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**STATE OF UTAH**

**Public Service Commission**

In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations

Docket No. 10-035-124

**Direct Testimony of  
William Steinhurst, Ph.D.**

**On Behalf of  
Sierra Club**

**May 26, 2011**

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1 **1. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your name and occupation.**

3 A. My name is William Steinhurst, and I am a Senior Consultant with Synapse  
4 Energy Economics (Synapse). My business address is 32 Main Street, #394,  
5 Montpelier, Vermont 05602.

6 **Q. Please describe Synapse Energy Economics.**

7 A. Synapse Energy Economics is a research and consulting firm specializing in  
8 energy and environmental issues, including electric generation, transmission and  
9 distribution system reliability, ratemaking and rate design, electric industry  
10 restructuring and market power, electricity market prices, stranded costs,  
11 efficiency, renewable energy, environmental quality, and nuclear power.

12 **Q. Please summarize your work experience and educational background.**

13 A. I have over thirty years of experience in utility regulation and energy policy,  
14 including work on renewable portfolio standards and portfolio management  
15 practices for default service providers and regulated utilities, green marketing,  
16 distributed resource issues, economic impact studies, and rate design. Prior to  
17 joining Synapse, I served as Planning Econometrician and Director for Regulated  
18 Utility Planning at the Vermont Department of Public Service, the State's Public  
19 Advocate and energy policy agency. I have provided consulting services for  
20 various clients, including the Connecticut Office of Consumer Counsel, the  
21 Illinois Citizens Utility Board, the California Division of Ratepayer Advocates,  
22 the D.C. and Maryland Offices of the Public Advocate, the Delaware Public  
23 Utilities Commission, the Regulatory Assistance Project, the National Association  
24 of Regulatory Utility Commissioners (NARUC), the National Regulatory  
25 Research Institute (NRRI), American Association of Retired Persons (AARP),  
26 The Utility Reform Network (TURN), the Union of Concerned Scientists, the  
27 Northern Forest Council, the Nova Scotia Utility and Review Board, the U.S.  
28 EPA, the Conservation Law Foundation, the Sierra Club, the Southern Alliance

1 for Clean Energy, the Oklahoma Sustainability Network, the Natural Resource  
2 Defense Council (NRDC), Illinois Energy Office, the Massachusetts Executive  
3 Office of Energy Resources, the James River Corporation, and the Newfoundland  
4 Department of Natural Resources.

5 I hold a B.A. in Physics from Wesleyan University and an M.S. in Statistics and  
6 Ph.D. in Mechanical Engineering from the University of Vermont.

7 I have testified as an expert witness in approximately 30 cases on topics including  
8 utility rates and ratemaking policy, prudence reviews, integrated resource  
9 planning, demand side management policy and program design, utility financings,  
10 regulatory enforcement, green marketing, power purchases, statistical analysis,  
11 and decision analysis. I have been a frequent witness in legislative hearings and  
12 represented the State of Vermont, the Delaware Public Utilities Commission  
13 Staff, and several other groups in numerous collaborative settlement processes  
14 addressing energy efficiency, resource planning and distributed resources.

15 I was the lead author or co-author of Vermont's long-term energy plans for 1983,  
16 1988, and 1991, as well as the 1998 report *Fueling Vermont's Future:*  
17 *Comprehensive Energy Plan and Greenhouse Gas Action Plan*, and also  
18 Synapse's study *Portfolio Management: How to Procure Electricity Resources to*  
19 *Provide Reliable, Low-Cost, and Efficient Electricity Services to All Retail*  
20 *Customers*. In 2008, I was commissioned by the National Regulatory Research  
21 Institute (NRRI) to write *Electricity at a Glance*, a primer on the industry for new  
22 public utility commissioners, which included coverage of energy efficiency  
23 programs. In 2011, NRRI commissioned a second edition of that work.

24 My resume is attached to this testimony as Exhibit SC-10 (WS-1).

25 **Q. On whose behalf are you testifying in this case?**

26 A. I am testifying on behalf of the Sierra Club.

27 **Q. Have you testified previously before the Utah Public Service Commission?**

28 A. No, I have not.

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to consider whether investments in certain  
3 environmental upgrades made by PacifiCorp, doing business as Rocky Mountain  
4 Power in Utah (the company) were prudent and should be allowed recovery. I also  
5 address the question of coordination between the company's integrated resource  
6 plan (IRP) activities and its rate case requests.

7 **Q. How is your testimony organized?**

8 A. My testimony is organized as follows:

- 9 1. Introduction and Qualifications.
- 10 2. Summary of Conclusions and Recommendations.
- 11 3. Prudence and the Company's Proposal
- 12 4. Recommendations

## 13 **2. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS**

14 **Q. Please summarize your primary conclusions.**

15 A. My primary conclusions are summarized as follows:

- 16 (1) The company seeks recovery in this proceeding for the capital and operating  
17 costs of major environmental upgrades (Current Case Retrofits) at certain  
18 power plants.
- 19 (2) Over the near- to mid-term, the company faces substantial additional costs due  
20 to known and likely environmental regulations that will have to be made to  
21 keep those plants in operation, and the company knew or should have known  
22 that those known and likely regulations would impose such costs.<sup>1</sup>
- 23 (3) The available evidence indicates that the company failed to determine whether  
24 the Current Case Retrofits would be cost effective in the light of those known

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<sup>1</sup> As explained below and in the prefiled testimony of Sierra Club witness Dr. Jeremy I. Fisher, those known and likely upgrades fall into two categories, which he and I refer to as Company Projected Retrofits and Emerging Retrofits. His prefiled testimony details the items included in all three categories (Current Case Retrofits, Company Projected Retrofits, and Emerging Retrofits).

