and measurable and being charged to customers, instead of using the estimated carbon
19 costs from Public Service's most recent ERP case;

~~20 The OCC believes that in order for the retail rate cap to have meaning, costs that
21 should appropriately be "charged" to the RESA should not be charged to the ECA and that
22 estimated carbon costs should not be included in the determination of rates until carbon costs~~

Line	Headroom with a Carbon Adder		Scale	Headroom without a Carbon Adder	
1					
2					
3			102.5		
4			102		
5			101.5		
6			101.0		
7			100.5		
8			100		
9			99.96		
10			99.0		
11			98.5		
12			98		
13			97.5		
14					
15					
16					
17					
18					
19	No-RES	RES		No-RES	RES
20	(w/ Carbon Adder)	(w/ Carbon Adder)		(w/o Carbon Adder)	(w/o Carbon Adder)

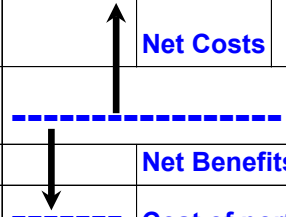
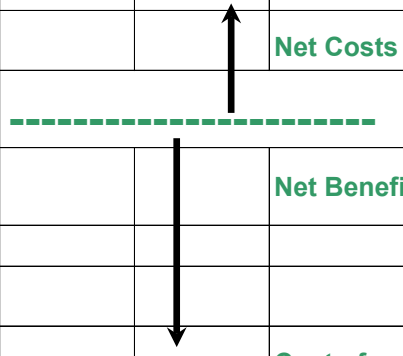
2% Headroom 2.00

Headroom 2.04

2% Headroom 1.96

Line	Scale	Headroom with a Carbon Adder			Scale	Headroom without a Carbon Adder		
1								
2								
3	30				30			
4	29			----- RES (w/ Carbon Adder)	29			
5	28		2%		28			
6	27				27			----- RES (w/o Carbon Adder)
7	26	No-RES -----			26		2%	
8	25	(w/ Carbon Adder)		Amt of Eligible Energy	25			Amt of Eligible Energy
9	24				24	No-RES -----		
10	23				23	(w/o Carbon Adder)		
11	22				22			----- Cost of portfolio
12	21			----- Cost of portfolio	21			after fossil fuel
13				after fossil fuel				resources are
14				resources with their				removed, but before
15				carbon costs are				renewables are added
16				removed, but before				
17				renewables are added				

Line	Lock Down With Carbon Adder	Scale	Lock Down Without Carbon Adder
1			
2			
3			
4			
5		30	
6		29	
7	No-RES (w/ Carbon Adder)	28	Net Costs
8	Net Benefits	27	No-RES (w/o Carbon Adder)
9		26	Net Benefits
10		25	Cost of portfolio
11	Cost of portfolio	24	after fossil fuel
12	after removing		resources are
13	equivalent sized		removed, but before
	fossil fuel resource		renewables are added
	with its carbon adder		



**Re: The Application of Public Service Company) Second Set of Discovery Requests
of Colorado for Approval of its 2009 Renewable) Of the Office of Consumer Counsel
Energy Standard Compliance Plan) Served On Public Service Company
Docket No. 08A-532E) February 6, 2009**

DISCOVERY REQUEST NO. OCC2-1:

In this docket, Public Service is proposing to be allowed to “lock down” the incremental costs of a new Eligible Energy Resources.

- a) Under Public Service’s proposal, will this lock down calculation include a value for the “carbon savings” of the Eligible Energy Resource?
- b) Under Public Service’s proposal, will this lock down calculation include a value for the “carbon costs” of the fossil fuel equivalent resource used in the No-RES scenario?
- c) Under Public Service’s proposal, which Eligible Energy Resources will use the carbon prices approved in the Company 2007 Colorado Resource Plan case, Docket No. 07A-447E for the lock down calculation?
- d) Mr. Warren explains on page 5 of his Direct Testimony, lines 3 to 5 that in the last column of Table 6-1 is the on-going costs of the SunE Alamosa and all On-Site solar installed as of the as of the end of 2008. Please break out by year this column into two sets—one attributable to SunE Alamosa and one attributable to all On-Site solar resources. Please provide the spreadsheet, with cell references intact, which performs these lock down calculations.
- e) Please provide the on-going costs shown in the last column of Table 6-1, but without including any carbon costs being included in the analysis. Please break out by year the values into two sets—one attributable to SunE Alamosa and one attributable to all On-Site solar resources. Please provide the spreadsheet, with cell references intact, which performs these lock down calculations.
- f) Should future carbon costs/taxes legislation be approved which establishes known costs for carbon, would Public Service agree to recalculate the prior years’ lock down amounts based on actual carbon costs/taxes and true-up the RESA account for the difference between estimated carbon costs and known costs for carbon?

- g) Does Public Service agree with the following statements. As a result of the settlement reached in its 2003 LCP, it agreed to impute a Renewable Energy Credit value of \$8.75 per MWh in the resource selection process for renewable resources. This imputed REC value was used in the selection process for the 2005 All-Source RFP. The use of the imputed REC value contributed in part to the selection of four wind resources because they were shown to be cost effective, due in part to the \$8.75 per MWh imputed REC value. Contracts were signed for four wind resources and the facilities went into service. However, when their actual costs were included in the RES/No-RES modeling in Docket No. 06A-478E, they had the unintentional consequence of increasing the incremental energy costs recovered through the RESA. If the Public Service disagrees with any of the above statement, please identify which statements the Company disagrees with and why.

RESPONSE:

- a) Yes.
- b) Yes.
- c) All eligible renewable resources are compared to thermal resources in the No RES model and therefore include the carbon prices when considering the lock down calculation.
- d) See Attachment OCC2-1.
- e) Unavailable. The RES and No RES modeling, and Ongoing Costs calculations were not performed without Carbon Costs.
- f) No. The purpose of the lock-down provision is to lock in expected incremental costs (or incremental savings) at the time that the resource is procured. Therefore, Public Service does not agree that the RESA balance should be changed if carbon costs are different in the future from the Commission-approved carbon estimates that are used at the time of resource procurement. The same is true for all other cost estimates in the STRATEGIST model.
- g) Public Service agrees with all of these statements.

Sponsor: Art Warren (a – e)
Dan Ahrens (f & g)

Response Date: February 12, 2009

Re: The Application of Public Service Company)	First Set of Discovery Requests
of Colorado for Approval of its 2009 Renewable)	Of the Office of Consumer Counsel
Energy Standard Compliance Plan)	Served On Public Service Company
Docket No. 08A-532E)	January 15, 2009

DISCOVERY REQUEST NO. OCC1-12:

On page 7 lines 1 to 12 of Mr. Warren's Direct Testimony, he indicates that Public Service has included the cost of carbon emissions above the 20% reduction for purposes of calculating the RESA beginning in the year 2010. Please identify the yearly amount of carbon costs above the 20% level for the years 2010 to 2020 included in the RESA calculations.

RESPONSE:

See Attachment OCC1-12.

Sponsor: Art Warren

Response Date: February 9, 2009

Year	Wholesale LRS	Retail	CO2 \$000 above 20%	CO2 \$000 added to Retail Revenue Forecast	CO2 RESA \$000 @ 2% RESA
2010	14%	86%	\$152,464	\$131,042	\$2,621
2011	14%	86%	\$158,786	\$136,221	\$2,724
2012	9%	91%	\$133,884	\$122,202	\$2,444
2013	9%	91%	\$126,158	\$114,753	\$2,295
2014	9%	91%	\$133,365	\$121,003	\$2,420
2015	9%	91%	\$154,213	\$139,582	\$2,792
2016	10%	90%	\$154,013	\$139,094	\$2,782
2017	10%	90%	\$145,915	\$131,580	\$2,632
2018	10%	90%	\$166,613	\$150,037	\$3,001
2019	10%	90%	\$179,283	\$161,228	\$3,225
2020	10%	90%	\$189,136	\$169,880	\$3,398

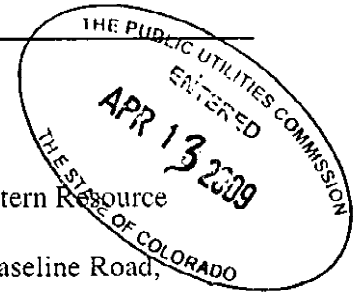
BEFORE THE PUBLIC UTILITIES COMMISSION OF COLORADO

DOCKET NO. 08A-532E

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009 RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN.

**CROSS-ANSWER TESTIMONY OF LOWREY BROWN
ON BEHALF OF WESTERN RESOURCE ADVOCATES**

MARCH 23, 2009



1 **Q. Please state your name, occupation, and business address.**

2 A. My name is Lowrey Brown. I am a Senior Policy Analyst in Western Resource
3 Advocates' (WRA) Energy Program. My business address is 2260 Baseline Road,
4 Suite 200, Boulder, CO 80302.

5 **Q. Please describe WRA.**

6 A. WRA is a non-profit conservation organization working to protect and restore the
7 natural environment of the Interior American West. WRA's Energy Program works to
8 develop and implement policies to reduce the environmental impacts of the electric
9 power industry in the Interior West by promoting the expanded use of renewable energy,
10 energy efficiency, and other clean energy resources in an economically sound manner.

11 **Q. Have you prepared an appendix that describes your qualifications?**

12 A. Yes, Appendix A is attached to this testimony and describes my qualifications.

EXHIBIT # 26
DOCKET # 08A-532E
WITNESS _____
DATE 4/13/09
REPORTER AW

1 **Q. Have you previously testified as an expert witness in electric utility proceedings?**

2 A. Yes. I have testified before the Public Utility Commission of Oregon on behalf of the
3 Citizens' Utility Board of Oregon. A summary of my participation before that
4 Commission is included in Appendix A.

5 **Q. Please summarize your testimony in this proceeding.**

6 A. My testimony rebuts the Colorado Office of Consumer Counsel's (OCC) assertion
7 that the carbon adder from the Resource Planning process should not be used in the retail
8 rate impact calculation that is used this year for compliance with Colorado's Renewable
9 Energy Standard (RES) laws and regulations.

10 **Q. Please summarize your argument as to why the carbon adder is appropriately**
11 **included in the retail rate impact calculation.**

12 A. First, it is important to recognize that the RES Compliance Plan is a long-term
13 resource acquisition plan, and is part of a utility's overall long-term resource procurement
14 process. Not including the carbon adder in the retail rate impact calculation, simply
15 because carbon costs are not currently a line item in customer rates today, suggests that a
16 utility should make long-term resource acquisition decisions based only upon costs as
17 they are today, and not upon the utility's best estimate of how costs will change into the
18 future. This would not be a reasonable way to approach long-term resource planning.

