

**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.

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."<sup>1</sup>

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

---

<sup>1</sup> OCC Testimony of Frank Shafer at 7.

1 no carbon costs in the future.<sup>2</sup> 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.<sup>3</sup> 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.

---

<sup>2</sup> 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 CO<sub>2</sub> 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."

<sup>3</sup> 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.<sup>4</sup> 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.

---

<sup>4</sup> Public Service Direct Testimony of Daniel Ahrens at 21-22.

## LOWREY BROWN STATEMENT OF QUALIFICATIONS

### Employment

2009 -	Western Resource Advocates <i>Sr. Policy Analyst, Energy Program</i>	Boulder, CO
2004 - 2008	Citizens' Utility Board of Oregon <i>Utility Analyst</i>	Portland, OR
2002 - 2003	Xenergy Consulting (now Kema) <i>Engineering Analyst</i>	Portland, OR
2000 - 2001	Resource Engineering <i>Engineering Intern</i>	Glenwood Springs, CO
1997 - 2000	Ira Klitzner, Securities Broker <i>Writer &amp; Educational Consultant</i>	Aspen, CO
1997	Solar Energy International <i>Intern</i>	Carbondale, CO
1997	The Valley Journal <i>Freelance Writer</i>	Carbondale, CO

### Public Utility Commission of Oregon Filings

AR 495	REC Ownership in QF Contracts	Comments, Oral Presentation to ALJ
UE 165	Hydro Power Cost Adjustment Mechanism	Testimony
UE 167	General Rate Case	Testimony
UE 179	General Rate Case	Testimony
UE 180	General Rate Case	Testimony
UE 192	2008 Annual Power Cost Update	Testimony
UE 195	Annual Power Cost Update Mechanism	Testimony, Stipulation
UM 1014	Disposition Of Beaver 8 Generating Unit	Testimony, Stipulation
UM 1121	Texas Pacific Group Acquisition Attempt	Testimony
UM 1147	Deferred Accounting - Power Costs	Comments
UM 1198	Deferred Accounting - 2005 Hydro	Testimony, Stipulation
UM 1261	Deferred Accounting - Power Costs	Testimony, Stipulation
UM 1271	Deferred Accounting - Unregulated Turbine	Testimony
UM 1276	Performance Ratemaking - Buy vs. Build	Comments
UM 1282	Prudence of Avista's Gas Purchasing	Testimony
UM 1286	Purchased Gas Adjustment Investigation	Comments

### Education

Master of Science, Engineering	Stanford University, CA
Bachelor of Science, Civil Engineering	Stanford University, CA