

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application)	Docket No. 04-035-42
Of PacifiCorp for Approval of)	PRE-FILED DIRECT TESTIMONY OF
Its Proposed Electric Service)	ANTHONY J. YANKEL
Schedules and Electric)	FOR THE COMMITTEE OF
Service Regulations)	CONSUMER SERVICES

January 7, 2005

1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**
3 **ADDRESS.**

4 A. I am Anthony J. Yankel. I am President of Yankel and Associates, Inc.
5 My address is 29814 Lake Road, Bay Village, Ohio, 44140.

6 **Q. ARE YOU THE SAME ANTHONY J. YANKEL THAT FILED DIRECT**
7 **TESTIMONY IN THE REVENUE REQUIREMENT PORTION OF THIS**
8 **CASE?**

9 A. Yes, I am.

10 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING REGRDING COST OF**
11 **SERVICE AND RATE DESIGN?**

12 A. I am testifying on behalf of the Utah Committee of Consumer Services
13 (Committee or CCS).

14 **Q. PLEASE SUMMARIZE THE KEY ISSUES AND CONCERNS**
15 **ADDRESSED IN YOUR TESTIMONY.**

16 A. While the Company's cost-of-service study shows that the returns for
17 both the residential (Rate Schedule 1) and the small commercial (Rate
18 Schedule 23) classes are well over the jurisdictional average rate of
19 return, and the return for the irrigation class (Rate Schedule 10) is well
20 below the jurisdictional average return, I recommend the Company's
21 rate spread proposal be applied to any change in the level of Utah
22 revenue requirement ordered by the Commission. Specifically, the
23 irrigation class should receive the average jurisdictional percentage

1 rate change. The Company's cost-of-service shows that the lighting
2 classes (Rate Schedules 7, 11, 12, and 13) have relatively low returns
3 when compared to other customer classes. Thus, these lighting
4 classes should receive a rate change that moves these customers
5 closer to cost-of-service. The remaining change in revenue
6 requirement should be spread across all other rate classes (Rate
7 Schedules 1, 6, 9, 23, etc.) on an equal percentage basis.

8 My testimony also addresses a problem with the billing
9 determinants used by the Company to develop the rate design for the
10 residential rate classes. Unlike past cases where billing determinants
11 were simply the result of normalizing actual data, the Company is
12 using a forecasted test year in this case. While I accept the
13 Company's forecasted results for the number of residential bills and
14 the overall load level, I disagree with how the Company spread kWh
15 usage among the rate blocks. Contrary to the manner in which growth
16 in residential usage is taking place (partly based upon the addition of
17 new customers and partly due to increases in summer air conditioning
18 load), the Company proposes to spread growth in residential usage
19 evenly over all months and all rate blocks.

20 I propose an adjustment to break out this growth: first by
21 customer additions; second by season of the year; and finally by rate
22 block. Because there are different rates charged for each usage block
23 during different times of the year, correcting the Company's billing

1 determinants results in a change in the revenue collected from the
2 residential class. Using the Company's proposed rate design, I
3 demonstrate that use of PacifiCorp's inappropriate billing determinants
4 would result in an over-collection of the residential revenue
5 requirement by more than \$5 million.

6 **COMMITTEE'S RATE SPREAD PROPOSAL**

7 **Q. PLEASE PROVIDE AN OVERVIEW OF THE COMMITTEE'S RATE**
8 **SPREAD PROPOSAL.**

9 A. Without knowing exactly what change in the Company's revenue
10 requirement will be ordered by the Commission, it is difficult to give a
11 precise proposal of how that revenue change should be allocated
12 among the various customer classes. With that caveat, the Committee
13 recommends that the following rate spread proposal be adopted by the
14 Commission:

15 (1) The Irrigation class should receive a rate change consistent
16 with the average percentage change in jurisdictional revenue
17 requirement.

18 (2) The lighting rate schedules (Rate Schedules 7, 11, 12, and
19 13) have very low rates of return. If a general rate increase is
20 authorized, these rate schedules should receive rate increases that are
21 approximately 1.5 times the jurisdictional average increase. If a
22 general rate decrease is authorized, the rates for these schedules
23 should remain unchanged.

1 (3) All other customer classes (Rate Schedules 1, 6, 9, 23, etc.)
2 should receive an equal percentage rate change associated with the
3 remaining revenue requirement.