19 This highlights a fundamental problem with the, I think false, presumption that an annual
20 reworking of a utility's RES Compliance Plan is necessary to comply with the retail rate
21 impact rule. A utility cannot reasonably be expected to make long-term renewable

1 resource acquisition decisions when the funding available for those acquisitions changes
2 every year. It is an unfair position to put the utility in, and it is unnecessary.

3 In addition, it is important not to lose sight of the fact that the retail rate impact
4 calculation in the RES Compliance Plan is an estimate based on forecasts of two different
5 cost streams for two different future scenarios, one of which – the No-RES plan – the
6 utility will specifically not pursue. By its nature, the retail rate impact calculation cannot
7 have the mathematical certainty of $1+1=2$. To whipsaw a utility's resource procurement
8 plan back-and-forth each year as cost forecasts change based upon a calculation that is
9 both a forecast and an estimate does not make sense.

10 **Q. What is the basis for OCC's argument that the carbon adder should not be**
11 **included in the retail rate impact calculation?**

12 A. OCC argues that there is no carbon charge currently in customer bills, and that to
13 include it in the retail rate impact calculation would inflate the calculation with costs that
14 do not exist in the "real world."¹

15 **Q. Why do you disagree with OCC's argument?**

16 A. The RES Compliance Plan examines both the retail rate impact and the utility's long-
17 term renewable resource acquisition plan for complying with the Renewable Energy
18 Standard. Excluding the carbon adder, because no specific carbon cost is in rates today,
19 would suggest that a utility should plan its resource acquisitions today as if there will be

¹ OCC Testimony of Frank Shafer at 7.

1 no carbon costs in the future.² The same logic would suggest that a utility should plan its
2 resource acquisition as if all costs, from natural gas prices to the cost of raw materials,
3 will remain as they are today. This is not a reasonable way to approach long-term
4 resource acquisition planning. Specifically, exclusion of the carbon adder now would be
5 approaching future resource planning based on a future carbon cost stream of zero,
6 simply because zero is the carbon cost in rates today. While we cannot know exactly
7 what the future cost of carbon regulation might be, the political momentum for carbon
8 emissions regulation strongly suggests a future carbon cost stream greater than zero.

9 **Q. In its argument, did OCC claim that carbon costs should be excluded when**
10 **considering future resource acquisitions?**

11 A. No, OCC specifically distinguishes between the retail rate impact calculation and
12 resource planning assumptions.³ This distinction, however, is part of the fundamental
13 problem with OCC's argument. The retail rate impact calculation is a central part of a
14 utility's renewable resource acquisition planning for RES compliance. The result of the
15 retail rate impact calculation determines the level of funding for renewable resources that
16 can be developed by the utility. It would not make sense to use one set of assumptions in
17 the retail rate impact calculation and another when planning resource acquisitions, when
18 those resource acquisitions are being planned for based upon the results of the retail rate
19 impact calculation.

² In Commission Decision No. C08-0929, where the carbon adder was established, the Commission points to the direction provided by and authority granted in § 40-2-23(1)(b) C.R.S., notes the increasing momentum in the political acceptance of carbon legislation, and agrees with PSCo's perspective that CO₂ costs are likely to rise. The first sentence of § 40-2-23(1)(b) C.R.S. reads: "The commission may give consideration to the likelihood of new environmental regulation and the risk of higher future costs associated with the emission of greenhouse gases such as carbon dioxide when it considers utility proposals to acquire resources."

³ OCC Testimony of Frank Shafer at 7.

1 **Q. Please explain the fundamental problem with an annual reworking of a utility's**
2 **RES Compliance Plan.**

3 A. A utility cannot reasonably be expected to plan for long-term RES resource
4 acquisitions if the amount of money available for those acquisitions changes from year to
5 year. It does not seem fair to expect a utility to plan for and acquire renewable resources,
6 while annually changing the funding available for those acquisitions as gas prices spike
7 or drop, as the cost of materials rises or falls with economic activity, or as the costs of
8 complying with likely future carbon emissions regulation is phased in. A utility could
9 acquire a resource one year, the cost of which was well within that year's forecast for
10 long-term funding, only to be told that this year's forecast for long-term funding indicates
11 that the once-acceptable cost of that resource is now outside of the available funding.

12 **Q. Why do you think this annual reworking of a utility's RES Compliance Plan,**
13 **through the annual retail rate impact calculation, is not necessary?**

14 A. As I read them, neither the Renewable Energy Standard Statute, nor the Rules
15 implementing it, require an annual reworking of a utility's renewable resource
16 procurement plan through an annual redetermination of the retail rate impact. With regard
17 to the retail rate impact specified in the Renewable Energy Standard, § 40-2-124(1)(g)(I)
18 C.R.S. provides that, "for each qualifying utility, the commission shall establish a
19 maximum retail rate impact ... of two percent of the total electric bill annually for each
20 customer. The retail rate impact shall be determined net of new alternative sources of
21 electricity supply from noneligible energy resources that are reasonably available at the
22 time of the determination."

1 While specifying an annual retail rate impact, the Statute does not speak to an annual
2 determination of that impact, and, at the risk of splitting hairs, it says “at *the time of the*
3 determination” (emphasis added). I am making no presumption that use of the definite
4 article limits the Commission to a single determination, but I see nothing that would
5 require multiple determinations.

6 **Q. The Commission’s Rules are far more specific as to the calculation of the retail**
7 **rate impact. How do you read the Rules, in particular 3661(h)(II), as not requiring**
8 **an annual retail rate impact determination by the Commission for compliance**
9 **purposes?**

10 A. First. The Rules governing compliance with the Renewable Energy Standard are
11 lengthy, and Rule 3661(h)(II) should be read within the context of the Rules as a whole.
12 There are a number of provisions in the Rule that either suggest or clearly state a long-
13 term approach to a utility’s renewable resource procurement plan, and specifically an
14 approach that looks past the single compliance year of each filing.
15 Foremost, the Commission’s Rule for a utility’s “estimate of the retail rate impact limit”
16 requires the utility to consider resources “at the beginning of the compliance year and for
17 a minimum of the ten years thereafter,” 3661(h)(I). The Commission’s Rules also address
18 the carrying forward of Renewable Energy Certificates (RECs) from past years and the
19 borrowing of RECs from future years, 3659(a)(VI-VII), the expiration of RECs in five
20 calendar years, 3659(f), the carrying forward of costs incurred in acquiring eligible
21 energy, 3660(c), and investor-owned utility ownership of renewable generation assets,
22 3660(e), which are unlikely to be one-year investments.

1 Though a utility's RES Compliance Plan filing is to include the utility's determination of
2 the retail rate impact, 3657(a)(I)(A), the Commission's ruling is on the Plan, 3657(b).
3 Rule 3661(h)(II), requiring a utility to modify its RES plan so as not to exceed the retail
4 rate impact for the first compliance year of the RES planning period, stands alongside
5 Rule 3659(f) that specifically allows an investor-owned utility to carry forward
6 compliance costs in excess of the retail rate impact. The latter makes sense, as resources
7 are not acquired in a linear fashion, and it is reasonable to expect inter-year variability in
8 renewable resource acquisition expenditures.

9 In summary, the existing rules do not require an annual Commission determination of the
10 retail rate impact, and do contain numerous references and provisions that suggest a long-
11 term approach to a utility's RES Compliance Plan.

12 **Q. Explain the significance of your earlier claim that the retail rate impact**
13 **calculation lacks mathematical certainty.**

14 A. As described earlier, the retail rate impact calculation, by its nature, lacks
15 mathematical certainty. It is an estimate that is based on forecasted cost streams from two
16 different possible future scenarios, one of which – the No-RES scenario – the utility will
17 specifically not pursue. Not only will both of these forecasts almost certainly be wrong,
18 one of the forecasted scenarios is for an alternate reality that will not exist, and so cannot
19 be looked back at to see what its cost stream actually was.

20 This is not to suggest that the retail rate impact calculation serves no purpose, but it is
21 important to keep the results of the calculation in perspective. Recalculating the retail rate

1 impact based on this year's gas cost is not going to provide mathematical certainty that
2 did not exist in the first place.

3 Planning for future resource acquisitions is a process that involves forecasts,
4 assumptions, sometimes placeholders, and always uncertainty. A utility's renewable
5 resource acquisition planning for RES compliance is subject to the same uncertainties,
6 but, as described earlier, if the amount of funding available to the utility for compliance
7 changes every year, it adds an element of futility to the process, as resources planned for
8 one year might be too expensive the next year and then within projected funding levels
9 the year after that. A far more sensible approach to planning for and acquiring renewable
10 resources to comply with the RES would be to design, based on the best forecasts and
11 assumptions available, a renewable resource acquisition plan that meets the retail rate
12 impact cap, and then proceed to acquire the resources without rolling the dice each year --
13 which annually raises or lowers the forecast for available funds for RES compliance, and
14 leaves the utility in limbo as it tries to make long-term renewable resource acquisition
15 decisions.

16 Given that the retail rate impact calculation is an estimate, and one whose forecast cannot
17 even be compared to events as they eventually materialize (as one of the scenarios will
18 not ever materialize), it is especially nonsensical to require a utility to redesign its
19 renewable resource acquisition plan each year around that calculation. It does make
20 sense, however, that in planning for future resource acquisitions, the utility should use the
21 best available information at the time.

