

**BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA**

IN THE MATTER OF AN INVESTIGATION )  
INTO THE APPROPRIATENESS OF DEMAND ) Docket No. 06-12005  
SIDE MANAGEMENT COST RECOVERY )  
MECHANISMS AND INCENTIVES )

Second Comments of

**Stephen Wiel**

on behalf of

**Southwest Energy Efficiency Project (SWEEP)**

September 10, 2007

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## Introduction

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

A. My name is Stephen Wiel. I am the Nevada Representative of SWEEP, the Southwest Energy Efficiency Project. My business address is 780 Joyce Lane, Incline Village, Nevada, 89451.

**Q. For whom are you commenting?**

A. I am commenting on behalf of Southwest Energy Efficiency Project (SWEEP).

**Q. Please describe SWEEP.**

A. SWEEP is a public interest organization promoting greater energy efficiency in the six states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. This is a high growth region where energy efficiency efforts have been lagging compared to other regions, air pollution is a growing concern, and many new power plants are under development or planned, including some new coal-fired power plants. SWEEP engages in both analysis and advocacy and is collaborating with utilities, state agencies, environmental groups, universities, and other energy efficiency specialists. SWEEP works in the following five areas:

- state energy legislation,
- utility energy efficiency policy and programs,
- building energy efficiency,
- combined heat and power, and
- energy efficiency in rural areas.

25

26 **Q. What are your professional qualifications?**

27 A. I have 45 years of experience in energy and environmental management. I am  
28 currently the Nevada Representative of the Southwest Energy Efficiency project  
29 (SWEEP). I previously served as Head of the Energy Analysis Department at  
30 Lawrence Berkeley National Laboratory (LBNL), where I also established LBNL's  
31 Washington Office, served as senior advisor to the US Department of Energy on  
32 integrated resource planning and demand-side management in the utility sector, led  
33 the greenhouse gas mitigation component of the U.S. Country Studies Program, and  
34 created the initiative on international energy efficiency standards and labels that  
35 evolved into the Collaborative Labeling and Standards Program (CLASP). Before  
36 joining LBNL, I regulated utility companies, serving for 8 years as a Nevada Public  
37 Service Commissioner. Before that, I ran my own consulting firm in energy  
38 management and solar design and was an Assistant Professor at UNR.  
39 During the time I was a Nevada Public Service Commissioner, I presided over several  
40 integrated resource plan filings and related dockets. I was also prominent in the  
41 National Association of Regulatory Utility Commissioners (NARUC), where I served  
42 as the Chairman of NARUC's Conservation Committee for four years, contributing  
43 significantly to the development of electric and gas utility companies' long-range  
44 planning, their investment in conservation, incentives for conservation profitability,  
45 and environmental accounting.  
46  
47 I currently serve as President of the Board of CLASP, am on the Board of Directors  
48 of the American Council for an Energy Efficient Economy, and am on the Boards of

49 two local organizations supporting homeless women. I have Bachelor's and Master's  
50 degrees in Chemical Engineering from Stanford University, and a Doctorate from the  
51 University of Pittsburgh, Graduate School of Public and International Affairs. I have  
52 published 151 books, articles, reports and papers on the subject of energy efficiency  
53 and the environment.

54

55 **Q. What is the purpose of your comments?**

56 A. I am suggesting changes to the Proposed Changes to Regulation of the Public Utilities  
57 Commission of Nevada for Comment and Discussion in Docket No. 06-12005 dated  
58 August 24, 2007 in order to continue providing appropriate incentives that encourage  
59 Nevada Power Company and Sierra Pacific Power Company to maximize the public  
60 benefit from conservation and load management opportunities as a routine course of  
61 their business – with the bulk of the benefits accruing to their customers, the  
62 transaction costs tolerably small, the burden on the PUCN and its staff also tolerably  
63 small, and adequate surety in place for the financial community.

64

65 **Q. What are your suggestions for improvement in Nevada's incentive structure?**

66 A. I suggest that the Commission modify the language of NAC 704.9523 Section 4 as  
67 follows (italics and single strikethroughs indicate the PUCN's proposed additions and  
68 deletions, respectively; *ITALICIZED CAPS* and double strikethroughs indicate  
69 SWEEP's recommended additions and deletions):

70 4. ~~At the time~~ *The utility SHALL RECEIVE AN additional performance*  
71 *incentives CONSISTING of A 5 PERCENT equity adder ~~or other program~~*  
72 *performance measure.* ~~SO LONG AS The value of the bonus incentive shall~~

