

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

**In the Matter of the Application of)
PACIFICORP for an Increase in its Rates and)
Charges.)**

Docket No. 01-035-01

DIRECT TESTIMONY OF

DR. CHARLES E. JOHNSON

ON BEHALF OF

**SALT LAKE COMMUNITY ACTION PROGRAM
CROSSROADS URBAN CENTER
AND
UTAH LEGISLATIVE WATCH**

JUNE 15, 2001

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1 **I. QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A. My name is Charles E. Johnson. My business address is 1338 Foothill Blvd.,
4 Suite 261, Salt Lake City, Utah.

5 Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND.

6 A I hold a combined B.S. Degree in Chemistry and Physics from the University of
7 Utah, an M.S. in Mathematics from the University of Wisconsin and a Ph.D. in
8 Mathematics from the Ohio State University.

9 Q. HOW HAVE YOU BEEN EMPLOYED SINCE RECEIVING YOUR
10 DEGREES?

11 A. After completing my graduate education, I was an Instructor of Mathematics at
12 Kansas State University in Manhattan, and an Assistant Professor of Mathematics at

1 Wichita State University. In 1974, I left the academic environment and was employed by
2 Control Data Corporation as a manager responsible for mathematical modeling. In 1977,
3 I joined an economic consulting firm addressing the regulation of public utilities. Since
4 that time, I have worked on utility-related issues, having founded a firm consulting in
5 utility matters and having been a principal in another firm. I am now an independent
6 utility consultant.

7 Q. HAVE YOU TESTIFIED PREVIOUSLY IN REGULATORY PROCEEDINGS?

8 A. Yes. I have testified as an expert witness before regulatory commissions in 20
9 jurisdictions, including before this Commission. Proceedings have involved the
10 regulation of electric and gas utilities, telephone companies and insurance carriers. I have
11 testified frequently in the areas of cost of service studies and rate design, and have also
12 addressed depreciation and financial issues.

13 Q. ON WHOSE BEHALF ARE YOU PROVIDING TESTIMONY IN THIS
14 PROCEEDING?

15 A. I am testifying in Docket No. 01-035-01 before the Utah Public Service
16 Commission (PSC or The Commission) on behalf of the Salt Lake Community Action
17 Program, Crossroads Urban Center and Utah Legislative Watch, referred to as Utah

1 Ratepayers Alliance. I have reviewed the filing and other materials of PacifiCorp (UP&L
2 or the Company).

3 Q. WOULD YOU PLEASE DESCRIBE SOME OF YOUR PROFESSIONAL
4 ACTIVITIES?

5 A. I have provided assistance to numerous entities involved in business and
6 economic rate regulation. Much of this work has been in public utility regulation on
7 behalf of state regulatory agencies or other public authorities, such as state attorneys
8 general and federal agencies. I developed a series of seminars on cost of service and rate
9 design and have provided training on these issues to Commission Staff in Kansas,
10 Minnesota, Maryland and New Hampshire. These seminars covered both embedded and
11 marginal cost-of-service studies and development of various types of rate forms. I
12 developed a Utility Planning and Management Manual for use by federal government
13 facilities for the planning, acquisition and management of utility services. I have also
14 provided assistance to independent consumer groups and have assisted a number of
15 industrial enterprises and government facilities in examining their operations in light of
16 their tariff options and the potential for altering usage patterns or installing cogenerating
17 facilities. Recent work has included the determination of appropriate depreciation rates
18 for regulated utilities. I have also developed and presented a seminar on capital recovery
19 to publicly-owned utilities in the Caribbean.

1 I am a member of the Society for Depreciation Professionals and have met the
2 requirements of that organization to be a Certified Depreciation Professional, The
3 Institute of Electrical and Electronics Engineers, the Washington Operations Research
4 and Management Sciences Council, the Washington area affiliate of the Operations
5 Research Society of America and the Institute for Management Sciences.

1 **II. PURPOSE AND SUMMARY**

2 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

3 A. I will address several topics in my testimony.

4 First, I will show that the costs of serving low-income customers is less than the
5 cost of serving other residential customers. For that reason, I will ask that the
6 Commission issue a finding that low-cost customers have a lower cost to serve than other
7 residential customers and that a lower rate for low-income customers is cost-justifiable.