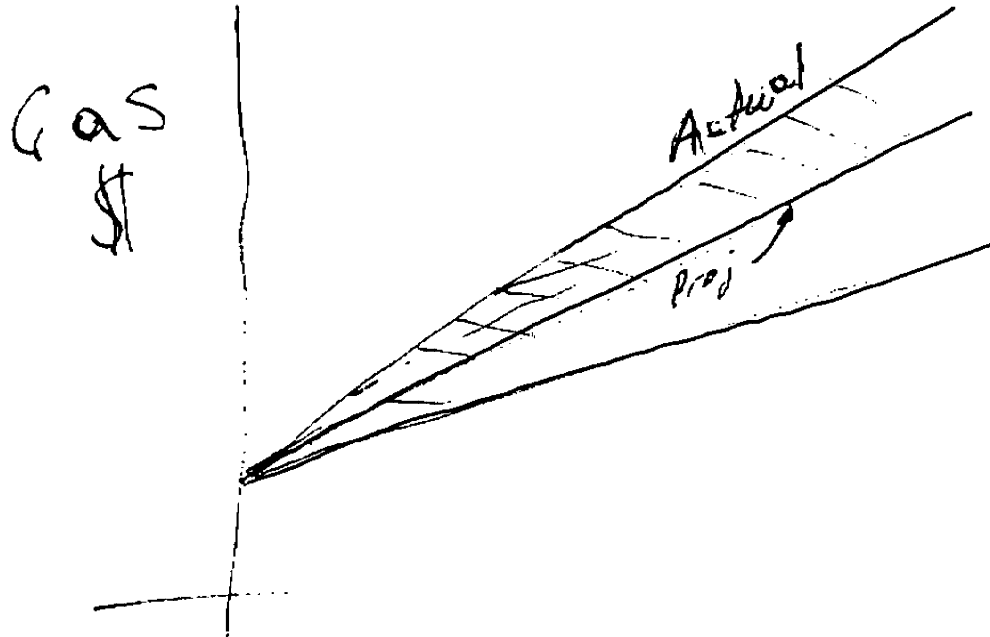
1 **Q. Is your opinion consistent with Public Service's proposed lock-down of a**
2 **resource's net cost or benefit?**

3 A. Yes, I believe so. I see no reason that a full-blown Commission retail rate impact
4 determination would be necessary to establish the incremental net cost or benefit of a new
5 resource. It is important to keep in mind that, going forward, changes in the cost of
6 carbon regulation or fluctuations in gas prices will not change the utility's costs of
7 acquired renewable resources. I would note that my understanding of Public Service's
8 proposal is that only the net cost or benefit of resources that have, or will very soon be,
9 acquired would be locked-down.⁴ Circumstances can change quickly, and I would not
10 want to create a situation where, by locking-down a resource's estimated net cost or
11 benefit in advance, a utility might have an incentive to blindly follow a Plan that had
12 been approved under different circumstances.

13 **Q. Does this conclude your testimony?**

14 A. Yes.

⁴ Public Service Direct Testimony of Daniel Ahrens at 21-22.



THE PUBLIC UTILITIES COMMISSION
ENTERED
APR 13 2009
THE STATE OF CONNECTICUT

EXHIBIT # 37
DOCKET # 08A-532E
WITNESS Gene Camp
DATE 4-7-09
REPORTER cc

Re: The Application of Public Service Company)	First Set of Discovery Requests
of Colorado for Approval of its 2009 Renewable)	Of the Office of Consumer Counsel
Energy Standard Compliance Plan)	Served On Public Service Company
Docket No. 08A-532E)	January 15, 2009

DISCOVERY REQUEST NO. OCC1-12:

On page 7 lines 1 to 12 of Mr. Warren's Direct Testimony, he indicates that Public Service has included the cost of carbon emissions above the 20% reduction for purposes of calculating the RESA beginning in the year 2010. Please identify the yearly amount of carbon costs above the 20% level for the years 2010 to 2020 included in the RESA calculations.

RESPONSE:

See Attachment OCC1-12.

Sponsor: Art Warren

Response Date: February 9, 2009

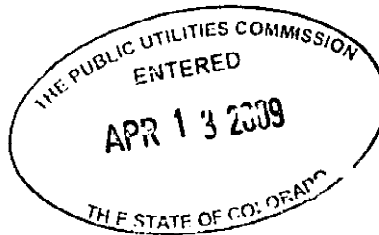


EXHIBIT # 38
DOCKET # 08A-532E
WITNESS Arthur Warren
DATE 4-7-09
REPORTER W

Year	Wholesale LRS	Retail	CO2 \$000 above 20%	CO2 \$000 added to Retail Revenue Forecast	CO2 RESA \$000 @ 2% RESA
2010	14%	86%	\$152,464	\$131,042	\$2,621
2011	14%	86%	\$158,786	\$136,221	\$2,724
2012	9%	91%	\$133,884	\$122,202	\$2,444
2013	9%	91%	\$126,158	\$114,753	\$2,295
2014	9%	91%	\$133,365	\$121,003	\$2,420
2015	9%	91%	\$154,213	\$139,582	\$2,792
2016	10%	90%	\$154,013	\$139,094	\$2,782
2017	10%	90%	\$145,915	\$131,580	\$2,632
2018	10%	90%	\$166,613	\$150,037	\$3,001
2019	10%	90%	\$179,283	\$161,228	\$3,225
2020	10%	90%	\$189,136	\$169,880	\$3,398

Docket No. 08A-532E

Staff Position on "Time Fence" Issue

1. The fundamental principle underlying Staff's recommendation with regard to the Company's proposed "time fence" is that the retail rate impact determination should reflect actual costs and benefits of renewables that are incremental to that which would have been the case if non-renewable resources had been acquired. The RESA balance should not be based on "locked in" savings and costs determined based on previous projections.
2. The four renewable resources that resulted from the 2005 All Source RFP, and any resources that existed prior to the passage of Amendment 37, should not be included in the retail rate impact determination.
3. With each annual Renewable Energy Standard (RES) plan
 - (a) The Company shall rerun the RES and No-RES models for the prior year replacing only the projected costs of fuel and CO₂ with actual costs. This analysis shall be used to determine the incremental costs to be assessed to the RESA.
 - (b) If the determination in (a) demonstrates that incremental costs were less than the maximum rate impact, then the RESA balance shall be credited by that amount.
 - (c) If the determination in (a) demonstrates that incremental costs were greater than the maximum rate impact, then the RESA balance shall be debited by that amount.
 - (d) The plan and models looking forward should be based on the Company's best projection of sales, fuel costs, CO₂ costs, and replacement non-renewable resource costs.
4. If the RESA account is determined to be insufficient to cover the ongoing costs of renewable resources that were already approved by the Commission through previous RES plans, electric resource plans, or specific contract approval applications, then the Company shall be allowed to seek recovery of the shortfall in RESA funds through a rider such as the ECA. The RESA shall be debited by any shortfall recovered through such a rider.
5. In the case of RESA funds determined to be insufficient to cover the ongoing costs of renewables as described in paragraph 4 above, acquisitions of new renewable resources shall cease until such time that it is determined that RESA funds are sufficient to recover costs of the new resources.

EXHIBIT # 44
DOCKET # 08A-532E
WITNESS _____
DATE 4/8/09
REPORTER [Signature]

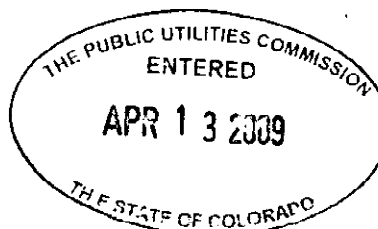


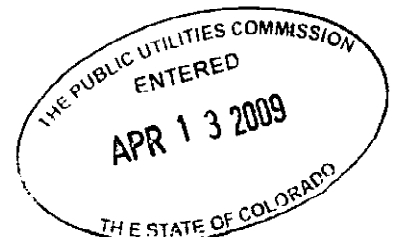
Illustration of gas price impact on RESA costs

A	B	C <i>(A x B) / 1000</i>
Change in Gas Price <u>\$/mmbtu</u>	Average Heat Rate of Avoided Fossil Energy <u>btu/kWh</u>	Change in Cost of Avoided Energy <u>\$/MWh</u>
\$1.00	8,000	\$8.00

	D	E	F <i>D x E x 8760</i>	F x C
<u>Technology</u>	Installed Nameplate <u>MW</u>	Capacity Factor	Annual Energy Produced <u>MWh</u>	Change in Annual Avoided Energy Savings <u>(\$/year)</u>
Wind	1000	38%	3,328,800	\$26,630,400
Solar	400	32%	1,121,280	\$8,970,240
			<u>Total</u>	<u>\$35,600,640</u>

Each \$1.00/mmbtu change in gas price results in a \$35 million swing in costs each year.

EXHIBIT # 2/8
 DOCKET # 08R-532e
 WITNESS _____
 DATE 2/18/09
 REPORTER [Signature]



RES

future Renew
Dec 31 Renew
Pre 1A37 Renew
None RES

PSC

UP Date
lock Down

Staff

UP date
Refun Fuel/CO ₂

Scenario 3

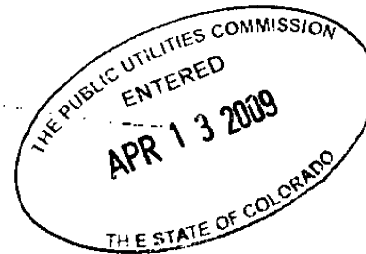


EXHIBIT # 49
DOCKET # 08R-532E
WITNESS _____
DATE 4/13/09
REPORTER HW

2009 APR 17 PM 4:09

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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C-Baker
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R

IN THE MATTER OF THE APPLICATION OF)
PUBLIC SERVICE COMPANY OF) DOCKET NO. 08A-532E
COLORADO FOR APPROVAL OF ITS 2009)
RENEWABLE ENERGY STANDARD)
COMPLIANCE PLAN)

STATEMENT OF POSITION
OF PUBLIC SERVICE COMPANY OF COLORADO

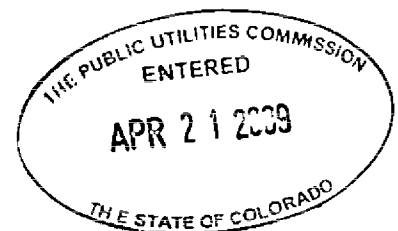
~~Public Service Company of Colorado respectfully requests that the Commission approve Public Service's 2009 Renewable Energy Standard Compliance Plan (the "2009 RES Plan"). The 2009 RES Plan is set forth in Hearing Exhibits 1 and 2 and is further discussed in the testimony provided by Public Service's witnesses. The 2009 RES Plan fully complies with Commission Rule 3657. The 2009 RES Plan meets and exceeds the Renewable Energy Standards.~~

~~In this Statement of Position, Public Service will address the major disputed issues raised in this Docket. To the extent we do not address an issue, Public Service requests that the Commission adopt the position articulated by the Company in our testimony and exhibits.~~

~~Disputed Issues~~

~~I. Determining the Retail Rate Impact~~

~~Commission Rules 3660 and 3661 address the issues of utility cost recovery for Eligible Energy Resources and the determination of the retail rate impact of these resource acquisitions. There were several disputed issues that were raised concerning the Company's proposed calculation of the retail rate impact of our 2009 RES Plan and subsequent plans. We address each of these issues in turn.~~



~~incremental v. actual non-incremental costs than the accounting transfers we used in past years.~~

~~The Staff has argued that this issue should be deferred until the Company's next Phase II rate case when the ECA is discussed. We disagree. There is nothing about the ECA design that will impact this decision. There needs to be one account for truing up estimated to actual costs. We have explained why we want to switch that account from the RESA to the ECA. There is no need to wait for the Phase II to make this decision. Plus, the Company needs to know which dollars are going to hit the RESA deferred balance when we prepare our 2010 RES Plan, due to be filed on July 1, 2009. It is very unlikely that there will be a Phase II rate case decision by that date.~~

~~The OCC argued that we should split the extra wind production between the ECA and the RESA. We believe this proposal is too complicated and unnecessary. Since the bulk of each wind MWh is non-incremental cost, the majority of the cost should hit the ECA anyway. In order to obtain the precision requested by the OCC, Public Service would have to run a RES No RES Plan for each wind resource, each year — which is a large amount of work. This would probably yield only minor variations from what we propose. Public Service respectfully requests that the Commission adopt the Company's proposal.~~

f. The "lock down" proposal.