73 *DOES not exceed 20 PERCENT OF the net PRESENT VALUE OF THE benefits*  
74 *of the conservation or demand management program IMPLEMENTED IN ANY*  
75 *GIVEN RESOURCE PLANNING PERIOD. SHOULD THE CALCULATED*  
76 *BENEFITS USED TO DETERMINE THE VALUE OF THE INCENTIVE BONUS*  
77 *APPLIED IN ANY GIVEN RESOURCE PLANNING PERIOD LATER BE*  
78 *SHOWN BY THE UTILITY'S MONITORING AND VERIFICATION PROGRAM*  
79 *TO BE ERRONEOUS, THE INCENTIVE VALUE TO BE APPLIED TO THE*  
80 *NEXT THREE-YEAR RESOURCE PLANNING PERIOD SHALL BE ADJUSTED*  
81 *ACCORDINGLY. ~~In determining whether a cost should receive an incentive~~*  
82 *~~bonus the Commission will consider the contribution the program makes to~~*  
83 *~~improving the electric system including, but not limited to, the items defined in~~*  
84 *~~NAC 704.948.~~*

85 **Q. Why do you recommend these changes to the language of NAC 704.9523?**

86 A. SWEEP recommends these changes to the language of NAC 704.9523 for the  
87 following two reasons:

- 88 1. The current 5 percent ROE adder provides an appropriate balance between that  
89 portion of the benefits from conservation and load management (demand-side  
90 management or DSM) programs retained by the utility (about 10%) and the  
91 portion that accrues to its customers (about 90%).
- 92 2. Specifying the mechanism and value of the incentive bonus in the regulation  
93 provides the utility with the surety it needs for its DSM program to  
94 become/remain a business profit center that competes successfully within the  
95 utility for the company's management attention and limited financial resources.

96

97 Q. **What criteria are you using to make these recommendations?**

98 A. As SWEEP described in its comments in this docket dated February 2, 2007, SWEEP  
99 believes that, in order to provide the most reliable and cost-effective electricity for  
100 Nevada, the primary goal of the incentive structure addressed in this regulation  
101 should be "to provide rules that make investment in cost-effective DSM a slightly  
102 more preferable business venture for Nevada utilities than investing in supply side  
103 facilities". SWEEP's February 2 comments went on to list six criteria for responsibly  
104 achieving this goal. The regulations must:

- 105 1. Provide the utility a fair return on its DSM investment, considering risk and  
106 lost sales
- 107 2. Provide the utility an incentive to select DSM over competing investments
- 108 3. Avoid DSM competing with the utility's O&M budget for limited resources
- 109 4. Provide the public with an appropriate share of the net benefit of DSM
- 110 5. Avoid utility windfall profits
- 111 6. Maximize the public benefit from DSM

112 Two more criteria that SWEEP inherently considers that satisfy NAC 704.948 are:

- 113 7. Minimize the risk of electricity disruptions
- 114 8. Minimize price volatility

115

116 Q. **What is the basis for your recommendation that the ROE adder be 5 percent?**

117 A. There are various views on the appropriate level of earnings that a utility company  
118 should receive for its DSM investments. As I described in my February 2 comments,  
119 I believe that *profitability* should be the criterion and that the appropriate level of  
120 profit can be bounded by two considerations. On the lower end, the profit should be

121 at least as high as that from investments in supply, after consideration of risk, lost  
122 revenues from reduced sales, expected growth in sales, debt to equity ratio, fuel costs,  
123 power purchase contracts and opportunities, and other aspects of the company's  
124 operations. On the upper end, the company should not earn more than a reasonable  
125 share of the net economic benefit created by its DSM investments. Consumers should  
126 receive the majority of the benefit.

127

128 The 5 percent ROE adder that has been in place for the past several years seems to  
129 have found the recommended balance. It, along with the energy credit allowed in the  
130 renewable portfolio standard, has stimulated Nevada Power Company (NPC) to  
131 increase its annual DSM spending from \$2.2 million in 2002 to \$31.8 million in 2007.

132 The net benefits accruing annually to customers from this DSM spending (after  
133 repayment of costs and payment of profit to NPC) have also grown by an order of  
134 magnitude to \$18 million in net benefits projected for the 2007 program.

135

136 Since the February 27, 2007 workshop in this docket, Sierra Pacific Resources (SPR)  
137 has analyzed NPC's profitability from its existing energy conservation and load  
138 management programs using the 5 percent ROE adder currently in the regulations.  
139 This analysis shows, for example, that NPC's \$31.8 million 2007 DSM program will  
140 generate gross benefits of \$52.5 million. The portion of net benefits that accrues to  
141 customers, after subtracting the \$31.8 million program costs and NPC's \$2.3 million  
142 'profit', is \$18.4, which is 89% of the net benefits. NPC's share of the net benefits as a  
143 result of the capitalization and 5% ROE adder is 11% (of which about a half is from  
144 the ROE adder).

145

146 SPR has recently conducted a similar analysis for Sierra Pacific Power Company's  
147 (SPPC's) proposed 2008 resource plan that was recently filed. This analysis shows,  
148 for example, that SPPC's \$9.9 million 2008 DSM program will generate gross  
149 benefits of \$19.2 million in gross benefits. The portion of net benefits that accrues to  
150 customers, after subtracting the \$9.9 million program costs and SPPC's \$0.8 million  
151 'profit', is \$8.5, which is 91% of the net benefits. SPPC's share of the net benefits as a  
152 result of the capitalization and 5% ROE adder is 9% (of which about a third is from  
153 the ROE adder).

