

1 **Q. Are you the same David L. Taylor that previously filed direct testimony in**
2 **this case?**

3 A. Yes.

4 **Purpose and Summary of Testimony**

5 **Q. What is the purpose of your rebuttal testimony?**

6 A. My rebuttal testimony is in response to the Testimony of Committee of Consumer
7 services witness Anthony Yankel. It focuses on the issue of the difference
8 between load factors for customers of different usage levels and the impact of
9 those load factors on the cost of service for those customers. I will present a more
10 accurate representation of load factor data by usage level and then present the
11 implication of the load factor differences on the cost of service for customers of
12 different usage levels. Finally I address the issue of an appropriate price signal
13 for residential summer period energy usage.

14 **Load Factors**

15 **Q. Do you agree with Mr. Yankel's representation of the average coincident**
16 **peak load factors presented on pages 4 and 5 of his testimony?**

17 A. No. Mr. Yankel's load factor calculations misrepresent and distort actual
18 customer usage patterns in favor of his analysis and resulting recommendations.
19 It appears that Mr. Yankel determined the coincident load factor for each usage
20 level by taking a simple average of the monthly load factors for each sample
21 customer. In his rebuttal testimony, Mr. Richard Anderson discusses why this
22 method is inappropriate and discusses the proper way to develop average load
23 factors for each usage level.

24 **Q. Has the company calculated load factors that are more representative of**
25 **customer usage within monthly kWh usage ranges?**

26 A. Yes. In response to Mr. Yankel's discussion on pages 4 and 5 of his testimony,
27 The company calculated, as shown in Table 1 below, monthly coincident load
28 factors by usage level using the 2004 summer data referenced by Mr. Yankel. In
29 addition the company also calculated monthly non-coincident peak and
30 distribution peak load factors for the various monthly kWh usage ranges. These
31 additional load factors are used to calculate the full cost of service by usage level
32 that I discuss later in my testimony.

Table 1

Monthly Coincident Peak Load Factor, Sample of 145 Schedule 1 Customers, Summer 2004

Average Monthly Usage	CP_LF May-04	CP_LF Jun-04	CP_LF Jul-04	CP_LF Aug-04	CP_LF Sep-04	Avg Monthly LF for Summer
0-400 kWh	85%	84%	73%	71%	77%	77%
401-1000 kWh	78%	62%	71%	57%	66%	66%
> 1000 kWh	69%	65%	66%	58%	51%	61%
0-400 kWh	85%	84%	73%	71%	77%	77%
401-600 kWh	83%	71%	74%	63%	65%	71%
601-1000 kWh	73%	56%	69%	54%	66%	62%

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34 **Q. Does the information in Table 1 support Mr. Yankel's statement that there is**
35 **“a strong correlation between the amount of monthly Residential usage and**
36 **the contribution to system peak demand during the summer months?**

37 A. No. While the coincident load factors shown in Table 1 indicate that large users
38 do generally have summer coincident peak load factors somewhat lower than the
39 smaller users, that difference is not as large or as significant as Mr. Yankel claims
40 on page 5 of his testimony in support of a higher tailblock rate. In
41 addition, Table 1 shows that the summer coincident load factors for the 400-600
42 kWh block generally fall between the load factors of the 600-1000 kWh and the

43 0-400 kWh range. So while the load factor for this usage level is “not that
44 dissimilar from that for the 0-400 kWh range” (Yankel line 108), neither is it
45 dissimilar from that of the 601-1000 kWh range. Therefore, the load factor data
46 does not support Mr. Yankel’s proposal to expand the size of first block from its
47 current 0-400 kWh range to 0-600 kWh range.

48 Overall, because the coincident load factors for all load sizes are less than
49 100 percent, the results from Table 1 support the conclusion that all kWh usage
50 groups are responsible for high summer usage levels.

51 **Cost Support**

52 **Q. Did Mr. Yankel provide any supporting cost of service analysis in support of**
53 **his proposed summer period block prices?**

54 A. No. On page 31 of his testimony, Mr. Yankel makes the following
55 recommendation:

56 “The Committee’s position is that Residential rates should be developed
57 that place a higher percentage increase on the summer tailblock rate than
58 the average percentage increase. Although the present summer inverted
59 block rates are sending the customers a price signal that air-conditioning
60 load is expensive to serve, the present rates are not sending a strong
61 enough signal.”