The difference between the RES Plan and the No RES Plan provides the estimate of the incremental costs of the renewable resources that must be within the retail rate impact cap. This issue involves *which* renewable resources in the utility's RES Plan are displaced by non-renewable resources in the utility's No RES Plan. This

issue has been debated in each of Public Service's three compliance plans (2007 – 2009) because of the ambiguity and/or unintentional consequence of the interplay between Commission Rules 3661(h)(I) and (h)(II). Last year, in Docket No. 07A-462E addressing Public Service's 2008 RES Plan, we pointed out that there was a disconnect between these two rule subsections, such that the costs of certain resources factored into the determination of incremental cost but that the benefits of these resources did not. All parties and the Commission agreed that both the costs and the benefits of the renewable resources that impact the retail rate impact calculation need to be taken into account. The resources that were affected by this "cost-but-not-benefit" problem were the resources that were commercially operational at the time that the RES-No-RES Plans were run. The Commission granted a waiver of the rule to allow both the costs and the benefits of the renewable resources to be taken into account in the RES-No RES modeling.

Last year, Public Service raised another concern with respect to resources already acquired and we asked for a second waiver. That concern involved the application of Rule 3662((a)(XI), which required a recalculation of the RES Plan – No RES Plan with the filing of the annual compliance report, using the "actual compliance year values." We were concerned that rerunning the RES Plan—No RES Plan with actual gas prices could impact resources already purchased and further limit RESA funds if actual gas prices turned out lower than estimated gas prices. This situation adversely impacts the RESA balance because lower gas prices translate into higher *incremental* costs for renewable resources that must be paid from the RESA. The Commission (and the Staff) agreed that the utility should not be required to rerun the

RES Plan—No RES Plan analyses and apply the results retrospectively to the RESA, unless the utility had failed to meet the Renewable Energy Standard due to the retail rate impact limit *and* rerunning the RES Plan-No RES Plan analysis would create more “headroom” in the RESA, i.e., gas prices turned out to be higher than estimated. See Decision No. C08-0559 (June 4, 2008) at pp. 43-45.

This year, Public Service developed a solution to address both of these problems that were identified in the 2008 RES Plan – a solution that protects the RESA funds and that meets the requirements of Rule 3661(h). That solution is the Company’s “lock down” proposal. The lock down proposal works as follows. As Public Service acquires resources, the projected net costs or net benefits of that resource (or if small – the resource is aggregated once a year with other small resources for purposes of this determination) are determined for the life of that resource through a RES Plan – NO RES Plan modeling and then “locked down” and not reconsidered in subsequent RES compliance plan proceedings. In this way, the dollars that will be charged against the RESA balance become known and fixed. They are not retrospectively changed as gas prices fluctuate. As indicated earlier, even though the estimated incremental costs of the acquired resources are “locked down”, ultimately the deferred accounts reflect the actual costs paid. Under the Company’s proposal, the true-up to actual costs occurs in the ECA deferred account.

The Company’s lock down proposal was applied this year to the existing Eligible Energy Resources that impact the RESA at the time the RES – No RES modeling was conducted for the filing of the 2009 RES Plan. Those resources are the SunE Alamosa¹ central solar facility and all of the on-site Solar*Rewards contracts as of

December 31, 2008. Public Service estimated what the incremental costs for these resources will be, given all of the assumptions that the Commission ordered be used for resource acquisition in Docket No. 07A-447E (our most recent Resource Planning docket). The projected incremental costs of these resources are set forth in Column J of Table 6-3 as the “ongoing incremental costs.” Once these ongoing incremental costs are determined, these resources are modeled as part of both the RES Plan and the NO-RES Plan and, therefore, no longer factor into the determination of the incremental costs for new eligible energy resources. The incremental costs for *new* eligible energy resources are shown in Column H of Table 6-3. The costs that hit the RESA account in each year will include both the Modeled Incremental Costs for the new resources in Column H and the Ongoing Incremental Costs for the already acquired resources in Column J.

Public Service views the costs in Column H – the modeled incremental costs of new eligible energy resources – to be the costs discussed in Commission Rule 3661(h)(I). We view the costs in Column J – the ongoing incremental costs – to be the costs discussed in Commission Rule 3661(h)(II). This new modeling approach takes into account both the costs and the benefits of the resources that are in each column, thereby solving the mismatch problem for which we sought a waiver last year. This modeling approach also solves the problem caused by actual gas prices being lower than estimated. Once a resource is acquired and its net costs or benefits are locked down, then future changes in gas price forecasts do not impact that resource. The future changes in gas prices affect only the acquisition of *new* renewable resources, not the existing renewable resources.

Public Service urges the Commission to adopt this approach for determining the retail rate impact of Public Service's RES Plans. This approach provides better budgeting certainty to our Company and to the market as a whole. This approach gives us the ability to continually update our plans based upon known and established charges against the RESA from resources already acquired. All other approaches create uncertainty as to how many RESA dollars must be "reserved" to pay for already acquired resources. When uncertainty is created, and reserves must be established, then the Company has fewer dollars that can be spent on renewable resources and fewer resource acquisitions will be planned.

At the hearing, Trial Staff presented a counterproposal through the testimony of Gene Camp, reduced to writing as Exhibit No. 44. Staff proposed the following changes to the Company's proposal. First, Staff proposed that there would be no locked down incremental costs. Each time the Compliance Plan was prepared, all renewable resources acquired after the passage of Amendment 37 (with the exclusion of the four resources acquired as part of the Company's 2003 Least Cost Plan) would factor into the incremental cost determination in the RES Plan/ No RES Plan modeling. If gas price estimates dropped between plans, then already-acquired resources would show higher incremental costs than assumed at the time of their acquisition. Staff's proposal is that if the recalculation of incremental costs renders the RESA account insufficient to cover the ongoing costs of renewable resources, then the ECA would pick up the difference – but the Company would have to stop acquiring more renewable resources until the RESA funds were built back up again.

Second, not only would the Staff have the RES-No RES modeling apply to all of these resources going forward, the Staff would also look back at the most recent compliance year to retrospectively recalculate the incremental costs of the resource acquired in that year – using actual gas and carbon dioxide costs from the past year. In other words, Staff is now proposing the exact opposite position that Staff proposed last year in Docket No. 07A-462E as to the need to do a retrospective look at gas prices from the just completed compliance year.

Public Service strongly opposes the Staff's plan. We view this plan as creating substantial instability in the Company's ability to budget for the acquisition of renewable resources and to plan for carbon reduction. Each year, the dollars that we thought we would have available for future resource acquisition could be dramatically reduced by a recalculation of the incremental cost impact of "sunk" decisions from resources already acquired. While it is true, as suggested by Staff, that the recalculations could create more headroom if gas prices are higher than estimated at the time of resource acquisition, the opposite is also the case – lower gas prices could create, retrospectively, less headroom. Public Service believes that it is better to create reasonable levels of certainty as to the impact of past decisions, rather than to constantly reprice them. We think it is better to give up the potential for more headroom created by retrospective modeling than to lose assumed headroom going forward.

We also strongly oppose Staff's solution – halting the acquisition of renewable resources until the RESA replenishes, due to a retrospective remodeling of sunk decisions. This could result in boom and bust cycles for our Solar*Rewards program. It

could also delay the acquisition of larger eligible energy resources that we are counting on for capacity and for carbon reduction.

To give the Commission some sense of the “swing” in costs on the Public Service system created by changes in estimated gas prices, Mr. Ahrens sponsored Hearing Exhibit No. 48. This exhibit shows that each \$1.00 per MMBTU in gas price causes an approximate \$35 million swing in the avoided energy costs on the Public Service system. This swing will increase as more renewable resources are added and there are more gas MWHs avoided by renewable resources. While Staff pointed out through cross-examination that Exhibit 48 shows the avoided energy costs and not the change in incremental costs, it must be remembered that the incremental cost determination is closely linked to the determination of avoided energy costs. When the RES Plan/No RES Plan differential is modeled to determine the incremental costs of renewable resources, the benefit provided by the renewable resources is primarily the displacement of fuel cost. So, as the displaced fuel cost increases or decreases, the modeled incremental costs of the renewable portfolio moves in the opposite direction in very close correspondence. If the cost of the fuel displaced drops, the incremental costs of the renewable resource increases – and vice versa. Exhibit 48 shows that even a small change in fuel price estimates each year can have a very large impact on the modeled avoided energy savings for resources already acquired. This is why Public Service finds the Staff’s proposal problematic.

At the hearing Commissioner Baker asked what would happen if the resources that are “repriced” each year were to include *all* of the renewable resources on the Company’s system, including the resources that predated Amendment 37 and the four

resources excluded from the retail rate impact calculation by earlier Commission decisions. The result would be an even wider potential swing than set forth on Exhibit 48 and than suggested by the Staff proposal. The more renewable resources that factor into remodeling the incremental cost, the more impact – up or down – on the RESA as modeling assumptions change over time. It is true that Staff's proposal (or Commissioner Baker's variation on Staff's proposal) could create more headroom – a nice "upside" to fund more renewables. But these proposals also create the risk of a substantial "downside" that could interfere with growing the renewables industry in Colorado.

We understand the quest to create more headroom under the cap established by the General Assembly. Public Service has put two proposals before the Commission that will create more headroom under the retail rate impact cap without creating the "downside" inherent in the Staff proposal. The first Public Service proposal to create more headroom has already been approved by the Commission in Docket No. 08A-260E, where we proposed a new Windsource product. Under Windsource, customers voluntarily pay premiums to Public Service that will be used to acquire more renewable resources. The projected impact of these Windsource premiums is shown by contrasting Table 6-3 with Table 6-4. As can be seen in column R of Table 6-3, by 2020 the RESA deferred account has been reduced to \$324,226. But the same column in Table 6-4 shows a positive deferred balance of \$146,870,248 in 2020. Table 6-4 shows the projected Windsource premiums but not the addition, yet, of the resources that we will buy with those premiums. These projections estimate approximately \$147 million of additional headroom from these voluntary Windsource contributions.