1 and likely environmental regulations. Failure to determine whether the  
2 Current Case Retrofits would be cost effective in the face of those known and  
3 likely future costs, which the company knew or should have known would be  
4 required, constitutes imprudence.

5 (4) The available evidence also indicates that the company continues to fail to  
6 properly reflect those known and likely environmental regulations or their  
7 potential costs in its resource planning.

8 **Q. Please summarize your primary recommendations.**

9 A. The Commission should disallow the costs of the company's Current Case  
10 Retrofit investments, including associated operation and maintenance (O&M)  
11 costs and costs due to lost output from the affected plants, unless and until the  
12 company shows decisively that the incremental capital costs requested in this case  
13 were prudent in light of known and likely future investments and were in keeping  
14 with least cost principles.<sup>2</sup>

15 The company is requesting the opportunity to recover significant costs from  
16 ratepayers associated with the continued operation of its existing coal-fired power  
17 plants. The Commission should also require the company to provide a full  
18 analysis and accounting for the impact of existing and upcoming environmental  
19 regulations affecting its fleet of coal plants, as well as the full range of options for  
20 addressing those regulations, including both supply- and demand-side resources  
21 as well as alternatives to continued operation such as retirement or repowering.  
22 The Commission should require the company to use existing and appropriate  
23 venues for evaluating the company's planning and decision-making regarding  
24 existing coal-fired units. The costs facing the existing fleet should include not  
25 only the costs requested for meeting environmental compliance criteria today, but

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<sup>2</sup> By "costs due to lost output from the affected plants," I mean the cost of replacement power or additional production needed by the company due to any plant or unit downtime caused by the installation or operation and maintenance of the Current Case Retrofits, plus the cost of additional production or replacement power needed by the company due to either parasitic loads or reduced capacity at any

1 also the capital and operating expenses associated with reasonably anticipated  
2 environmental retrofits and other environmental mitigation requirements, as well  
3 as a price on carbon dioxide (CO<sub>2</sub>) representative of likely regional and federal  
4 policies on greenhouse gas emissions. Such analyses should provide the  
5 Commission and intervenors with an opportunity to evaluate the proposed  
6 investments in the context of the full range of costs that the company will face at  
7 its units in order to determine if ratepayers should bear the costs.

8 Without such an analysis, it is impossible for the Commission or any intervenor to  
9 fully assess whether the company's plans for the maintenance, upgrades, and  
10 operations of its fleet of plants is in keeping with least-cost principles, and  
11 whether the company's proposed investments represent a suitable use of ratepayer  
12 monies.

13 **3. PRUDENCE AND THE COMPANY'S PROPOSAL**

14 **Q. What are the costs that the company is seeking to recover and that you**  
15 **conclude are imprudent?**

16 A. As explained in the prefiled testimony of Sierra Club witness Dr. Fisher,  
17 approximately 26% of the requested rate base increase is from new retrofits to  
18 meet environmental regulations at old coal plants in the company's fleet (the  
19 Current Case Retrofits). I will explain below why those investments, along with  
20 their associated operation and maintenance (O&M) costs and costs due to lost  
21 output from the affected plants, are imprudent. Dr. Fisher lists those specific  
22 Current Case Retrofits in his prefiled testimony.

23 **Q. Has the company presented information sufficient for the Commission to be**  
24 **able to evaluate the prudence of the capital investments in pollution control**  
25 **proposed for recovery in the current docket?**

26 A. No. The company has presented testimony by witnesses to provide information  
27 supporting the prudence of capital investments in pollution control equipment and

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plant or unit caused by the operation of the Current Case Retrofits, less the variable costs of production avoided at the plants or units affected by the installation and operation of the Current Case Retrofits.

1 additional generation plant, mining, transmission and hydro projects being placed  
2 in service during the test period. However, while that information was necessary,  
3 it is not sufficient to demonstrate prudence. As explained in the testimony of Dr.  
4 Fisher, the amount that the company is requesting in this rate case is only a  
5 portion of the costs that it anticipates in its overall emissions reduction plan (the  
6 Company Projected Retrofits) and only a portion of the total costs that it is likely  
7 to face over the next few years for environmental compliance activities at its  
8 power plants (including the Emerging Retrofits). Beyond the pollution controls  
9 that are likely to be required to comply with current and upcoming EPA rules, the  
10 question of the types of costs that will likely arise due to emissions of greenhouse  
11 gases, such as CO<sub>2</sub>, presents a potentially significant cost to the company. The  
12 likely costs for greenhouse gas control regimes must be addressed in any  
13 reasonable review of the cost effectiveness of investments aimed at the continued  
14 operation of a power plant with high carbon emissions.

15 **Q. Please explain your understanding of prudence determinations and their**  
16 **effect in a rate case.**

17 A. It is my understanding that only prudently incurred expenses, including recovery  
18 of and on prudently incurred investments, including used and useful for the  
19 provision of utility service, may be recovered in retail rates. In addition, only  
20 prudent investments used and useful for the provision of utility service may be  
21 included in rate base. Conversely, imprudently incurred expenditures are  
22 traditionally disallowed. Finally, costs must also be reasonable, necessary and  
23 verifiable in order to be recoverable.