62 He does not support his recommendation with any cost of service studies or any
63 other analyses that indicate what the prices of the three summer block should be.
64

65 **Q. Have you prepared any analysis that provides a cost basis for the price of the**
66 **summer energy blocks?**

67 A. Yes. I have addressed the question from two perspectives; equity and efficiency.
68 The equity perspective looks at whether or not customers of different sizes are
69 paying their fair share of the cost of providing service. For many years in Utah
70 this has been an embedded cost standard and is the basis of the cost of service
71 studies presented in rate cases. The efficiency perspective looks at whether
72 customers are provided with correct price signal to make informed energy
73 consumption decisions. Mr. Alt also addresses these concepts in his testimony.

74 **Equity Argument**

75 **Q. What type of analysis have you prepared to determine the cost responsibility**
76 **for customers with different energy usage levels?**

77 A. To address the equity, or fairness, issue I developed embedded unit cost of service
78 results for both summer and winter period and then calculated the per kWh cost of
79 service for the three load sizes represented in the company summer blocking
80 structure. The analysis is found in Exhibit UP&L___(DLT-1R). Tab 1.0 of
81 Exhibit UP&L___(DLT-1R) is a single page that summarizes the analysis, tab 1.1
82 shows the calculations of the unit cost of service by season and by monthly usage
83 level, tab 1.2 contains the summer season load factor data used in the analysis,
84 and tabs 1.3 to 1.7 provide relevant sections from the cost of service study that are
85 used to separate the cost of service between seasons. The analysis is developed
86 using the functionalized PacifiCorp State of Utah Cost Of Service Study for the
87 12 Months Ending September 2007 presented in this case by Karl D. Anderberg

88 in Exhibit UP&L ___(KDA-3), as adjusted to reflect the stipulated revenue
 89 requirement. Exhibit UP&L___(DLT-2R) provides a description of the
 90 procedures used in above referenced analysis.

91 **Q. What does your analysis show?**

92 A. My analysis shows that there is no cost basis to increase summer tailblock rates
 93 beyond its current level and certainly not beyond the level proposed by the
 94 company. It further shows that if there is any under recovery of costs during the
 95 summer it is from those customers using less than 1000 kWh per month, not from
 96 those using more than 1000 kWh per month. This becomes clear by looking at
 97 Table 2 below.

Table 2		
Unit Costs @ Stipulated Rate Increase		
Description	Summer	Winter
<u>TOTAL COST OF SERVICE</u>		
<u>With \$3.40 Cust Charge</u>		
Customer Related COS Per Month	\$3.40	\$3.40
Demand & Energy Related COS Per KWH		
Winter all kWh		\$0.0675
Summer 0 - 400 kWh / Month	\$0.0867	
Summer 401 - 1000 kWh / Month	\$0.0913	
Summer > 1000 kWh / Month	\$0.0920	

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99 Table 2 supports at least four conclusions. First, it shows that, based on the
 100 allocation procedures in the cost of service study, the per kWh cost of service
 101 during the summer period is higher across all usage levels than the cost of service
 102 during the winter period. Second, the cost of service difference between the
 103 usage levels is quite small. I discuss the reasons for this later in my testimony.
 104 Third, the company's proposed summer tailblock price is greater than the summer
 105 period cost of service for those customers using over 1000 kWh per month.

106 Fourth, the company's proposed prices for the first two blocks is less than the
 107 summer period cost of service for customers using less than 1000 kWh per month.

108 **Q. How do your cost of service results compare to the residential rate design**
 109 **proposals from the different parties?**

110 A. Table 3 below compares my cost of service results with the Schedule 1 rate design
 111 proposals of the three parties in the case.