8 Second, I will address an issue in the Commission’s Order in Docket No. 99-035-
9 10, in which the Commission directed PacifiCorp not to collect nor spend more than
10 \$1.85 million for the HELP tariff. The Company designed the tariff to collect the \$1.85
11 million based on the test year number of customers. If there is growth in Utah, the \$1.85
12 million would be collected in the period just short of a year. This means that PacifiCorp
13 must adjust the recovery charge days before the end of the year. I ask that the
14 Commission change its directive and not constrain collection and spending to \$1.85
15 million.

16 Third, I support the Company’s concept of introducing an inverted residential rate
17 to serve as a mechanism to better price energy at its marginal cost. However, I propose

1 the use of three inverted blocks, rather than two. This provides a better incentive to
2 reduce consumption at several levels of usage, particularly at high usage levels. In
3 conjunction with this additional incentive for large users of electricity, I propose
4 shortening the peak period in the Company's residential time-of-day rate to the highest-
5 cost times. This would make the time-of-day option more appropriate for the current
6 costs faced by the Company and might make it more appealing to large residential
7 customers.

8 Fourth, I propose that most Schedule 6 and Schedule 9 customers that currently
9 have metering capable of providing time-of-day metering be billed on time of day
10 charges. These rates would provide a financial incentive for large users of electricity to
11 reduce their loads at peak cost periods. As was the case with the residential time-of-day
12 rate, the peak periods for the existing time-of-day options extend too long, from 7 a.m. to
13 11 p.m. This period should also be reduced to the highest-cost hours and the rate should
14 be mandatory for the largest customers.

15 Lastly, I propose that the special contracts entered into between PacifiCorp and
16 any customer include provisions that allow for contingencies such as the recent price
17 changes. In the past, this has been a one-sided arrangement, with customers being
18 allowed to renegotiate the contract if circumstances led to higher costs under the contract

1 than the tariff rates, but with special contract customers insisting that the Commission
2 had no authority to increase rates if costs increased for everyone else.

1 **III. COST OF SERVING LOW-INCOME CUSTOMERS**

2 Q. DO LOW INCOME CUSTOMERS COST AS MUCH TO SERVE AS OTHER
3 RESIDENTIAL CUSTOMERS?

4 A. No. There are several steps in reasoning that low-income customers cost less to
5 serve than other residential customers. I will discuss each of the following steps in
6 greater detail below.

- 7 1. Low-income customers consume less electricity than other residential customers.
8 2. Low-income customers contribute less to the peak demand per customer than
9 other residential customers.
10 3. Low-income customers even contribute less to the peak demand per kWh than
11 other residential customers, i.e., they have a higher load factor.

12 Q. DO LOW-INCOME RESIDENTIAL CUSTOMERS CONSUME AS MUCH
13 ELECTRICITY AS OTHER RESIDENTIAL CUSTOMERS?

14 A. No. The electric consumption of low-income residential customers is less in
15 every month than the electric consumption of other residential customers. On average,
16 low-income residential customers' consumption is about 11 percent less than other
17 residential customers and in the peak summer month of August, their consumption is 25
18 percent less. Page 1 of Exhibit___(CEJ-1) contains a table comparing the consumption

1 of the two groups and page 2 of that exhibit is a graph comparing the consumption. This
2 is based on PacifiCorp's response to Utah Ratepayers Alliance question number 6 of its
3 first data request, in which nearly 10,000 low-income residential customer loads were
4 compared with all other residential customer loads (approximately 570,000 customers).
5 These 10,000 customers were identified by PacifiCorp as recipients of some form of
6 energy assistance, primarily through the HEAT program.

7 Q. ARE THESE 10,000 CUSTOMERS ALL OF THE LOW-INCOME
8 CUSTOMERS IN PACIFICORP'S SERVICE TERRITORY?

9 A. No. We estimated that approximately 20,000 customers would sign up for the
10 HELP low-income lifeline rate and nearly that many has signed up. At the time we
11 proposed the HELP program, we estimated that around 60,000 customers in Utah were
12 eligible for the HEAT program, which is available to households at or below 125 percent
13 of the federal poverty level. Not all of these households are in Utah Power's service
14 territory and not all households that are eligible actually apply for the HEAT program.
15 Lastly, some households that receive HEAT assistance apply the full benefit to their
16 natural gas bill and wouldn't appear on the PacifiCorp list.