154

155 **Q. Aren't you concerned that the 5 percent ROE adder increases rates and is a**  
156 **burden for non-participants in the energy efficiency and load management**  
157 **programs?**

158 A. No. The effect of the ROE adder isn't noticeable. SPR's analysis mentioned in the  
159 answer to the previous question shows that NPC's entire 2007 DSM program,  
160 including the current 5 percent ROE adder, costs NPC's average residential customer  
161 \$1.41 per year out of his/her total \$1,393 annual bill. While NPC's DSM program  
162 increases rates by one-tenth of one percent, the average participant sees a decrease of  
163 \$10.41 in his/her annual bill. Similar analysis for SPPC shows a lower cost for the  
164 average customer from the company's DSM program and a higher return.

165

166 As the analysis in the answer to the question above shows, this is a price well worth  
167 paying for the increasing benefits that are accruing from the growing DSM business  
168 that is taking hold within SPR.



169

170 **Q. What is the basis for your recommendation that the incentive bonus be capped**  
171 **at 20% of net benefits?**

172 A. SWEEP believes that appropriate regulations should include a provision to protect  
173 customers from unexpected consequences. Providing a cap on the incentive bonus  
174 that utilities can receive accomplishes this purpose for this incentive regulation.  
175 SWEEP agrees that the cap of 100% of net benefits contained in the proposed  
176 regulation would protect customers from incurring a net loss from the utilities' DSM  
177 programs. SWEEP also believes that the 20% cap it recommends is high enough to  
178 be needed in only truly unexpected circumstances and guarantees customers a large  
179 majority of the benefits from the utilities' DSM programs.

180

181 **Q. What is the basis for your recommendation that the mechanism and value of the**  
182 **incentive bonus be fixed by regulation?**

183 A. One of the reasons that NPC's and SPPC's DSM programs have grown as  
184 dramatically as they have is that the mechanism in the current regulation provides  
185 certainty that the companies' investments in DSM will be more profitable than an  
186 equivalent investment in the traditional facilities that utility executives otherwise feel  
187 more comfortable with. Building and sustaining a DSM program is a long-term  
188 venture. SWEEP believes that removing this certainty and leaving it to be  
189 reconsidered every three years as part of a resource plan filing would have an  
190 unfortunate detrimental effect on the development of the companies' DSM programs  
191 that has been underway for the past several years and will hopefully continue for the  
192 foreseeable future. Uncertainty of the outcome of rate treatment in the next resource

193 plan decision would inhibit company commitments beyond three years, foster  
194 discomfort within the financing and bond rating community, and likely instill caution  
195 by the company during the preparation of the resource plan itself.

196

197 The goal of the incentive regulation should be to stimulate a thriving DSM profit  
198 center within each of the utility companies – a center that will profit the most by  
199 achieving the optimum benefit for its customers – a center that needs little prodding  
200 by the Commission. A business such as this takes years to develop and survives only  
201 with profitable long-term prospects. A business like this needs to know more than  
202 three years in advance how its profits will be obtained and that they will continue  
203 indefinitely.

204

205 **Q. Why do you believe that the ROE adder mechanism is preferable to other**  
206 **program performance incentive measures?**

207 A. As I mentioned in my February 2 comments, I believe that of all the mechanisms that  
208 have been tried in various states, the Nevada approach of providing an adder to the  
209 utility's ROE for its capital investment in cost-effective DSM comes closest to the  
210 ideal of having utility companies prefer to invest in DSM rather than supply facilities.  
211 By employing this mechanism, the PUCN best aligns the regulations with the  
212 business model of the utility, providing the least adversarial regulation of DSM. If  
213 the top executives of the utility company *want* to invest in DSM, there is less  
214 oversight and pressure required of the Commission.

215

216 **Q. Why do you recommend that the ROE adder be adjusted based on actual**  
217 **performance every three years?**

218 A. The Commission needs assurance that the benefits attributed to the utilities' DSM  
219 programs actually materialize over the years. If profits are earned on benefits never  
220 delivered, the money should be refunded. The companies devote serious effort to  
221 monitor and evaluate the performance of their DSM programs. The information  
222 obtained should be used to adjust their cumulative long-term earnings based on the  
223 amount of energy savings and peak demand reduction achieved as well as the cost  
224 effectiveness of DSM programs as a whole. This will provide an incentive to the  
225 utility for maximizing both savings and cost effectiveness.

226

227 SWEEP's recommendation is a compromise between the extremes of (1) an annual  
228 adjustment with true-up based on field evaluations to the ROE adder for that year and  
229 (2) never truing up. In order to provide added stability to the incentive mechanism,  
230 SWEEP's recommendation would true up the cumulative incentive bonus based on  
231 field evaluations by adjusting the ROE adder every three years. This way the utility  
232 would know with relative certainty what its earning would be within each three-year  
233 planning period and customers would be made whole over the following three year  
234 period.

235

236 **Q. Does that conclude your comments?**

237 Yes