The second mechanism proposed by Public Service to create headroom under the retail rate impact cap is pending before the Commission in Docket No. 08R-424E, the pending rulemaking docket on the Commission's Renewable Energy Standard Rules. In that docket, Public Service has asked for rules that clarify the ratemaking treatment that will be afforded utilities that sell RECs not needed for compliance with the Renewable Energy Standard. We have suggested that the rules state that the margin earned on the REC sales be split, with the utility keeping 20% of the margin as an incentive to get top dollar for the RECs, and then 80% of the margins being placed in the RESA deferred account so that more renewable resources can be acquired. This proposal, again, creates more upside for the RESA, without any downside.

Public Service requests that the Commission adopt the Company's lock down proposal to provide more certainty and stability in our budget for renewable resources. We also request that the Commission look favorably upon the Company's alternative headroom proposals in the rulemaking docket.

g. Whether or not to "lock down" carbon assumptions

The OCC witness Mr. Shafer supported the Company's lockdown proposal, except Mr. Shafer proposed that carbon assumptions be revisited in subsequent model runs. Mr. Shafer argued that since there is no carbon regulation at this time, the carbon assumptions should not be included in any locked down costs.

Public Service opposes the OCC's position. All of the reasons that we set forth above when we discussed the merits of the lockdown proposal apply with equal force to the need to lockdown the carbon assumptions used at the time of resource acquisition. Again, we repeat, by locking down the carbon assumption we are not requiring

customers to actually pay for any costs that Public Service does not incur. If we assume there will be carbon regulation in 2010 and that regulation does not start until 2012, the lockdown will not cause our customers to pay for non-existent carbon regulation.

We see no difference between reopening the incremental cost determination to reflect actual carbon costs (as proposed by the OCC) and reopening the incremental cost determination to reflect actual gas costs (as proposed by Staff). In both cases, if these costs are lower than assumed at the time of resource acquisition, the retrospective modeling will charge more incremental costs to the RESA than were assumed at the time the resource acquisition decision was made – retrospectively reducing headroom and decreasing the Company's ability to acquire more renewable resources. If the carbon costs are higher than assumed, then more headroom would be created, but as we discussed in connection with gas prices earlier, Public Service would prefer to avoid the risk of a retrospective loss of headroom.

Commission Rule 3661(e) requires the utility to use the same methodologies and assumptions approved in the most recent resource planning case for determining the retail rate impact. The Commission recently approved in Docket No. 07A-447E the carbon assumptions that Public Service must use in evaluating the bids and Company proposals submitted in response to the January 2009 All Source RFP. We anticipate that we will be acquiring large amounts of renewable resources based upon these carbon assumptions. When we evaluate these resources, we will be conducting RES Plan/No RES Plan analyses to make sure that we have enough money to pay for the incremental costs of these resources under the retail rate impact cap. We will be

contracting to purchase the output from these renewable resources, or constructing these resources, based upon their passing the retail rate impact cap test. We do not want to have to revisit these decisions and reprice the incremental cost based upon later changes in the costs of either natural gas or carbon, because of the risk of substantial decreases in the funds available in the RESA account.

It is standard regulatory practice to evaluate utility actions based upon what is known or projected at the time that the resource decision is made. This is test that is applied to determine whether a utility acted in a prudent manner. Utility actions are not judged based on hindsight. We believe that this same concept – judging renewable resource acquisition on the basis of the facts and projections at the time the resource acquisition decision is made – should apply to the calculation of the retail rate impact limit. The Commission has been authorized by C.R.S. §40-2-124 to interpret how to apply the retail rate impact cap. We urge the Commission to adopt an interpretation that is workable for the utilities, that avoids booms and busts in the renewables market, and that avoids retrospective loss of RESA funds.

~~2. Allocations of the On-site Solar Funds~~

~~COSEIA and the Interwest Energy Alliance dispute how the on-site solar funds should be allocated among the Company's small, medium and large programs. Public Service respectfully requests that the Company's 2009 plan for allocating these funds, set forth in Section 5 of the 2009 RES Plan and in the testimony of Ms. Newell, be approved. This allocation has been pretty much predetermined by the Company's proposal to honor all of the applications that were submitted in October 2008. As the Commission is aware, when the Company announced that it intended to reduce the Se-~~

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2009 APR 17 PM 4:46

BEFORE THE PUBLIC UTILITIES COMMISSION

STATE OF COLORADO

Docket No. 08A-532E

TRIAL STAFF'S STATEMENT OF POSITION

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS 2009 RENEWABLE ENERGY STANDARD COMPLIANCE PLAN

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Trial Staff of the Colorado Public Utilities Commission ("Trial Staff") hereby respectfully submits its Statement of Position in this proceeding.

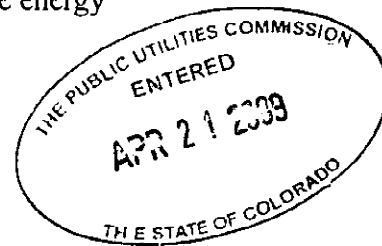
I. ARGUMENT

A. The Commission should reject the Company's proposal concerning the time fence and lockdown and instead accept Trial Staff's recommendation.

It is Trial Staff's position that when drafting § 40-2-124, C.R.S., the renewable energy standard, the legislature intended to accomplish two goals: 1) to mandate a shift in the generation of electricity in the State of Colorado away from conventional fossil generation toward clean renewable generation, and 2) in understanding that renewable energy generates energy at a higher cost today, provide an annual limit to acquisitions of renewable energy and its associated costs in the form of a retail rate impact test.

Section 40-2-124(1)(g)(I), C.R.S., states:

Except as otherwise provided in subparagraph (IV) of this paragraph (g), for each qualifying utility, the commission shall establish a maximum retail rate impact for this section of two percent of the total electric bill annually for each customer. The retail rate impact shall be determined net of new alternative sources of electricity supply from noneligible energy resources that are reasonably available at the time of the determination. If



the retail rate impact does not exceed the maximum impact permitted by this paragraph (g), the qualifying utility may acquire more than the minimum amount of eligible energy resources and renewable energy credits required by this section. (Emphasis added.)

Public Service Company of Colorado (“Public Service,” or the “Company”) seeks approval from the Commission to “lock down” the net incremental costs (or benefits) of new eligible energy resources either at the time it files its annual Compliance Plans or at the time it signs a contract for a new renewable energy resource.¹ The Company’s proposal for a time fence requires one to interpret § 40-2-124(1)(g)(I), C.R.S., to require the Company only to *plan* or project to stay within the retail rate impact limit and not *actually* stay within the limit. Under the Company’s proposal, if the actual incremental costs exceed the limit, then those costs will be passed on to rate payers through the Electric Commodity Adjustment (“ECA”). Therefore, the actual incremental cost to rate payers for renewable energy is not reflective of the costs recovered through the Renewable Energy Standard Adjustment (“RESA”). Further, the Company proposes that it be held harmless with respect to projections of the costs to implement the Renewable Energy Standard (“RES”) and be allowed to proceed without regard to changing circumstances, holding rate payers liable for exceeding the RESA retail rate impact by passing costs exceeding the limit through the ECA.

Hearing Exhibit 48, sponsored by Company’s witness Mr. Daniel Ahrens, assists in understanding the Company’s position. Exhibit 48 shows that for a \$1.00/MMBtu change in

¹ Exhibit 3, p. 20, l. 13 through p. 22, l. 17.

the cost of gas, there will be a corresponding \$35,000,000 change in the energy savings provided by 1,000 MW of wind and 400 MW of Solar. Putting that in perspective for the 2009 RES plan, the Company projects that the RESA, which is set at 2% of annual retail sales revenues, will collect approximately \$50,000,000.² The RESA funds are intended to recover both the incremental and ongoing costs of renewables relative to the cost of conventional resources in their place. Under the Company's time fence proposal, the lost benefit of \$35,000,000 would be passed on to rate payers through the ECA.³ Trial Staff believes it is likely that the perception of rate payers would be that they have paid only 2% more for the renewables. However, under the Company's proposal, in actuality rate payers have paid 3.4%: 2% or \$50,000,000 through the RESA and 1.4% or \$35,000,000 through the ECA. Carrying this example even further, if the Company's gas cost projections underestimate the cost of gas by \$1.00/MMBtu over a twenty year life for the resources contained in the example, then in addition to the 2% RESA, customers would pay \$700,000,000 in incremental costs through the ECA.

Trial Staff is troubled by the Company's proposal that appears to intentionally mask or hide the actual costs of renewable generation. Trial Staff cannot recommend that the Commission approve a plan that is not transparent and is intentionally misleading to rate payers with regard to the actual costs of renewable generation.

² Exhibit 2, Tables 6-3 and 6-4, Column M.

³ See also Exhibit 32.

Trial Staff's position regarding the time fence is reflected in Exhibit 44 and was explained in detail by its witness, Mr. Eugene C. Camp.⁴ Trial Staff believes that the Commission should reject having the RESA balance locked in based on previously projected savings and costs. Rather, Trial Staff's proposal is summarized below:

- The four renewable resources that resulted from the 2005 All Source RFP, and any resources that existed prior to the passage of Amendment 37 should not be included in the retail rate impact calculation set forth in Commission Rule 4 *Code of Colorado Regulations* ("CCR") 723-3661(h).
- With each annual RES Compliance Plan, the Company must rerun the RES/No-RES models for the prior year, replacing only the projected costs of fuel and CO₂ with actual costs. This analysis will be used to determine the incremental costs to be assessed to the RESA.
- If the determination immediately above demonstrates that incremental costs were less than the maximum retail rate impact, then the RESA balance shall be credited by that amount.
- If the determination demonstrates that the incremental costs were greater than the maximum retail rate impact, then the RESA balance shall be debited by that amount.
- If the RESA account is determined to be insufficient to recover the ongoing costs of renewable resources that were already approved by the Commission through previous RES plans, electric resource plans, or specific contract approval applications, then the Company shall be allowed to seek recovery of the shortfall in RESA funds through a rider such as the ECA. The RESA shall be debited by any shortfall recovered through such a rider.
- If the RESA account is determined to be insufficient to recover the ongoing costs of renewable resources that were already approved by the Commission through previous RES plans, electric resource plans, or specific contract approval applications, acquisitions of new renewable resources shall cease

⁴ Tr. Vol. II, p. 8, l. 7 through p.51, l. 23; p. 74, l. 6 through p. 78, l. 18; Tr. Vol. III, p. 126, l. 10 through p. 156, l. 23.

until such time that it is determined that RESA funds are sufficient to recover the costs of the new resources.