17 Thus, the comparison of the 10,000 low-income customers with the 570,000 other
18 residential customers does not separate PacifiCorp's residential customers into groups of

1 low-income and other, because the 570,000 includes 40,000 to 50,000 low-income
2 customers. However, we do know that the 10,000 customers identified are low-income
3 and that their usage is lower than the remaining group of customers. It seems reasonable
4 to assume that their electric consumption is representative of all low-income customers,
5 so that the low-income customers among the 570,000 would have lower usage than the
6 other households. This would bias the comparison so that the difference between the two
7 PacifiCorp groups would be less than the actual difference between the group of low-
8 income customers and the group of actual non-low-income customers. This means that
9 the 11 percent difference I calculated understates the actual difference between the usage
10 of low-income customers and non-low-income customers.

11 Q DO LOW-INCOME CUSTOMERS CONTRIBUTE LESS TO THE
12 PACIFICORP PEAK THAN NON-LOW-INCOME CUSTOMERS?

13 A. Yes. If one assumes that the load shape of low-income customers is the same as
14 that of other customers, because the kWh used by low-income customers is 11 percent
15 less, the demand would also be less per customer by that same 11 percent. But there is
16 another factor that causes the kW of demand per customer to be even less than the 11
17 percent. The allocation of generation costs in the PacifiCorp cost-of-service study is
18 based on 75 percent demand and 25 percent energy and the demands used are the average
19 of the 12 monthly peak demands. The monthly peak demands that occur in the summer

1 contribute significantly more to the total than do the monthly peak demands in other
2 months.

3 Low-income customers contribute less to the peak summer consumption than they
4 do to other months. For example, the August consumption is 116 percent above the
5 average monthly consumption for low-income customers, while the August consumption
6 is 138 percent above the average monthly consumption for other customers. When the
7 month-by-month calculation of the 12 monthly peak demands is performed assuming the
8 load shapes are the same for the low-income customers as for the other customers on a
9 month-by-month basis, the calculation of the 12 monthly peak demands is less than
10 simply a reduction in demand equal to the 11 percent reduction in energy. The total 12
11 monthly peak demands is about 0.7 percent less for low-income customers. Admittedly,
12 the percentage reduction is small, but when used to allocate nearly \$2 billion in
13 production plant, a small percentage change in the allocation can amount to a substantial
14 amount of dollars.

15 Q. WHAT IS THE DIFFERENCE BETWEEN THE KW OF PEAK DEMAND PER
16 KWH OF ENERGY USED BY LOW-INCOME CUSTOMERS COMPARED
17 TO OTHER RESIDENTIAL CUSTOMERS?

1 A. The low-income customers use about 527 kWh per kW per year compared to 524
2 kWh per kW for other residential customers. Again, while this difference is a small
3 percentage, it can have a large dollar impact on the allocation of costs. If the entire
4 residential class' consumption were like the low-income customers', the residential class
5 would be allocated 11 percent less costs based on energy and 11.7 percent less costs
6 based on the 12 monthly peak demands. This is particularly significant in these times of
7 extraordinarily high purchased power costs. Low-income customers do not impose the
8 high loads and high costs on the system that other residential customers do.

9 Q. ARE THERE ANY OTHER REASONS THAT LOW-INCOME CUSTOMERS
10 IMPOSE LOWER COSTS OF SERVICE THAN OTHER RESIDENTIAL
11 CUSTOMERS DO?

12 A. Yes. As noted above, the monthly consumption of low-income customers
13 averages 11 percent below other residential customers for the year, but is 25 percent
14 below the residential consumption in the peak summer month. For the four month period
15 June-September, the low-income usage is 21 percent below other residential usage. Other
16 than the extraordinary prices in December that rose above all expectations, prices in these
17 summer months greatly exceeded the prices in other months. It doesn't matter whether
18 PacifiCorp is buying or selling power, the impact on the power supply costs is the same.
19 If PacifiCorp is buying power, a lower level of consumption saves the cost of buying that

1 high-priced power. If PacifiCorp is selling power, a lower level of consumption provides
2 PacifiCorp with additional power to sell, benefitting all other customers. Thus, the
3 greater difference in consumption between low-income customers and other residential
4 customers during these high-cost months results in lower costs of serving low-income
5 customers than other residential customers.