Table 3				
Unit Costs @ Stipulated Rate Increase				
Description	Cost of Service	Company	CCS	AARP
TOTAL COST OF SERVICE				
With \$3.40 Cust Charge				
Customer Related COS Per Month	\$3.40	\$3.40	\$0.98	\$2.50
Demand & Energy Related COS Per KWH				
Winter all kWh	\$0.0675	\$0.0739	\$0.0765	\$0.0735
Summer 0 - 400 kWh / Month	\$0.0867	\$0.0739	\$0.0765	\$0.0743
Summer 401 - 600 kWh / Month	\$0.0913	\$0.0832	\$0.0765	\$0.0863
Summer 601 - 1000 kWh / Month	\$0.0913	\$0.0832	\$0.0914	\$0.0863
Summer > 1000 kWh / Month	\$0.0920	\$0.0972	\$0.1077	\$0.1017

113 **Efficiency Argument**

114 **Q. How have you addressed the efficiency issue?**

115 A. To address the efficiency, or price signal issue, I simply replaced the generation
 116 component in the above analysis with the 2007 summer period avoided costs,
 117 adjusted for secondary losses, from the company's avoided cost filing on October
 118 6, 2006. Avoided costs represent PacifiCorp's cost of providing one additional
 119 kWh, or the costs that are avoided if that kWh is provided by an entity other than
 120 PacifiCorp. Table 4 below shows the result of that calculation.

Table 4			
2007 Summer Period Avoided Cost Price Signal			
Description	0-400 kWh	400-1000 kWh	> 1000 kWh
Non Generation Embedded COS *	\$0.0362	\$0.0372	\$0.0363
Generation @ 2007 Summer Avoided Cost **	<u>\$0.0548</u>	<u>\$0.0548</u>	<u>\$0.0548</u>
Price Signal Rate	\$0.0910	\$0.0920	\$0.0912

* Does not include any customer related costs

** Adjusted for secondary voltage losses

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What Table 4 shows is that a price signal that reflects the avoided cost rate for customers using over 1000 kWh per month is below the company's proposed tailblock rate and considerably lower than 10.8 cents per kWh tailblock rate proposed by Mr. Yankel. One needs to keep in mind that all of the costs above the 5.48 cents per kWh in the tailblock rate represent the recovery of fixed costs that will not change as a customer chooses to consume fewer or more kWh in a given month.

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Q. You have shown the avoided cost calculation for all three usage levels.

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Doesn't the avoided cost price signal only apply to the tailblock?

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A. No. As Mr. Griffith points out in his rebuttal testimony, more than half of

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PacifiCorp's residential customers have summer usage less than 1000 kWh per

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month. These customers also make energy usage decisions that impact the

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company's avoided costs. Pushing a larger portion of the rate increase into the

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tailblock, as proposed by Mr. Yankel, reduces the price signal for the majority of

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Utah residential customers.

137 **Summary**

138 **Q. Please summarize your conclusions and observations regarding the summer**
139 **period block rates?**

140 A. From my analysis I conclude that summer tailblock provides an adequate price
141 signal for large residential customers and there is no cost basis to increase the
142 tailblock rate beyond its current level and certainly not beyond the level proposed
143 by the Company. I also conclude that if there is any under recovery of costs
144 during the summer it is from those customers using less than 1000 kWh per
145 month, not from those using more than 1000 kWh per month. My conclusions
146 are supported by the following observations from my analysis:

- 147 1. The summer coincident peak load factors for large and small users are not,
148 despite Mr. Yankel's assertion, substantially different.
- 149 2. Mr. Yankel's proposal to expand the size of first block from its current 0-400
150 kWh range to 0-600 kWh range should be rejected by the Commission. The cost
151 of service evidence does not support his proposal.
- 152 3. Customers across all kWh usage groups are responsible for high summer usage
153 levels.
- 154 4. Across all usage levels the cost of service is higher during the summer period
155 than during the winter period.
- 156 5. The cost of service difference between the usage levels is quite small.
- 157 6. The company's proposed summer tailblock price is higher than cost of service
158 and the proposed prices for the first two summer blocks are below cost of service.

159 7. The company's proposed rate for customers using over 1000 kWh per month is
160 higher than the company's 2007 avoided costs.

161 8. The 10.8 cents per kWh tailblock rate proposed by Mr. Yankel greatly exceeds
162 both cost of service and avoided costs and should be rejected by the Commission.

163 **Q. Does this conclude your rebuttal testimony?**

164 **A. Yes.**