24 **Q. Who must demonstrate the imprudence or non-used and useful status of**  
25 **costs?**

26 A rate-regulated utility traditionally enjoys a rebuttable presumption that its  
27 expenditures and investments are prudent, as well as used and useful. That  
28 presumption can be rebutted by factual evidence demonstrating imprudent utility  
29 expenditures or investments that are not used and useful. Once that presumption  
30 has been rebutted, then the burden shifts to the utility to provide evidence  
31 sufficient:



1 (1) to form the basis for findings that costs were prudent and used and  
2 useful; and,

3 (2) to overcome any evidence to the contrary.

4 **Q. Please explain your conclusions regarding prudence determinations and used**  
5 **and useful determinations for the company's Current Case Retrofits.**

6 A. The investments in Current Case Retrofits, which the utility seeks to put into rate  
7 base, are not "used and useful" for several reasons. First, EPA has not yet  
8 finalized a regional haze rule under the Clean Air Act, thus, the company has no  
9 way of knowing whether its premature retrofit work will meet federal  
10 requirements. For example, Dr. Fisher demonstrated that it is likely, depending on  
11 the particular regulation, that additional technology will ultimately be required. If  
12 so, the company will have to go back and expend additional resources meeting  
13 EPA requirements and may have acted prematurely.

14 Instead, Rocky Mountain Power wants authority to gamble on the installation of  
15 pollution controls that it hopes will meet EPA's final requirements. Such a  
16 gamble violates the principle that utility property must be used and useful for  
17 public convenience at the time of rate consideration. See Re U.S. West  
18 Communications, Inc., Docket No. 94-049-08, 183 P.U.R. 4th 382, (1997) ("We  
19 continue to uphold the used and useful ratemaking principal because it demarcates  
20 as asset's in-service and productive status which in turn triggers capital  
21 recovery..."). Further, including expenses for the Current Case Retrofits in rate  
22 base prior to completing construction of the retrofits, as Rocky Mountain Power  
23 proposes here, violates the used and useful principal (unless there is a future test  
24 period exception in Utah). By including the retrofit costs in rate base now, Rocky  
25 Mountain Power wants ratepayers to fund an equity return on those future assets  
26 before they are in productive service. This type of ratemaking treatment is  
27 inequitable and improper. *Id.* In sum, since Rocky Mountain Power's  
28 expenditures for pollution retrofits (the Current Case Retrofits) are premature,  
29 they do not qualify as used and useful. The Commission should not approve  
30 recovery of those costs through rates at this time.

1 Rocky Mountain Power's proposal similarly violates the Commission's "known  
2 and measurable" standard because, without a final EPA rule, the full costs of the  
3 pollution retrofits remain unknowable at this time. This includes future costs that  
4 are uncertain in rate base and shift the risk from shareholders to ratepayer. In re  
5 PacifiCorp, Docket No. 97-035-01, 192 P.U.R.4th 289, 315 (1999) (removing  
6 uncertain hydro-dam removal costs where no contract agreements had been made  
7 and the outcome of negotiations was unknown). The company is asking  
8 ratepayers to bear the risk that the requested retrofit investments will be sufficient  
9 to meet EPA's final rule. It is inappropriate for Rocky Mountain Power to force  
10 ratepayers to bear this risk where the choice to assume such risk is entirely within  
11 the company's control.

12 Clearly some form of investment on the part of the company will ultimately be  
13 necessary because EPA regulations will require substantial pollution reductions;  
14 however, Rocky Mountain Power's proposed investments do not position the  
15 company to best deal with these future regulations. To the contrary, the decision  
16 to install controls today to meet an unknown standard creates a risk that the  
17 retrofits may fall short of meeting EPA requirements. Under such a scenario,  
18 Rocky Mountain Power would be forced to either reinvest in different or  
19 additional technology, which could render the currently proposed investments  
20 redundant or obsolete, or to decommission plants entirely, in which case the  
21 ratepayer funded investments would be abandoned. The prudent action here is to  
22 fully evaluate the likelihood and costs of future regulations and to act on that  
23 knowledge as required to provide long term least cost service.

24 To the extent Rocky Mountain Power insists on making these investments,  
25 shareholders must bear the risks until the retrofits are put into service and the  
26 utility can conclusively demonstrate that the retrofits are necessary *and* sufficient  
27 to meet final EPA requirements. "This classic regulatory view of risk-sharing  
28 underlines the importance of regulatory lag. It is an inducement to management  
29 efficiency." In re PacifiCorp, Docket No. 97-035-01, 192 P.U.R.4th 289, 315  
30 (1999). Excluding the retrofit costs from the revenue requirement until after the

1 retrofits are used and useful would also ensure that the pollution retrofit costs are  
2 known and measurable.

3 With respect to prudence, Rocky Mountain Power's actions count as imprudent  
4 for several reasons. First, installing the Current Case Retrofits is highly  
5 inefficient, and is therefore also imprudent. Rocky Mountain Power may be  
6 forced to completely revamp its pollution controls or, even repower or retire  
7 plants, once EPA issues its final rules. The proposed investments may result in  
8 inefficiencies by installing controls that may be redundant, unnecessary or  
9 obsolete.