Trial Staff's proposal will keep the Company whole, regardless of changes in the price of fuel or CO₂ costs. However, the Company may need to adjust plans going forward to assure that rate payers never pay in excess of 2% more than they would have paid for conventional generation. In addition, the Company is currently exceeding and projected to exceed the renewable energy standard for the planning period. This is in contrast to the Company's position that it need only plan or project to limit the impact to customers to 2%, and if it's projections are wrong, then the Company should be held harmless and rate payers pay the difference through the ECA. Trial Staff believes it is more appropriate to use either actual numbers where available or updated, new projections to more accurately reflect the costs associated with the RESA that rate payers are paying.

Public Service voiced its opposition to Trial Staff's proposal through Mr. Ahrens' Rebuttal Testimony on the matter. It appears the other intervenors also oppose Trial Staff's proposal. The reasons for opposition include: the fear that acquisitions of renewable energy would decrease or even cease for periods when the RESA was insufficient to recover ongoing costs⁵; the Company would have less incentive to invest in renewable energy because it may be at risk to recover previous investments in renewables⁶; Trial Staff's proposal would put the Company at risk of being in violation of the retail rate impact due to

⁵ Tr. Vol. II, p. 27, l. 9 through p. 31, l. 24.

⁶ Tr. Vol. II, p. 30, l. 15 through p. 39, l. 23; Tr. Vol. III, p. 135, l. 25 through p. 140, l. 15.

“backcasting”⁷; that Trial Staff’s proposal would lead to wide swings and create uncertainty for Company planning purposes; and that the proposal would create instability for vendors supplying the market – primarily the on-site solar market.⁸

As Mr. Camp made clear, Trial Staff’s proposal is not an attempt to limit development of renewable energy. Mr. Camp explained, in evaluating Trial Staff’s proposal, one must examine what happens both when the price of natural gas is lower than projected as well as when it is higher than projected. There is no dispute that if the price of natural gas is lower than what was projected the previous year, the “headroom” or the funds available in the RESA is smaller, thereby reducing the amount the Company may spend on renewable energy. The converse is also true: if the price of natural gas is higher than projected, then the difference between the RES and No-RES Plans is higher, thus increasing the amount of money available to spend on renewables. It is Trial Staff’s opinion, as well as the environmental community’s opinion in the Company’s resource planning docket (Docket NO. 07A-447E), that the Company’s natural gas price projections are low. Therefore, it is likely that the price of natural gas will increase as demand increases, and this will produce additional amounts that can be spent on renewable energy. The potential for natural gas prices to drop and remain low is unlikely in the extreme.⁹

⁷ Vol. III, p. 135, l. 25 through p. 140, l. 15.

⁸ Tr. Vol. III, p. 162, l. 15 through p. 164, l. 4.

⁹ Tr. Vol. II, p. 15, ll. 4 - 20.

Trial Staff also disputes that Public Service will have less incentive to acquire renewable resources under Trial Staff's proposal. Mr. Camp's testimony made clear that under Trial Staff's proposal, the Company would recover all its expenses for renewable resources and that any previously made expenditures in resources approved by the Commission would not be subject to second-guessing.¹⁰ Further, Public Service is not at risk of being in violation of the 2% retail rate impact because, under Trial's Staff's proposal, the following year's RESA is adjusted to account for any overspending or underspending.¹¹

Public Service also testified that it opposed Trial Staff's proposal because of the uncertainty the proposal would create for planning purposes and also the impact it would have on vendors. With respect to these assertions, Trial Staff notes that the Company is required to file annual RES Compliance Plans that provide the opportunity to identify changes in acquisitions, changes that the Company currently annually implements. Further, while it is true that the pace at which new near term renewables such as on-site solar or small wind projects are able to be deployed may be reduced or curtailed if gas prices remain lower than predicted, conversely, in the case of higher than projected gas prices, the pace of deployment of some small renewable projects may be increased. Unfortunately, volatility in the market for small renewable resources has existed for many years and is caused primarily by changing tax laws and incentive payments from companies such as Public Service, but the

¹⁰ Tr. Vol. II, p. 27, l. 9 through p. 29, l. 16; Vol. III, p. 136, l. 12 through p. 140, l. 16.

¹¹ Tr. Vol. III, p. 138, l. 8 through p. 139, l. 3.

Company's proposal will place the risk of changing gas prices wholly on rate payers for the purpose of providing a stable market for small renewable resource developers.

~~B. The Commission should defer the Company's proposed cost recovery through the Electric Commodity Adjustment ("ECA") to the upcoming docket which will examine all aspects of the mechanism.~~

~~In past Company Compliance Plans, the differences between the projected cost and the actual cost of Eligible Energy have been trued up by adjustments to the RESA deferred account. As part of this proceeding, Public Service seeks approval from the Commission to change the true up mechanism from the RESA to the ECA. As the basis for making this change, the Company argues that there are currently no wind costs recovered through the RESA. However, as wind comes on line, Public Service is concerned that there will be significant variation in the actual output compared to what was projected, which will create a significant impact on the RESA deferred balance. Public Service argues that the variations caused by increases or decreases in wind production should be accomplished through adjustments to the ECA.¹² If the Commission approves the Company's proposal, it will have the effect of permanently moving incremental wind production costs from the RESA to the ECA.~~

~~There is no dispute that pursuant to Commission orders, by the end of this calendar year, Public Service will file an application for a docket in which all aspects of the ECA will be examined. In fact, the Company's witness Mr. Ahrens testified that the Company's new~~

¹² Exhibit 3, p. 12 through p. 14, l. 7.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE APPLICATION OF)
PUBLIC SERVICE COMPANY OF COLORADO) DOCKET NO. 08A-532E
FOR APPROVAL OF ITS 2009 RENEWABLE)
ENERGY STANDARD COMPLIANCE PLAN.)

**STATEMENT OF POSITION
OF THE COLORADO OFFICE OF CONSUMER COUNSEL**

~~Pursuant to Decision No. R09-0125-I, Interim Order of Hearing Commissioner Matt Baker Establishing a Procedural Schedule and Addressing Scope of Issues, issued by the Hearing Commissioner on February 6, 2009, the Colorado Office of Consumer Counsel (“OCC”), by and through its counsel, hereby files its Post-Hearing Statement of Position in the above-captioned docket.~~

INTRODUCTION

~~On December 1, 2008, Public Service Company of Colorado (“Public Service”) filed an application with the Colorado Public Utilities Commission (“Commission”) requesting approval of its 2009 Renewable Energy Standard Compliance Plan. This is Public Service’s third compliance plan filing under the Commission’s Renewable Energy Standard (“RES”) Rules.¹ The OCC supports the Commission’s approval of Public Service’s 2009 RES Compliance Plan with the following modifications.~~

¹ ~~The RES Rules are found at 4 Code of Colorado Regulations 723-3-3650 to 723-3-3665.~~

CARBON ADDER USED IN THE LOCKDOWN CALCULATION

The OCC advocated through both its pre-filed and oral testimonies that the resource acquisition planning assumption regarding the carbon cost adder should not be included in the lockdown calculation until the actual carbon costs become “known and measurable.” The imputation of carbon costs when no actual carbon costs are currently being paid by the customers on their bills artificially creates headroom that does not exist in the “real world.”² The OCC believes that the method used to calculate the retail rate impact and the associated lockdown amount should be based on assumptions which are more closely tied to what is actually impacting customer bills and not on resource planning assumptions which are used in the selection process of resources. The OCC contends that its request to use assumptions different than those used for resource planning process is allowed under RES Rule 3611(e)³, which reads:

For purposes of calculating the retail rate impact, the investor owned QRU shall use the same methodologies and assumptions it used in its most recently approved least-cost planning case, *unless otherwise approved by the Commission*. Confidential information may be protected in accordance with rules 1100 through 1102 of the Commission’s Rules of Practice and Procedure. (Emphasis Added)

The OCC maintains that carbon cost assumptions are uniquely different than other assumptions used in the resource planning process. Contrasting carbon assumptions with natural gas prices assumptions shows the distinction. In the Electric Resource Planning process, the Commission does not approve specific natural gas prices, but instead approves a methodology, which is updated at the time the utility begins the resource selection process after it has received bids. While it is unlikely that the updated natural gas prices will reflect actual prices when the resource

² See Hearing Exhibit Number 15, page 7, lines 4-11; and page 10, line 7 through page 11, line 17.

comes on-line, it does not matter because customers ultimately pay whatever the actual natural gas prices are through the Electric Commodity Adjustment (“ECA”) and not the updated natural gas price that was used in the selection resource process. However, carbon costs are not analogous to updated natural gas prices because, at least as of today, customers do not pay for the carbon costs included on their bills nor is there a process to reconcile the projected values for carbon costs with actually incurred carbon costs as is done with natural gas prices through the ECA.⁴

The OCC recommends that Public Service be allowed to calculate an associated lockdown for an Eligible Energy resource’s net cost or net benefits as it has proposed with the exception that no carbon cost adder be included in the analysis. Our recommendation would be a two-step calculation of the lockdown amount. The first step would calculate the net cost or net benefit for the SunE Alamosa project and the 2007 and 2008 On-Site Solar systems as part of this Compliance Plan without including a carbon cost adder. The second step would calculate the additional net benefit associated with the “carbon savings” for the SunE Alamosa project and the 2007 and 2008 On-Site Solar systems once carbon costs are known and measureable and once they are captured in bills which customers pay. These additional net benefits would be incorporated in a future Compliance Plan filing of Public Service. Under our recommendation, the Company would be required to retain the associated data and modeling files used to calculate the net cost or net benefit lockdown for this Compliance Plan. The OCC recommendation is a conservative approach to the calculation of net costs or net benefits since

³ See Hearing Exhibit Number 15, page 7, line 12 through page 9, line 2.

⁴ See Hearing Exhibit Number 15, page 8, lines 7-15.

there is currently uncertainty as to when and the magnitude of carbon costs that will be included in customer bills.

~~CHANGING FROM THE RESA TO THE ECA FOR DEFERRED ACCOUNTING TREATMENT~~

~~Currently the difference between the projected total costs of Eligible Energy and the actual total costs of Eligible Energy are “trued-up” by adjustments to the Renewable Energy Standard Adjustment (“RESA”) deferred account. Public Service seeks Commission approval to change the true-up process of Eligible Energy resources from the RESA’s deferred account to the ECA’s deferred account. Company witness Mr. Ahrens explains that although currently no wind costs are recovered through the RESA, as more wind comes on-line to meet the RES requirements, Public Service is concerned that actual wind output may vary significantly from projected wind output.⁵ He contends that since the RESA is currently the “balancing” rate mechanism, the RESA deferred account will be impacted by the full costs of either the increased (actual greater than projected) or reduced (actual less than projected) production as opposed to only the incremental cost of that generation.⁶ Mr. Ahrens mentions that variations in solar resource generation would also impact the RESA at their full costs and not their incremental costs. He states in his Direct Testimony⁷ that in order to reflect only the incremental costs in the RESA, the variations caused by increases or decreases in Eligible Energy production should be accomplished through adjustments to the ECA and not the RESA.~~

⁵ ~~Hearing Exhibit Number 3, page 13, lines 7-9.~~

⁶ ~~Hearing Exhibit Number 3, page 13, lines 11-15.~~

⁷ ~~Hearing Exhibit Number 3, page 14, lines 1-7.~~

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

DOCKET NO. 08A-532E

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009 RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN.