6 Q WHAT ACTION DO YOU RECOMMEND THAT THE COMMISSION TAKE
7 BASED ON THIS INFORMATION?

8 A. I recommend that the Commission make a finding in its Order that the cost of
9 serving low-income customers is lower than the cost of serving other residential
10 customers.

11 Q. HAVE YOU QUANTIFIED THIS DIFFERENCE IN COST?

12 A. No. I have not quantified with any precision the difference in cost of serving low-
13 income customers versus the cost of serving other residential customers. An
14 approximation could be obtained by performing a class cost-of-service study with low-
15 income customers as a separate class. I have not done such a study.

1 **IV. THE \$1.85 MILLION CAP ON COLLECTING AND SPENDING**
2 **ON THE HELP PROGRAM**

3 Q. PLEASE EXPLAIN THE \$1.85 MILLION CAP ON COLLECTING AND
4 SPENDING ON THE HELP PROGRAM?

5 A. In its Order in Docket No. 99-035-10, in which the lifeline rate for low-income
6 customers was approved, the Commission directed the Company to neither collect nor
7 spend more than \$1.85 million dollars per year for the program. The surcharge that was
8 implemented was designed to recover \$1.85 million, based on the test year number of
9 customers. If we have seen growth in the number of customers, the surcharge would
10 recover slightly more than the \$1.85 million if it were left in place for the full year. There
11 are several ways that the Company could avoid collecting more than the ceiling. For
12 example, the Company could project when the ceiling will be met, and cease collecting
13 the surcharge for those few days of billings in the year to avoid violating the Commission
14 Order. As we near the end of the year, it is likely that PacifiCorp will be approaching that
15 limit.

16 There are several objections to imposition of the cap and little benefit to its
17 imposition. First, due to a lag in customers being signed up for the lifeline rate, the
18 expected 20,000 customers were not enrolled at the beginning of the program. Thus more

1 was collected in the early months than was spent. This surplus funding may amount to
2 more than a half million dollars. If the collection and spending are constrained to be a
3 maximum of \$1.85 million each, this surplus can never be spent. Next, capping the
4 collection and spending requires exact predictions on numbers of recipients and of paying
5 customers and that some action be taken at precisely the right time. The means of
6 imposing the caps was not specified by the Commission, so the Company would
7 presumably be able to take whatever action it felt necessary to comply. The action it
8 might take to accomplish the caps could be objectionable to the Commission or to parties
9 to the proceeding.

10 If there is growth in the number of customers in Utah, the collection of funding
11 will exceed the cap set by the Commission before the end of the year and will necessitate
12 the Company's ceasing to collect the surcharge for some days at the end of the year. The
13 problems are that it will lead to confusion on the part of those customers billed at the end
14 of the year when the surcharge disappears and reappears the following month. The
15 customers on billing cycles at the end of the year would always be the same ones that
16 would pay the surcharge for 11 months, bringing into question the fairness of the
17 surcharge. Finally, it is an additional burden on the Company that is truly unnecessary.

18 Q. WHAT ACTION DO YOU PROPOSE THE COMMISSION TAKE?

1 A. I ask that the Commission remove the \$1.85 million cap on collecting and
2 spending for the lifeline program and replace the cap with the direction that the
3 surcharges be designed to collect \$1.85 million on a test year basis and that the Company
4 not spend more than has been collected. It would also be necessary for the Company to
5 notify the parties if the fund were being depleted and an adjustment to the surcharge or
6 the benefit were necessary.

1 **V. RESIDENTIAL RATES**

2 Q. DO YOU SUPPORT THE COMPANY’S PROPOSAL TO INITIATE AN
3 INVERTED BLOCK RATE FOR THE RESIDENTIAL CLASS?

4 A. Yes, but I propose the use of an inverted block rate with three blocks rather than
5 the two proposed by PacifiCorp. Blocked rates, either declining or inverted, are
6 appropriate under certain circumstances.