10 Second, the company chose to exercise its discretion and to invest in premature  
11 controls in such a way that ratepayers may bear substantial and unnecessary costs,  
12 a clear abuse of discretion by the management of an enterprise entrusted with the  
13 public good, and it therefore imprudent as described above.

14 Third, the most basic duty of a public utility is to provide adequate service at just  
15 and reasonable rates, but the Current Case Retrofit costs have not been shown to  
16 be necessary or least cost for the provision of utility service over the long term.  
17 Therefore, rates that include recovery for these costs are inimical to the public  
18 interest, create economic waste, and would be, by definition in excess of just and  
19 reasonable rates. In sum, the company's Current Case Retrofit decisions were  
20 imprudent.

21 Fourth, Rocky Mountain Power has not properly considered a number of  
22 emerging federal requirements that will require additional expenditures on control  
23 technology (Emerging Retrofits) or may lead to plants being repowered or retired.  
24 In this way, the company is asking ratepayers to fund piecemeal work that could  
25 be done more efficiently or not at all once it has a better understanding of the full  
26 suite of federal requirements. Instead, the company wants to gamble on the  
27 installation of pollution controls that it hopes will meet (or be a cost effective  
28 foundation for meeting) EPA's final requirements. This gamble not only violates  
29 the principle that utility property must be used and useful for public convenience

1 at the time of rate consideration, but it is, at bottom, imprudent.

2 Thus, the Current Case Retrofit investments are not prudent. The prudent action  
3 would have been to fully evaluate the likelihood and costs of future regulations  
4 and to act on that knowledge as required to provide long term least cost service.  
5 To have done otherwise risks installing expensive pollution controls that fall short  
6 of meeting EPA requirements and would therefore require a new round of  
7 investment, shutdowns, or both.

8 **Q. Are there examples that show that the company knew or should have known**  
9 **about the potential cumulative effect on its coal plants of then current and**  
10 **emerging environmental regulations?**

11 A. Yes. The company's own documents that shows it has known of the potential for  
12 such a cumulative effect. Dr. Fisher discusses this extensively in his prefiled and  
13 Exhibits JIF-5. From PacifiCorp's SEC 10-K of March 31, 2003:

14 While the Company is unable at this time to predict with certainty the  
15 level of capital expenditures relating to air quality and carbon dioxide  
16 emissions, it believes these amounts could be significant but will be  
17 spread over a number of years. The Company also believes that the  
18 impact will be mitigated by recovery through the regulatory  
19 ratemaking process.

20 There is similar material in the more recent SEC filings. For example, in the 10-K  
21 for the transition from April 1 2006 to Dec 31 2006 (PacifiCorp acquired by  
22 MEHC), the New Source Review section reads:

23 Pending or proposed air regulations will require PacifiCorp to reduce  
24 its electricity plant emissions of sulfur dioxide, nitrogen oxides and  
25 other pollutants below current levels. The reductions will be required  
26 to address regional haze programs, mercury emissions regulations and  
27 possible re-interpretations and changes to the federal Clean Air Act. In  
28 the future, PacifiCorp expects to incur significant costs to comply with  
29 various stricter air emissions requirements. These potential costs are  
30 expected to consist primarily of capital expenditures. PacifiCorp  
31 expects that these costs would be recovered in rates and, as such,  
32 would not have a material adverse impact on PacifiCorp financial  
33 results.

34 In the 2008 IRP Update, the company acknowledges that the impending  
35 regulations may have a significant impact on its fleet:

1 There are currently a multitude of environmental regulations, which  
2 are in various stages of being promulgated, as outlined on the timeline  
3 below. Each of these regulations will have an impact on the utility  
4 industry and could affect environmental control requirements, limit  
5 operations, change dispatch, and could ultimately determine the  
6 economic viability of PacifiCorp's generation assets. The US  
7 Environmental Protection Agency has undertaken a multi-pronged  
8 approach to minimize air, land, and water-based environmental  
9 impacts. Aside from potential greenhouse gas regulation, no single  
10 regulation is likely to materially impact the industry; however, in  
11 concert they are expected to have a significant impact –especially on  
12 the coal fueled generating units that supply approximately 50% of the  
13 nation's electricity. [IRP Update, p. 17, emphasis added].

14 This foreknowledge of the likely cumulative effect of then-current and emerging  
15 regulations is precisely the knowledge that makes the company's failure to  
16 comprehensively assess the costs of those regulations in its management decisions  
17 a clear act of imprudence. Indeed, as of this writing, the company still has not  
18 evaluated the regulations "in concert," even though it anticipated that those  
19 regulations would have a significant impact on coal-fired power plants.

20 Furthermore, as pointed out by Dr. Fisher in his prefiled testimony in this  
21 proceeding,

22 Shortly before the final draft [of the company's 2011 IRP] was  
23 submitted to this Commission, the stakeholders confirmed through a  
24 phone call with the Company that the substantial environmental costs  
25 faced by the coal units were *not considered avoidable in any scenario*.