4 **Q. THE COMPANY'S COST-OF-SERVICE STUDY SHOWS THAT THE**
5 **IRRIGATION CLASS HAS A LOW RATE OF RETURN. WHY ARE**
6 **YOU PROPOSING THAT THE IRRIGATION CLASS RECEIVE THE**
7 **JURISDICTIONAL AVERAGE RATE CHANGE?**

8 A. Several years ago a load research task force (chaired by the
9 Committee) was convened to review --among other things-- the
10 irrigation class' rate of return and how this was impacted by the
11 Company's load research data. The task force concluded that load
12 research data for the irrigators were severely out of date and
13 inadequate¹. It also concluded that it would be very expensive to
14 develop good load research data for the irrigation class. The members
15 of the task force agreed that because the irrigation class was such a
16 small percentage of the overall jurisdictional revenue requirement and
17 because it would be too expensive to get adequate load research data
18 for this class, that the irrigation class should get the jurisdictional
19 average rate change until such time as new load research data were
20 gathered and analyzed.

¹ The Response to CCS Request 7.6 states in part: Irrigation Class load estimates are based solely on historical load estimates and are not derived from active load research studies in the State of Utah. It was the consensus of the Load Research Working Group (Chaired by the Division of Public Utilities) that the system average cost will be used as a basis of cost allocation for the Utah Irrigation Class.

1 Several years have passed and the Company has not collected
2 any new load research data for the irrigation class. The task force
3 recognized that the rate of returns listed for irrigators were unreliable
4 because of the age and poor quality of the load research data being
5 utilized. The data are even less reliable as they are older still. Thus, in
6 keeping with the recommendations of the task force, the calculated
7 rate of return for the irrigation class should be ignored and the irrigation
8 class should receive the jurisdictional average rate change.

9 **RESIDENTIAL BILLING DETERMINANTS**

10 **Q. WHAT ARE BILLING DETERMINANTS AND HOW ARE THEY**
11 **USED?**

12 A. Billing determinants are simply the total units being billed (customer
13 bills, kWh, kW), which are multiplied by the applicable rates to
14 determine the revenue collected. For example, one billing determinant
15 is the number of Residential Schedule 1 bills expected to be issued in
16 the test year. According to Company Exhibit (WRG-5), Page 1, Line
17 17, there are 7,538,992 bills expected to be sent to Schedule 1
18 customers in the test year that will be subject to whatever customer
19 charge the Commission authorizes. Likewise, according to line 29 of
20 that same exhibit, Schedule 1 customers are projected to use
21 6,003,983,571 kWh during the test year for which rates (and rate
22 designs) must be developed so that the Company can collect the
23 revenue requirement assigned to Schedule 1 customers.

1 **Q. IN VERY BROAD TERMS, HOW DID THE COMPANY DEVELOP**
2 **THE RESIDENTIAL BILLING DETERMINANTS IT USED IN THIS**
3 **CASE?**

4 A. PacifiCorp witness Griffith's Exhibit (WRG-5) shows that the Company
5 used the adjusted billing determinants for the historical period April
6 2003 through March 2004 as a basis for the forecasted billing
7 determinants it developed for the April 2005 through March 2006 test
8 year. The Company developed the number of residential bills for the
9 test year by increasing the base period number of bills by 7.967%.
10 The energy consumption for the test year was developed by increasing
11 the base period kWh consumption by 13.531% for each billing period
12 and rate block.

13 Column "A" of my CCS Exhibit 8.9 lists the adjusted billing
14 determinants for Residential Schedule 1 for the base period of April
15 2003 through March 2004. Column "B" lists the Company's forecasted
16 billing determinants for Residential Schedule 1 for the test year April
17 2005 through March 2006. Column "C" shows the percentage
18 increase with the number of bills increasing by 7.967% and the energy
19 in each of the billing blocks increasing by 13.531%.