7 Q. WHY IS AN INVERTED RATE FOR RESIDENTIAL CUSTOMERS
8 APPROPRIATE AT THIS TIME?

9 A. At the current time, the electric power industry is an increasing cost industry. It is
10 generally accepted that the industry was a declining cost industry at times in the past, but
11 the costs of providing additional units of output are currently substantially greater than
12 the average costs of providing electricity by PacifiCorp’s existing generating plants. With
13 an inverted block rate, customers that choose to use more electricity will pay more for
14 those additional kWh than the average price. Customers can also reduce the cost of their
15 electricity by reducing the usage in the higher priced blocks. The inverted blocks thus
16 accomplish two goals -- 1) they encourage conservation by the residential customers and

1 2) they price the additional usage closer to the cost of producing that additional
2 electricity.

3 Q. WHY IS A RATE WITH THREE STEPS MORE APPROPRIATE THAN THE
4 TWO-STEP RATE PROPOSED BY THE COMPANY?

5 A. The two-step inverted block rate designed by the Company has its breakpoint at
6 400 kWh per month. This is substantially below the average usage of residential
7 customers. By setting the first 400 kWh at a lower price than the remaining kWh, this
8 rate enables the Company to set the price for the remaining kWh at a higher level,
9 reflecting the higher current price of electricity and to some extent, satisfying the two
10 goals mentioned above. It should be noted that this same reasoning justifies keeping the
11 residential customer charge at its current low rate.

12 The problem with the rate proposed by the Company is twofold. First, the
13 difference in the price between the two blocks is not great enough and second, the break
14 in the blocks is set at too low a level. The Company's proposed price difference between
15 the two blocks is less than a penny, only \$0.007837 per kWh. This is only about a 10
16 percent difference in price and will not have a sufficiently large effect on customer
17 behavior.

1 Customers consuming larger quantities of electricity see little difference in their
2 charges over what would be produced using a simple flat rate. For example, a residential
3 customer consuming 5,000 kWh per month would receive only a 24 percent increase in
4 costs, compared to the average residential increase of over 18 percent. If this difference
5 were greater, these customers would pay something closer to the marginal cost of their
6 service and would therefore conserve more. A second step at a higher level of
7 consumption would enable the Commission to set the price for these higher consumption
8 levels to reflect the increased cost of the additional electricity. I propose that a second
9 step be set at 1500 kWh.

10 Q. AT WHAT PRICES DO YOU PROPOSE THE STEPS BE SET?

11 A. I propose that the middle block (e.g., from 400 to 1500 kWh) be set at the average
12 cost of residential electricity. I have calculated this to be \$0.07285 under the Company's
13 proposed class revenue targets. I then set the price for the first 400 kWh to be at a level
14 that would produce an increase about half as large as average for low levels of
15 consumption and about 50 percent higher for higher levels of consumption. This
16 procedure resulted in prices of \$0.068 per kWh for the first 400 kWh, \$0.07285 per kWh
17 for the next 1100 kWh, and \$0.08437 per kWh for any additional kWh. These values will
18 have to be recalculated to agree with the Commission's ordered revenue increase for the
19 residential class. I have prepared a billing comparison between the Company's proposed

1 rate and this rate and include that comparison as page 1 of Exhibit ___(CEJ-2). Page 2 of
2 Exhibit ___(CEJ-2) contains a comparison of the cost of the three-block inverted rate at
3 the Company-proposed rate level with current rates. As can be seen, the increase for
4 customers using 250 kWh per month will receive a 10.3 percent increase and customers
5 using 4,000 kWh per month will receive a 29.7 percent increase.

6 It should be noted that the lowest-consuming residential customers would see a
7 smaller increase than proposed by the Company and the largest-consuming customers
8 would see a larger increase than proposed by the Company. The breakeven point between
9 the two rate proposal is for customers consuming 491 kWh per month. Over 70 percent
10 of the residential customers use less than 10,000 kWh per year so fewer than 30 percent
11 of the customers would see an increase of more than about two percent greater than under
12 the Company's proposal. At the extreme, only 3.5 percent of the residential customers
13 use more than 20,000 kWh per year (1,667 kWh per month) and customers at this level of
14 consumption would face an increase of about 5.7 percent more than under the PacifiCorp
15 proposed rate.