26 In other words, even if the high cost of continuing to retrofit existing  
27 coal units was ultimately not cost effective, i.e., even if those units  
28 should be retired as a form of environmental compliance, the company  
29 had knowingly biased their model results through an *a priori*  
30 assumption. The company had unilaterally rejected a solution that  
31 could feasibly protect ratepayers from having to pay billions of dollars  
32 for unnecessary environmental upgrades. [*emphasis* in original]

33 This kind of management behavior is the epitome of imprudence. To the extent  
34 that the company makes any investment or incurs any costs based on that faulty  
35 and shortsighted analysis, those investments and costs would be imprudent and  
36 should not be recovered from ratepayers.

1 **Q. Can you identify the other costs that the company is likely to incur, and that**  
2 **Utah ratepayers would be asked to bear, in the near- to mid-term for**  
3 **Company Projected Retrofits and Emerging Retrofits?**

4 A. Yes, in broad terms. According to Dr. Fisher, EPA is poised to promulgate a  
5 series of rules that will apply to generating units in the electric sector, including  
6 the company's fleet of generating units. The rules will address air emissions, coal  
7 combustion residue, water intake and water effluent. Dr. Fisher's testimony  
8 explains that the company currently anticipates substantial additional expenditures  
9 on Company Projected Retrofits to meet certain of these rules. He also explains  
10 that the company is likely to face additional costs for Emerging Retrofits  
11 associated with rules and regulations that are currently under development.

12 **Q. Has the company presented information about additional costs that would**  
13 **ultimately be charged to ratepayers?**

14 A. The company clearly acknowledges it will make additional investments in its  
15 coal-fired power plants beyond those for which it requests approval in this docket.  
16 For example, according to Mr. Teply, "the company takes several factors into  
17 consideration when making pollution control equipment investments, including:  
18 evaluation of state and federal environmental regulatory requirements and  
19 associated compliance deadlines; review of emerging environmental regulations  
20 and rulemaking; and analyses of alternate compliance options." (Teply Testimony  
21 at 14.) Further, in its Emission Reduction Plan (Exhibit SC-\_\_\_(JIF-2)), the  
22 company discusses capital expenditures for additional pollution control equipment  
23 on PacifiCorp's coal-fired units, as well as associated annual increases to costs to  
24 customers and increases in O&M expenses due to the additional pollution control  
25 equipment. (Exhibit SC-\_\_\_(JIF-2) at 5-7.) The company acknowledged that the  
26 costs do not include other costs expected to be incurred as future emission  
27 reduction measures are finalized, nor did it address other applicable  
28 environmental initiatives. (Exhibit SC-\_\_\_(JIF-2) at 7.) In short, the company has  
29 not quantified many of these known and likely costs, making it very difficult to do  
30 a comprehensive evaluation of the full cost to ratepayers of continuing to operate  
31 specific plants in the company's fleet.

1 **Q. Why must the Commission consider costs outside those proposed for**  
2 **recovery in the current docket?**

3 A. Determination of the prudence of the company's investment and the most  
4 economically efficient resource choices requires a comprehensive and detailed  
5 assessment of the costs associated with a variety of options. This assessment must  
6 include a full understanding of all of the known costs associated with specific  
7 options, as well as an understanding and evaluation of costs that can reasonably  
8 be anticipated for specific options. While the company is not seeking cost  
9 recovery for all of the upcoming costs in this docket, it is not possible to evaluate  
10 the prudence of these expenditures in isolation from known and likely upcoming  
11 expenditures.

12 **Q. Please explain how a rate case is related to the company's IRP process.**

13 A. An integrated resource planning process, by definition, must abide by two broad  
14 principles. First, all resources must be considered—and considered on a “level  
15 playing field.” Second, the IRP process must deliver an integrated portfolio of  
16 resources with the mix of resources that will provide adequate and reliable service  
17 at the lowest life cycle cost, with the life cycle cost comparisons (between  
18 resources or portfolios) and with an acceptable level of risk to ratepayers. The  
19 company has used IRP for years, and it is appropriate that the company's rate  
20 requests be consistent with these principles of IRP.

21 **Q. Can it be difficult for utilities to plan for compliance given the sheer number**  
22 **of regulatory activities that EPA is currently undertaking?**

23 A. Although anticipating upcoming regulations can be challenging, EPA is expressly  
24 pursuing a multi-pollutant approach to help companies comprehensively plan for  
25 compliance. For example, in January, 2010, EPA announced its intention to  
26 ensure better air quality, and promote a cleaner and more efficient power sector  
27 and have strong but achievable reduction goals for SO<sub>2</sub>, NO<sub>x</sub>, mercury, and other  
28 air toxics. In other words, Rocky Mountain Power is asking for recovery of a tip  
29 of the iceberg, before decision makers and ratepayers have a full understanding of  
30 the magnitude of later, related costs.

1 The company's premature actions are all the more imprudent because EPA has  
2 emphasized the agency's efforts to take a multi-pollutant sector-based approach to  
3 regulation in order to provide certainty and clarity.<sup>3</sup>

4 In response, the company argues "customers directly benefit from the continued  
5 availability of low-cost generation produced at the facilities while also achieving  
6 environmental improvements from these resources, resulting in cleaner air."

7 (Direct Testimony of Chad A. Teply at 16.) While additional controls would  
8 result in environmental improvements, the question of whether the generation in  
9 question is "low-cost" cannot be resolved without taking into account known and  
10 likely upcoming rules and associated compliance costs. In evaluating additional  
11 investment in existing capacity for recovery from ratepayers, the Commission  
12 should be rigorous in its scrutiny and require the utility to go beyond simply the  
13 question of whether a particular retrofit is mandated for continued operation.