20 **Q. IS THERE ANYTHING INAPPROPRIATE ABOUT THE MANNER IN**
21 **WHICH THE COMPANY FORECASTED ITS BILLING**
22 **DETERMINANTS FOR THE RESIDENTIAL CLASS?**

1 A. Yes. The Company has provided a great deal of evidence in this case
2 to demonstrate that the spread of the increase in energy consumption
3 is anything but even across all rate blocks. The residential load is
4 growing due to increase in the number of customers, but that load
5 growth is not occurring evenly throughout the year or across all usage
6 profiles. Specifically, a significant portion of residential load growth is
7 due to the increasing use of Central Air Conditioners (CACs) in the
8 summer months. Thus, residential load growth will tend to be more
9 rapid during the summer months and have a greater impact on the
10 tailblock segment of the residential rate structure.

11 **Q. WHAT EVIDENCE HAS THE COMPANY PROVIDED IN THIS CASE**
12 **THAT CACs ARE A KEY DRIVER UNDERLYING THE INCREASE IN**
13 **THE RESIDENTIAL LOAD?**

14 A. Growth in the use of CACs is a generally recognized fact. Company
15 witness Davis discusses² how CACs impact the growth in residential
16 load:

17 Additionally, the Company is seeing more homes that have
18 Central Air Conditioners (CAC). Customers across our Utah
19 service territory are seeking more comfortable living conditions
20 and seem to be willing to pay for them. CAC are becoming the
21 norm for space conditioning on hot summer days. More new
22 homes require CAC as a selling point. Customers with
23 Evaporative Air Conditioners (EAC) are changing their
24 equipment to keep up with the norm.
25

² Page 15 line 18 through page 16 line 1 of the direct testimony of Reed C. Davis

1 I fully agree with Mr. Davis on this point—CACs are moving from a
2 luxury item to the norm. Mr. Davis takes this observation one step
3 further when he states³:

4 Exhibit UP&L__(RCD-7) shows the residential customers'
5 average use aggregated for the winter months (October through
6 May) and summer months (June through September) from 1992
7 to 2003. This shows that the use during the four summer
8 months is growing much faster than the remaining eight months
9 of the year.
10

11 **Q. HOW DO YOU PROPOSE TO CORRECT THE BILLING**
12 **DETERMINANTS USED BY THE COMPANY IN MR. GRIFFITH'S**
13 **EXHIBIT (WRG-5) PAGE 1?**

14 A. As pointed out above, there are primarily two reasons for the increase
15 in the residential load. The first reason is simply an increase in the
16 number of residential customers. The second reason for the increase
17 stems from higher energy usage per customer, which is chiefly driven
18 by the transition to CACs.

19 In making my adjustment I accept the Company's proposal to
20 evenly spread the increase in residential load resulting from the
21 increase in the number of residential customers. Given the Company
22 forecasts that the number of its Residential Rate Schedule 1
23 customers will increase by 7.967% over the base period, I assign an
24 energy growth of 7.967% to all Residential Schedule 1 rate blocks.
25 Column "D" of CCS Exhibit 8.9 incorporates this assumption that
26 7.967% energy growth was realized in each of the Residential

³ Page 16 line 3 through line 7 of the direct testimony of Reed C. Davis

1 Schedule 1 rate blocks. This assumption accounts for 422 million kWh
2 of the 716 million kWh of growth the Company forecasts for Residential
3 Schedule 1.

4 The remaining 294 million kWhs of growth is associated with
5 increased usage per customer. It is obvious that CACs are the main
6 driver behind the increase in usage per customer.

7 In response to DPU Request 9.40, the Company indicated that it
8 used a simple regression for forecasting average usage per residential
9 customer for the next two years. Each of the resulting forecast
10 equations for the summer and winter usage per customer contained a
11 constant and a "time" variable. The coefficient for the winter "time"
12 variable was 17.384 and the coefficient for the summer "time" variable
13 was 90.021. Another way of looking at these two coefficients is that
14 the regression equations predicted approximately 84%⁴ of the growth
15 in usage per customer would occur during the summer months.

16 Therefore, I applied 84% of this remaining 294 million kWh of growth to
17 the summer months and 16% to the winter months.

18 **Q. HOW DID YOU DIVIDE THE SUMMER AND WINTER INCREASE IN**
19 **USAGE AMONG THE VARIOUS RESIDENTIAL SCHEDULE 1 RATE**
20 **BLOCKS?**

21 A. Where to put the increase in usage per residential customer is simple
22 for the winter months as there is only one rate block. Thus, all of the

⁴ $90.021 / (17.384 + 90.021) = 83.8\%$

1 increase in usage during the winter months is applied to this one rate
2 block.