**STATEMENT OF POSITION
INTERWEST ENERGY ALLIANCE**

~~Interwest Energy Alliance (“Interwest”) proposes more explicit and transparent funding mechanisms be used for compliance with Colorado statutes, rules and energy policy. PSCo has made significant gains and Interwest’s members applaud its leadership towards achieving and in some areas exceeding clean energy goals. However, greater transparency is required due to public interest in the use of RESA funds.~~

I. SUMMARY OF RECOMMENDATIONS

~~A. Solar Program:~~

~~1. Subdivide the budget into budgets for the program categories. Use the residential electric revenue to fund the incentives for the less than 10 kW market segment. Use the remainder to fund incentive for the greater than 10kW segments of the market.~~

~~2. Establish consistent acquisitions of SORECs from the large category. Place caps on the twenty (20) year SOREC payment stream. Take applications four (4) to six (6) times per year. In this way, project development would be spread out throughout the year, reducing costs.~~

- ~~3. Establish an explicit budget for the annual acquisition of SORECs.~~

~~Designate two percent (2%) of retail electric revenue as the funding available.~~

- ~~4. Incorporate market discipline into the small category. Establish MW blocks for the small category, such that when certain installation MW targets are reached for the small category, the UFI would automatically step down.~~

- ~~5. Establish a transition period. The new models for funding and acquisition of SORECs should be fully in place by January 1, 2011, allowing two (2) years to adjust to the new paradigms.~~

~~B. Wind Forecasting Tool:~~

~~Deny cost recovery for the WiP wind forecasting tool because it was acquired in an imprudent manner. There is no evidence that the NCAR tool, based on technologies unrelated to power generation, will provide any benefit to Colorado Consumers. NCAR has never developed a wind forecasting tool. The cost recovery should be strictly limited as set forth herein and PSCo cautioned to use competitive bidding and transparent procedures to acquire this type of modeling in the future.~~

~~C. Time Fence:~~

~~Adopt PSCo's proposed time fence and lock-down of acquired generation costs.~~

~~II. SOLAR PROGRAM ADJUSTMENTS~~

- ~~A. Interwest recommends adjustment and reallocation of the revenues used to fund incentives in the solar program to provide a predictable, transparent program which supports orderly growth of the markets.~~**

~~Interwest's witness Rick Gilliam has more than thirty (30) years of experience guiding energy regulation, including six (6) years at the Federal Energy Regulatory Commission (FERC),~~

~~a wind forecasting tool to be used for energy generation.²⁶ NCAR's ability to model weather has little correlation to power generation. It is absurd that PSCo would ask the Commission to simply trust that NCAR's first attempt will be the best available product for Colorado consumers.~~

~~Second, even if the interviews produced a well founded substantive decision about the available choices in the market, this Commission will never have the benefit of knowing that the tool is cost effective. The same tool could have been made available at a lower cost to consumers as a result of a competitive bidding or more transparent process. Therefore, the cost recovery for the WiP contract should be limited by this Commission. An appropriate limit may be to tie cost recovery to actual savings PSCo can prove relate to the use of the tool.~~

~~This Commission is urged to caution PSCo against acquisition of this type of technology in the manner in the future. In addition, even if the WiP contract is approved and in no way acknowledging its usefulness, the data, modeling and all results should be published and made available for public use and peer review upon completion at the end of the project period (about 18 months, according to Mr. Parks) at minimal cost.~~

IV. TIME FENCE

Interest joins the parties which prefer PSCo's use of a time fence and "lock down" of costs to provide a predictable planning environment.

Investment in and development of new energy facilities, including renewable energy projects, often requires several years' lead time.²⁷ Placing these projects and RESA budgeting at risk from year to year as recommended by Staff would create disincentives. Risk increases costs.

Interwest prefers PSCo's use of the ECA deferred account to true up the projected costs to the actual costs of eligible energy resources.²⁸ Interwest also supports PSCo's time fence

²⁶ Interwest Cross-Examination of Mr. Parks.

²⁷ See Western Resource Advocates witness Lowrey Brown, Cross-Ans. Test., pp.5-9

which avoids recalculation of the incremental costs of renewables after the resource acquisition decisions have been made and implemented.

The Staff proposal incorporates a facially attractive goal – to tie rates to actual costs rather than projected costs, especially costs which we know will be wrong since they are projected years in advance of when the RESA is paid by a consumer. However, this recalculation puts PSCo's investment at risk. In addition, the plan is contrary to many aspects of the Rules and Rule 3660, which allows forward-looking cost recovery mechanisms. The costs may be carried forward if they exceed the retail rate impact in any year. See Rule 3660(c). Interwest supports calculation and publication of figures comparing the projected costs to actual costs. This transparency is consistent with the overall requirements for publication of actual results which Interwest has supported in similar dockets, and supports the overall goals of the Office of Consumer Council and Staff to tie regulation to provable results. However, PSCo's expenditure of the RESA must be capable of certainty once the transaction is closed and consumer dollars spent in any given year.

~~V.~~ **CONCLUSION**

~~In summary, Interwest commends PSCo for its significant renewable energy acquisitions. We have several modifications which Interwest urges the Commission to require as part of the 2009 Compliance Plan. First, Interwest urges the Commission to require that incentive funding be allocated between residential and non-residential markets in the proportions these market segments produce retail rate revenues. Second, we recommend that the Commission direct PSCo to modify its SOREC acquisition process for the large program to spread development out over the course of a year in "rolling reservations". This not only helps smooth fluctuating solar costs as described above, but allows more efficient project development by maintaining a more~~

²⁸ See Ahrens, Rebuttal test., p. 3, lines 10-11.

~~consistent level of work for installation crews. The Arizona approach, described in the testimony of witness Gilliam, is designed in this fashion. We recommend that the small program be modified to more systematically reduce rebate levels as appropriate as development occurs. There has been little discussion of the medium program in this docket. Here too, we would recommend that the REC payment (currently 11.5¢ per kWh) be reduced as appropriate amounts of MWhs are developed. Third, we recommend that the funding levels be increased to 2% of the retail rates, which excludes Windsorce and the net savings from all eligible resources. Fourth, we urge the Commission to require that market discipline be imposed by stepping down incentives, as in the California program. Finally, we urge the Commission to transition to these new programs by January 1, 2011. This docket addresses the 2009 Compliance Plan for PSCo. We believe the transition should begin this year, if only in a small way, and that the 2010 Compliance Plan incorporate a significant shift in this direction.~~

~~As to the WiP contract, Interwest requests that the Commission limit cost recovery to what savings PSCo can reasonably prove result from use of the tool on a year to year basis. Finally, Interwest prefers the lock down mechanism suggested by PSCo as to acquired eligible energy generation resources.~~

~~We thank the Commission and parties for the opportunity to provide input.~~

~~Respectfully submitted this 17th day of April, 2009.~~



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On Behalf of Interwest Energy Alliance

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

DOCKET NO. 08A-532E

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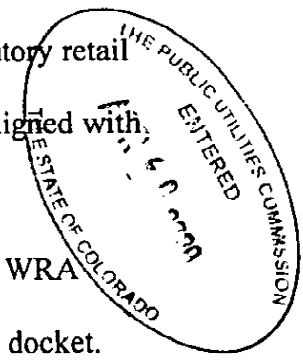
IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2009 RENEWABLE ENERGY STANDARD
COMPLIANCE PLAN

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**STATEMENT OF POSITION OF
WESTERN RESOURCE ADVOCATES**

COMES NOW Western Resource Advocates (WRA), by and through its
attorneys, and for its Statement of Position in this docket, states the following:

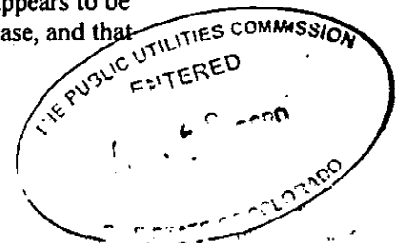
WRA urges the Commission to make policy decisions in this docket that
maximize renewable energy development, while complying with the 2% statutory retail
rate impact constraint. The positions WRA advocates here are more closely aligned with
the intent of Colorado's renewable energy standard, in compliance with the
Commission's rules, and in conformity with previous Commission decisions. WRA
requests that the Commission adopt these positions in the Order issued in this docket.



**I. A Carbon adder should be included in the calculation of the retail rate impact
cap.**

WRA supports the Company's proposal to include the estimated cost of carbon
emissions regulation in the calculation of the retail rate impact limit. Public Service, in
conformity with the Commission's order in its most recent resource planning docket,¹

¹ Decision No. C08-0929, mailed date September 19, 2008, Docket No. 07A-447E. Paragraphs 269 and
270, "However, new legislation enacted under Section 40-2-123(1)(b), C.R.S., explicitly allows the
Commission to consider future carbon cost, and political acceptance of carbon legislation appears to be
gaining momentum. Further, we agree with Public service that CO2 costs are likely to increase, and that



included a carbon adder in its modeling of the No-RES plan. The renewable energy standard compliance docket is a long-term resource acquisition plan, and is part of the Company's long-term resource procurement process. To account for likely future carbon emission regulation in one part of a utility's resource acquisition strategy, the resource planning process, but not in the RES compliance process would be inconsistent. It is practical and realistic that for planning purposes both dockets use conforming modeling inputs.

A. Colorado statutes and rules support the inclusion of the carbon adder.

Inclusion of the carbon adder creates valuable, incremental headroom under the 2% retail rate impact cap and appropriately adheres to legislative intent and Commission policy. First, Colorado law specifically authorizes the Commission to incorporate carbon emission regulatory costs in utility resource planning. The first sentence of Section 40-2- 123(1) C.R.S. reads: "The Commission may give consideration to the likelihood of new environmental regulation and the risk of higher future costs associated with the emission of greenhouse gases such as carbon dioxide when it considers utility proposals to acquire resources." Second, Colorado statutes provide support for bold, advancement of renewable generation investment: "The commission shall give the fullest possible consideration to the cost-effective implementation of new clean energy and energy-efficient technologies in its consideration of generation acquisitions for electric utilities, bearing in mind the beneficial contributions such technologies make to

\$20/ton is a reasonable starting point. Therefore, we adopt Public Service's rebuttal proposal for CO2 costs of \$20/ton plus 7 percent escalation." pp. 83-84.