14 In some regards, the company's planning and decision processes demonstrate  
15 efforts to consider a range of compliance options at different plants, as well as  
16 new resource options for meeting its customer's needs. However, the company's  
17 planning and decision process is shortsightedly based on the assumption that  
18 existing units must continue to operate regardless of likely costs, with ratepayers  
19 bearing the burden. The company has failed to use appropriate venues, such as  
20 integrated resource planning and predetermination proceedings, to allow the  
21 Commission to consider in comprehensive fashion whether ratepayers should  
22 fund continued operation of existing coal-fired units in light of existing and future  
23 regulatory requirements. Resource retirement does not appear as an option in  
24 compliance planning, nor does resource replacement emerge as an option in  
25 integrated resource planning.

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<sup>3</sup> Lisa Jackson, *Remarks on the 40th Anniversary of the Clean Air Act, As Prepared*; September 14, 2010.  
Available at  
<http://yosemite.epa.gov/opa/admpress.nsf/a883dc3da7094f97852572a00065d7d8/b6210c1d1d49b7a4852577fb006f435a!OpenDocument>. Accessed 4/8/11.



1 **Q. Is it sufficient for the company to determine the cost-effectiveness of the retrofits**  
2 **currently required for compliance?**

3 A. No. Such an evaluation would be incomplete, ignores relevant planning  
4 information that the company's management knows or should know, and could  
5 put ratepayers at risk for the costs of investments that, when considered as part of  
6 a whole, might not be cost-effective. The company is pursuing a piecemeal  
7 approach—requesting cost recovery approval for a single upcoming cost (BART)  
8 rather than considering the full costs to ratepayers of continuing to operate.  
9 Without factoring in the full range of known and likely costs that ratepayers  
10 would have to bear, it is not possible to assert that the power plants in question  
11 produce low-cost generation. A piecemeal approach to evaluating capital  
12 upgrades to existing power plants ignores the 40-year-plus trend of steadily  
13 increasing and tightening environmental regulation nationwide. It is reasonable  
14 for the Commission and the company to assume additional regulation and  
15 additional regulatory costs will be imposed. Doing so will support evaluation of  
16 individual compliance expenditures within a broader context of the full range of  
17 compliance obligations and costs that the company is likely to face at a particular  
18 unit rather than reviewing compliance obligations one by one.

19 The company's piecemeal approach to evaluating the upcoming costs of  
20 compliance deprives ratepayers of the benefit of a comprehensive review and  
21 prudence determination. In general, the scope of the Commission's consideration  
22 of the company's proposal should reflect a multi-pollutant approach to evaluating  
23 the known and likely costs of continued operation and retrofit, rather than  
24 considering one regulation at a time. The company must promptly provide  
25 information to the Commission and parties that allows for such an evaluation. It is  
26 not reasonable to put ratepayers at risk of having to fund multiple modifications  
27 or retrofits to meet compliance obligations if, taken as a whole, those compliance  
28 activities are less economical than alternatives.

29 The summaries of upcoming environmental requirements presented in Dr.  
30 Fisher's testimony evidence the potential synergistic magnitude of existing and  
31 proposed regulatory requirements. These mandates will inevitably inform utilities

1 decisions as they make future resource allocations to meet customer demand and  
2 determine the most appropriate investments for recovery from ratepayers. Given  
3 the sheer number and wide coverage of these mandates, it will be essential that,  
4 for future planning purposes and rate treatment, the Commission and the utilities  
5 consider their potential impact in a comprehensive, rather than singular, case-by-  
6 case basis. A step-wise, consistent decision-making process for deciding whether  
7 to retrofit existing plants, new plants or employ some other resource will be  
8 essential to ensuring the best outcome for ratepayers. When evaluating  
9 alternatives, utilities must consider the market cost of existing, unused natural gas  
10 capacity, the cost of a new combined cycle natural gas plant, as well as that of  
11 wind, other renewables, demand response, and energy efficiency, in comparison  
12 to the specific retrofit costs faced by an individual unit.

13 It is critical for companies to consider a reasonable range and intensity of risks  
14 and uncertainties, particularly those associated with environmental regulation.  
15 These include carbon costs, ozone regulation, mercury regulation, coal  
16 combustion waste risks and requirements, and a lengthy list of pending regulatory  
17 issues, as discussed in Dr. Fisher's testimony. I recommend that utilities be  
18 directed to include the costs and risks of existing and emerging regulations on a  
19 joint, multi-pollutant basis in evaluating investment plans, even when the final  
20 form or timing of a regulation is unknown, given the capital intensive and long-  
21 lived nature of investments in the electric industry.

#### 22 **4. RECOMMENDATIONS**

##### 23 **Q. What recommendations do you have for Commission?**

24 A. I recommend that the costs of the company's Current Case Retrofit investments  
25 be disallowed for recovery unless the company can show decisively that the  
26 incremental capital costs requested in this case are prudent in light of known and  
27 likely future investments and are in keeping with least cost principles. That  
28 disallowance should include not only the capital costs of the Current Case  
29 Retrofits, but also any associated operation and maintenance (O&M) costs and

1 costs due to lost output from the affected plants. The term “costs due to lost  
2 output from the affected plants,” means the cost of replacement power or  
3 additional production needed by the company due to any plant or unit downtime  
4 caused by the installation or operation and maintenance of the Current Case  
5 Retrofits. This also includes the cost of additional production or replacement  
6 power the company needs due to either parasitic loads or reduced capacity at any  
7 plant or unit caused by the operation of the Current Case Retrofits, less the  
8 variable costs of production avoided at the plants or units affected by the  
9 installation and operation of the Current Case Retrofits.