3 The decision of where to put the increase in usage per customer
4 for the summer period is also relatively simple. Three rate blocks are
5 in effect during the summer period: the first 400 kWh of usage; the
6 next 600 kWh of usage; and all additional usage. Given we know the
7 “increase in usage per customer” is largely driven by the transition to
8 CACs, the logical choice is to assign this increase in usage per
9 customer to the tailblock segment of the residential rate structure.

10 **Q. IS ASSIGNING THIS INCREASE IN CUSTOMER USAGE TO THE**
11 **RESIDENTIAL TAILBLOCK RATE CONSISTANT WITH OTHER**
12 **ADJUSTMENTS MADE BY THE COMPANY IN THIS CASE?**

13 A. Yes. Company witness Griffith’s Exhibit (WRG-5) page 1 lines 22 and
14 23 demonstrate that when the Company made normalizing
15 adjustments to the base period usage, those adjustments were made
16 at the tailblock rates for both the summer and winter periods (with the
17 winter rate being a single, flat rate).

18 **Q. WHAT IS THE IMPACT OF SPREADING THE GROWTH IN USAGE**
19 **PER CUSTOMER FOR RESIDENTIAL SCHEDULE 1 USAGE**
20 **ALONG THE LINES OF EXPECTED GROWTH, AS OPPOSED TO**
21 **SPREADING THIS GROWTH EVENLY THROUGHOUT THE YEAR**
22 **AND ACROSS ALL RATE BLOCKS?**

1 A. The impact of spreading the growth per customer portion of the
2 Schedule 1 growth is shown in the remainder of CCS Exhibit 8.9.
3 Column "E" indicates the relative proportions of my proposed summer
4 (84%)/winter (16%) split. Column "F" takes the usage per customer
5 increase (294 million kWh) and spreads it between these two time
6 periods. Column "G" reflects the total energy by rate block (i.e., sum of
7 customer growth kWh and usage per customer kWh growth).

8 Column "H" lists the Company's proposed block rates. Column
9 "I" lists the Company's proposed revenue based upon its proposed
10 block rates and billing determinants. Column "J" shows the
11 Committee's proposed revenue based upon the Company's proposed
12 rates and the Committee's proposed billing determinants for
13 Residential Schedule 1.

14 As indicated on CCS Exhibit 8.9, the difference between the
15 Company's and the Committee's proposed billing determinants is just
16 over \$5 million. The \$5 million amounts to a windfall for the Company
17 if the correct billing determinants are not used for the future test year.
18 In order to avoid this windfall, I recommend that when setting rates in
19 this case the Commission use the more appropriate billing
20 determinants that are shown in Column (J) of CCS Exhibit 8.9.

21 **Q. HAVE YOU MADE THE SAME BILLING DETERMINANTS**
22 **ADJUSTMENT FOR RESIDENTIAL RATE SCHEDULE 3?**

1 A. Yes. My billing determinants adjustment for Residential Rate
2 Schedule 3 is found on CCS Exhibit 8-10. This adjustment lowers the
3 revenue collected by the Company from customers on Residential
4 Rate Schedule 3 by \$74,054.

5 **COMMERCIAL BILLING DETERMINANTS**

6 **Q. THE COMPANY'S RESPONSE TO DPU REQUEST 9.40 INDICATES**
7 **THAT THE COMPANY HAD DONE A REGRESSION FORECAST**
8 **FOR THE SPLIT BETWEEN SUMMER/WINTER USAGE FOR**
9 **COMMERCIAL CUSTOMERS. DID YOU USE THIS INFORMATION**
10 **TO MAKE A SIMILAR ADJUSTMENT TO THE COMMERCIAL**
11 **CLASS?**

12 A. No, the commercial forecast of the summer/winter split in Response to
13 DPU 9.40 places 34.38% of the growth in the summer months. Given
14 that the 4 summer months represent 33.42%⁵ of the days in a year, the
15 forecast seems to spread this growth evenly throughout the year.
16 Thus, the Company's even spreading of the growth between all billing
17 determinants is more appropriate in the case of commercial customers.

18 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY ON COST-**
19 **OF-SERVICE AND RATE DESIGN ISSUES?**

20 A. Yes.

⁵ There are 122 days between June and September ($122 / 365 = 0.3342$).