Colorado's energy security, economic prosperity, environmental protection, and insulation from fuel price increases.”²

Additionally, modeling of the carbon adder is in compliance with the Commission’s rules that the same assumptions be used for modeling resource planning as for RES compliance. Commission Rule 3661(e) acknowledges the nexus between the RES Compliance process and the Resource Planning process; “For purposes of calculating the retail rate impact, the investor owned QRU shall use the same methodologies and assumptions it used in its most recently approved least-cost planning case, unless otherwise approved by the Commission.”³ Furthermore, the Commission’s rules state, “... it is in the best interests of the citizens of the state of Colorado to develop and utilize renewable energy resources to the maximum practicable extent.”⁴

B. The Commission should reject the OCC's recommendation to exclude the carbon adder.

The OCC’s argument is logically inconsistent because removing the carbon adder is an exception to the “lock-down,” which the OCC supports. The OCC recommends a backwards-looking, annual reopening of the modeled, No-RES assumptions for one estimated factor based on actual data (in hindsight), but not for any other estimated commodity, such as gas prices. The OCC’s demarcation that carbon regulation carbon costs should be ignored until there was actual regulation in place was a distinction without a difference. As the OCC acknowledged, there is no financial difference between a scenario without carbon regulation, and a scenario with carbon regulation and zero cost

² Section 40-2-123(10)(a), C.R.S.

³ Commission Rule 3661(e).

⁴ Commission Rule 3651.

(as might be the case in some years if Public Service receives early action credit). The OCC's proposal would significantly reduce many of the regulatory advantages of the "lock-down", such as simplicity, certainty and cost.

Additionally, the OCC concedes that removal of the carbon adder serves to restrict the amount of renewable energy that Public Service is permitted to procure with the 2% rate impact cap now.⁵ It has the effect of delaying investment in renewables, which the OCC admits is especially significant if future federal carbon regulation contains early action credit for carbon emission reductions taken prior to enactment.⁶ With a removal of the carbon adder the Company and its ratepayers will have lost the benefit of receiving early action credit for its early efforts and expenses towards carbon emissions reductions. Early action means that costs PSCo incurs today to reduce carbon will reduce the cost of carbon regulation in the future. So the costs of today's renewables are not incremental because they are reducing future compliance costs. The OCC stipulated that the current discussion draft of the proposed Waxman-Markey federal carbon regulation legislation uses 2005 as the base year for calculation of reduction targets.⁷ If 2005 becomes the base year in federal carbon legislation, then any carbon reduction achievements by Public Service after that year are financially valuable.

The OCC takes the position that the carbon adder should be removed from the No-RES plan because it is not "known and measurable." However, in the context of the RES compliance plan analysis the carbon adder is as "known and measurable" as any other estimated modeling input. As explained below, the retail rate impact is based on estimated, forecasted costs from two different possible future scenarios – the RES and

⁵ Transcript at p. ___. Cross-examination of Mr. Frank Shafer by Mr. Steve Michel on April 7, 2009.

⁶ Transcript at p. ___. Cross-examination of Mr. Frank Shafer by Mr. Steve Michel on April 7, 2009.

⁷ Transcript at p. ___. (At the end of the transcript, at the very end of the day on April 8, 2009.)

No-RES plans. The OCC advises adjusting the two scenarios for one specific, presumably known (early action credit would undermine this presumed certainty), event (zero carbon costs). But this presumed certainty is dwarfed by the overall uncertainty of the fictional No-RES scenario to which the RES scenario is compared. It is similar to estimating the sum of two random numbers and thinking that you can make a precise estimate if you know that one of the numbers is zero. Zero is simply not a better, more practical number, especially when an important objective is to build a portfolio that reduces carbon risk. The OCC acknowledged at the hearing that there is no way to know that the carbon adder forecast the Commission has chosen for use now in the company's long-term electric resource plan is any better than a forecast developed when carbon regulation is initially implemented.⁸

II. The Commission should approve the Company's proposal to "lock down" its actual acquisitions of renewable energy.

The Commission should approve implementation of the "lock-down" of ongoing incremental costs for planning and allocating RESA dollars. On this issue, the Commission again has the opportunity to advance the statutory goals and promote more investment in renewable energy generation. Fundamentally, if there is not a lock-down of the actually invested incremental costs there is not symmetrical treatment of risk to the utility. As a result, the utility has the incentive to be below the 2% rate impact cap, rather than spend up to the 2% cap.

⁸ Transcript at p. ____ Cross-examination of Mr. Frank Shafer by Mr. Steve Michel on April 7, 2009.

A. *Colorado statutes and rules support the concept of a "lock-down" of the costs of purchased renewable generation.*

Several provisions of Section 40-2-124 support the notion that renewable energy resources, once acquired, are "sunk" for financial and statutory compliance purposes. The renewable energy standard statute provides, "The retail rate impact shall be determined net of new alternative sources of electricity supply from noneligible energy resources that are reasonably available at the time of the determination."⁹ The phrase "that are reasonably available at the time of the determination" indicates that the estimated costs of those non-renewable resources should be "locked down" for calculation of the retail rate impact cap. Correspondingly, the actually acquired renewables, the ongoing incremental costs, should be "locked down" as well. Section 124 also provides, "These policies shall provide incentives to qualifying retail utilities to invest in eligible energy resources in the state of Colorado."¹⁰ And, the legislative declaration of intent emphasizes, "...it is in the best interest of the citizens of Colorado to develop and utilize renewable energy resources to the maximum extent possible." Permitting the "lock-down" of ongoing incremental costs, i.e. acquired resources, is the appropriate interpretation of Section 40-2-124.

B. *Locking down the costs of acquired renewable resources is a reasonable way to plan for resource acquisitions.*

If the "lock-down" proposal is not adopted by the Commission, there will be less investment in clean energy because, depending on highly volatile factors such as gas prices. Public Service's investment decisions would be subject to a 20/20 hindsight re-

⁹ Section 40-2-124(1)(g). C.R.S.

¹⁰ Section 40-2-124(1)(f). C.R.S.

analysis, and potentially a violation of the retail rate impact cap. The retail rate impact is calculated using two different Strategist model runs known as the RES and No-RES plans. These two modeling scenarios are then compared and the incremental amount between the RES and the No-RES plans determines the 2% cap. The extent to which the RES/No-RES cost/benefit calculation conforms to the 2% cap directly and significantly impacts the amount of renewable resources that can be acquired. Not “locking down” previous investments in renewables in both the RES and No-RES scenarios in future compliance plans substantially increases the risk of the utility violating the cap. For any risk-averse entity, such as a utility, this unreasonable exposure to a statutory violation will produce a cautious, risk averse approach to investment. Consequently, renewable investment in Colorado would not go up to the 2% retail rate impact ceiling because the Company would err on the side of being conservative.

Instability in the RESA fund would also discourage renewable energy investment. If the available RESA funds are subject to wide, volatile swings, as demonstrated in Ahrens hearing exhibit number 48, and as testified to by Mr. Warren,¹¹ this could produce a situation where the RESA funds are less than the funds necessary to pay for previously acquired resources. Also, this could have a disparate impact on small renewable resources because that is where the Company might find the financial flexibility to compensate for inadequate funds.

¹¹ Transcript at p. ___. Cross-examination of Mr. Warren by Ms. Mandell. Mr. Warren acknowledged that without the lock-down, some of the variables that might be remodeled are volatile and could have a significant effect on the RESA funds. Additionally, Mr. Warren discussed the logistical problems with rerunning of model runs.

C. *The Commission should reject Staff's opposition to the "lock-down."*

WRA believes the "lock-down," as structured by the Company, provides stability and certainty for maximum investment in renewable energy within the constraints of the retail rate impact cap. Staff's articulation of its position on the "lock-down" or "time fence" discounted the idea that as a consequence there might be a disparate, negative impact on investment in renewable generation.

On this issue, Staff presented the live testimony of Mr. Camp twice during the hearing, and provided a one-page exhibit, Exhibit 44, further clarifying its position. Although Mr. Camp acknowledged he had not studied what the company was proposing,¹² Mr. Camp opposed the "lock-down." However, it appears Mr. Camp's rationale was based, at least partially, on a lack of concern with violation of the 2% retail rate impact cap.¹³ He emphasized that the Company had no risk because of its right to recovery of all expenses.¹⁴ Also, Mr. Camp's testimony was somewhat inconsistent with the other Staff witness, Mr. Dalton. Mr. Dalton focused on a restrictive interpretation that the cost of renewable generation acquisitions each year must not exceed the amount collected from customers each year to remain in compliance with the 2% rate cap.¹⁵ These two positions are difficult to reconcile from a practical, implementation standpoint. Mr. Dalton's approach would restrict the Company's ability to procure long-term resources because of the uncertainty of available revenues. Mr. Camp's approach would

¹² Transcript at p. ___. Cross-examination of Mr. Camp by Mr. Steve Michel on April 7, 2009.

¹³ Transcript at p. ___. Cross-examination of Mr. Camp by Ms. Brandt-King, Ms. Mandell and Ms. Connelly on April 8, 2009.

¹⁴ Id.

¹⁵ See Mr. Dalton's Answer testimony p. 32, lines 17-19 and p. 36, lines 11-13, and his Cross-Answer testimony p. 5, lines 1-4.

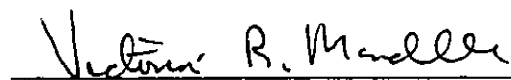
eliminate this restriction by allowing full cost recovery regardless of whether the 2% rate impact cap was violated.

Furthermore, the backwards-looking recalculation of previously estimated inputs recommended by Staff would make the modeling process *more* complex and difficult. The testimony provided at the hearing by the modeling experts, Mr. Warren and Mr. Parks, helped explain the practical challenges in implementing Staff's proposal.

In conclusion, WRA supports the Company's proposal to "lock down" renewable resource acquisitions, and to include the price of carbon emissions regulation in the calculation of the RES modeled scenario. Accordingly, we recommend the Commission approve these two elements of this compliance filing. This allows the Company to maximize the procurement of renewable resources under the 2% retail rate impact cap.

WHEREFORE, for the foregoing reasons, WRA prays for a Commission order in this proceeding consistent with the positions expressed herein, and for such other and further relief as the Commission deems just and proper.

Respectfully submitted this 17th day of April, 2009.



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