10 **Q. Does your opinion change if construction has already commenced or is**  
11 **complete on one or more of the imprudent upgrades that is being proposed**  
12 **for cost recovery in this proceeding or if any such construction has already**  
13 **been permitted?**

14 A. No. Such costs should still be disallowed. The disallowances I recommend are  
15 fully consistent with traditional ratemaking, whether or not the imprudent  
16 investment has already been made, in whole or in part.

17 **Q. Does your opinion change if additional investment in a specific imprudent**  
18 **upgrade is being proposed for recovery, but some of that upgrade’s cost was**  
19 **already been allowed in rate base in a prior rate case?**

20 A. No. The Commission should disallow as imprudent that portion of the investment  
21 not already allowed into rate base by prior Commission Order. The Commission  
22 should also consider, now and in the future, whether any of those or similar  
23 investments (that is, investments now found to have been imprudent but which  
24 had been allowed into rate base by prior Commission Order) are used and useful  
25 in the provision of utility service. Under traditional ratemaking practice, the cost  
26 of investments that have already been allowed into rate base (whether by an  
27 explicit finding of prudence or in accordance with a utility’s presumption of  
28 prudence), but which are no longer used and useful (if they ever were) may be  
29 subject to a disallowance, the extent of which is within the Commission’s  
30 discretion.

1 **Q. Do you have additional recommendations for the Commission?**

2 A. Yes. The Commission must take a proactive approach to ensure sound decision-  
3 making and to ensure that the Commission has sufficient information to evaluate  
4 company decisions that could result in significant costs to ratepayers. In  
5 particular, the Commission must consider establishing a comprehensive and  
6 consistent process for considering utility proposals for major investments in  
7 existing generating units. In general, the Commission's guidelines for such a  
8 process should require:

9 (1) A thorough inventory and description of all the relevant resource  
10 options, together with an assessment of their costs, benefits, uncertainties and  
11 risks, as well as the probabilities of those risks,

12 (2) An objective analysis of how those uncertainties and risks affect the  
13 performance of various resource plans individually and in combination,

14 (3) Development of a plan relying on a portfolio of resources that manages  
15 risk and uncertainty to a reasonable level while delivering the lowest life cycle  
16 cost over the fullest possible range of plausible future scenarios.

17 If the company fails to do so or fails to coordinate its rate requests with its IRP  
18 planning processes and principles, the Commission should consider imposing a  
19 penalty in the form of a reduction to the company's allowed rate of return.

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

21 A. Yes, it does.

## CERTIFICATE OF SERVICE

I hereby certify that on this 26<sup>th</sup> of May, 2011, an original version and fifteen copies of the foregoing document, with Exhibits provided on CD, were sent via U.S. Mail to the following:

Attn: Julie Orchard  
Herber M. Wells Building, 4<sup>th</sup> Floor  
160 East 300 South  
Salt Lake City, UT 84111

Additionally, I hereby certify that on this 26<sup>th</sup> day of May, 2011, a true copy of the foregoing document was sent via email to the following:

Alex Duarte	<a href="mailto:psc@utah.gov">psc@utah.gov</a>	Karen White	<a href="mailto:Karen.white@tyndall.af.mil">Karen.white@tyndall.af.mil</a>
Ariel Son	<a href="mailto:alex.duarte@qwest.com">alex.duarte@qwest.com</a>	Kevin Higgins	<a href="mailto:khiggins@energystrat.com">khiggins@energystrat.com</a>
Arthur Sandack	<a href="mailto:ariel.son@pacificcorp.com">ariel.son@pacificcorp.com</a>	Kurt Boehm	<a href="mailto:kboehm@bkllawfirm.com">kboehm@bkllawfirm.com</a>
Artie Powell	<a href="mailto:asandack@msn.com">asandack@msn.com</a>	Leland Hogan	<a href="mailto:Leland.hogan@fbfs.com">Leland.hogan@fbfs.com</a>
Barry Bell	<a href="mailto:wpowell@utah.gov">wpowell@utah.gov</a>	Mark Moench	<a href="mailto:mark.moench@pacificcorp.com">mark.moench@pacificcorp.com</a>
Betsy Wolf	<a href="mailto:Barry.Bell@pacifiCorp.com">Barry.Bell@pacifiCorp.com</a>	Michele Beck	<a href="mailto:mbeck@utah.gov">mbeck@utah.gov</a>
Brian Burnett	<a href="mailto:betsy@slcap.org">betsy@slcap.org</a>	Mike Kegge	<a href="mailto:mlegge@usmagnesium.com">mlegge@usmagnesium.com</a>
Bruce Plenk	<a href="mailto:brianburnett@cnmlaw.com">brianburnett@cnmlaw.com</a>	Nancy Kelly	<a href="mailto:nkelly@westernresources.org">nkelly@westernresources.org</a>
Carrie Meyer	<a href="mailto:bplenk@igc.org">bplenk@igc.org</a>	Neal Townsend	<a href="mailto:ntownsend@energystrat.com">ntownsend@energystrat.com</a>
Charles R Dubuc	<a href="mailto:carrie.meyer@pacificcorp.com">carrie.meyer@pacificcorp.com</a>	Patricia Schmid	<a href="mailto:pschmid@utah.gov">pschmid@utah.gov</a>
Cheryl Murray	<a href="mailto:rdubuc@westernresources.org">rdubuc@westernresources.org</a>	Paul Proctor	<a href="mailto:pproctor@utah.gov">pproctor@utah.gov</a>
Chris Parker	<a href="mailto:cmurray@utah.gov">cmurray@utah.gov</a>	Peter J. Mattheis	<a href="mailto:pjm@bbrslaw.com">pjm@bbrslaw.com</a>
Dan Gimble	<a href="mailto:chrisparker@utah.gov">chrisparker@utah.gov</a>	Rachael Martyn	<a href="mailto:rachael.martyn@pacificcorp.com">rachael.martyn@pacificcorp.com</a>
Daniel Solander	<a href="mailto:dgimble@utah.gov">dgimble@utah.gov</a>	Randy Parker	<a href="mailto:rparker@fbfs.com">rparker@fbfs.com</a>
Data Requests	<a href="mailto:daniel.solander@pacifiCorp.com">daniel.solander@pacifiCorp.com</a>	Roger Swenson	<a href="mailto:roger.swenson@prodigy.net">roger.swenson@prodigy.net</a>
David Taylor	<a href="mailto:datarequest@pacifiCorp.com">datarequest@pacifiCorp.com</a>	Ryan Kelly	<a href="mailto:ryan@kellybramwell.com">ryan@kellybramwell.com</a>
Dennis Miller	<a href="mailto:Dave.Taylor@pacifiCorp.com">Dave.Taylor@pacifiCorp.com</a>	Sarah Wright	<a href="mailto:sarah@utahcleanenergy.org">sarah@utahcleanenergy.org</a>
Eric Lacey	<a href="mailto:dennismiller@utah.gov">dennismiller@utah.gov</a>	Sharon Bertelson	<a href="mailto:bertelsens@ballardspahr.com">bertelsens@ballardspahr.com</a>
F. Robert Reeder	<a href="mailto:elacey@bbrslaw.com">elacey@bbrslaw.com</a>	Shayla McNeill	<a href="mailto:Shayla.mcneill@tyndall.af.mil">Shayla.mcneill@tyndall.af.mil</a>
Felise Thorpe-Moll	<a href="mailto:bobreeder@parsonsbehle.com">bobreeder@parsonsbehle.com</a>	Sonya Martinez	<a href="mailto:sonya@slcap.org">sonya@slcap.org</a>
Gary Dodge	<a href="mailto:fthorpemoll@utah.gov">fthorpemoll@utah.gov</a>	Sophie Hayes	<a href="mailto:sophie@utahcleanenergy.org">sophie@utahcleanenergy.org</a>
Gerald Kinghorn	<a href="mailto:gdodge@hjdllaw.com">gdodge@hjdllaw.com</a>	Stephen Baron	<a href="mailto:sbaron@jkenn.com">sbaron@jkenn.com</a>
Gloria Smith	<a href="mailto:ghk@pkhlawyers.com">ghk@pkhlawyers.com</a>	Stephen Mecham	<a href="mailto:sfmecham@cnmlaw.com">sfmecham@cnmlaw.com</a>
Holly Rachel Smith	<a href="mailto:gloria.smith@sierraclub.org">gloria.smith@sierraclub.org</a>	Steve Chriss	<a href="mailto:stephen.chriss@wal-mart.com">stephen.chriss@wal-mart.com</a>
Jane Briesemeister	<a href="mailto:holly@raysmithlaw.com">holly@raysmithlaw.com</a>	Steven Michel	<a href="mailto:smichel@westernresources.org">smichel@westernresources.org</a>
Jeff Larsen	<a href="mailto:jbriesemeister@aarp.org">jbriesemeister@aarp.org</a>	Teresa Foxley	<a href="mailto:foxleyt@ballardspahr.com">foxleyt@ballardspahr.com</a>
Jeremy Cook	<a href="mailto:Jeff.Larsen@pacifiCorp.com">Jeff.Larsen@pacifiCorp.com</a>	Vicki Baldwin	<a href="mailto:vbaldwin@parsonsbehle.com">vbaldwin@parsonsbehle.com</a>
Jerold Oldroyd	<a href="mailto:jrc@pkhlawyers.com">jrc@pkhlawyers.com</a>	William Evans	<a href="mailto:wevans@pblutah.com">wevans@pblutah.com</a>
Kaley McNay	<a href="mailto:oldroydj@ballardspahr.com">oldroydj@ballardspahr.com</a>	Yvonne Hogle	<a href="mailto:yvonne.hogle@pacificcorp.com">yvonne.hogle@pacificcorp.com</a>
	<a href="mailto:kaley.mcnay@pacificcorp.com">kaley.mcnay@pacificcorp.com</a>		

*Original Signed by:*

\_\_\_\_\_  
Jeff Speir  
Program Assistant  
Sierra Club Environmental Law Program