16 Q. IF THE LARGEST RESIDENTIAL USERS FACE THE HIGHEST INCREASES
17 UNDER YOUR PROPOSAL, WHAT IS THEIR ALTERNATIVE?

1 A. I propose that PacifiCorp offer a residential time-of-day rate that is appropriate for
2 the cost the Company faces today. This means that the peak period should reflect the
3 period of highest cost in this environment. This period is shorter than the current peak
4 period of 8 a.m. to 10 p.m. on non-holiday weekdays, which has discouraged customers
5 from taking electricity under this rate schedule. There are currently only seven customers
6 taking time-of-day service. Reducing the length of the peak period will make this a more
7 attractive rate for residential customers with large consumption.

8 Q. WHAT IS THE PERIOD OF HIGHEST COST FOR PACIFICORP?

9 A. The period of highest cost for purchased power varied during the months of the
10 year, with the months of May, June, July and August having the highest costs paid by
11 PacifiCorp. These highest cost hours were from 2 p.m. to 7 p.m. These hours correspond
12 closely to the 2 p.m. to 8 p.m. period that PacifiCorp asked for voluntary conservation
13 from customers.

14 Q. WHAT PERIOD SHOULD BE THE PEAK PERIOD FOR PRICING?

15 A. The Company advertised during the past months asking customers to voluntarily
16 reduce consumption during the period from 4 p.m. to 8 p.m. In my examination of the
17 100 highest priced transactions in each month during the past year, it appears to me that

1 the peak pricing period should start an hour or two earlier, either at 2 p.m. or 3 p.m. and
2 perhaps end at 7 p.m. The period should be short enough to attract customers who can
3 change sufficient use to the off-peak period to have an impact on the Company's loads
4 during the peak period, while at the same time not resulting in shifting the peak loads to
5 just outside the peak period. The only instance in which I am aware of such an
6 occurrence was of an extremely brief peak period, with a duration of only two or three
7 hours. A period of four to six hours should be sufficient to avoid this problem.

8 Q. SHOULD THE PEAK PERIOD LAST THROUGHOUT THE YEAR?

9 A. Yes. Although the highest-priced months are in the summer and winter, it would
10 be too confusing to customers to have different rate periods in Fall and Spring seasons
11 from those in the Winter and Summer seasons. Moreover, during the Spring and Fall,
12 utilities often take generating plants offline for maintenance and the amount of plant
13 available for reserves is diminished, sometimes to lower levels than during Summer or
14 Winter.

15 Q. HOW SHOULD THE PEAK AND OFF-PEAK PRICES BE SET FOR THE
16 RESIDENTIAL TIME-OF-DAY RATE?

1 A. There are several criteria that need to be met. First, the price differential between
2 peak kWh and off-peak kWh should be sufficient to provide an incentive for customers to
3 use energy during the off-peak period rather than during the on-peak period. The
4 residential Schedule 2 proposed by PacifiCorp has peak energy priced at 13.3594 ¢ per
5 kWh and off-peak energy priced at 3.994 ¢ per kWh, a ratio of over 4 to 1.

6 Second, the prices should be reasonably close to the cost. The time-of-day rate is
7 intended to better reflect the price differentials that differ by time of day. Because the
8 costs of power in the current market differ substantially by time of day, the time-of-day
9 rate will better reflect those differences than does the current flat residential rate or even
10 the inverted block rate.

11 Third, the expected revenue should not be greatly different from that produced by
12 the alternative rate. Because the inverted residential rate will increase costs the most to
13 the largest residential customers, they are the ones the most likely to seek an alternative
14 that can save them money if they adjust their consumption patterns. It therefore seems
15 appropriate to use the existing consumption patterns of these largest residential customers
16 to calculate the rate charges that will result in no change of revenue to the Company. Any
17 changes may have to be tempered by its impact on the existing Schedule 2 customers.

1 Lastly, the customer charge plays an important role in the residential time-of-day
2 rate. The current monthly charge of \$14.33 per month unnecessarily discourages
3 customers from taking the rate, even if the cost of a time-of-use meter is greater than the
4 cost of a standard Watt-hour meter. A lower customer charge would provide some
5 flexibility in setting the energy charges and would encourage more customers to sign up
6 for the rate and I recommend that the time-of-day customer charge be reduced.

1 **VI. TIME-OF-DAY RATES FOR SCHEDULES 6 & 9**

2 Q. DOES PACIFICORP CURRENTLY CHARGE CUSTOMERS ON SCHEDULE
3 6 OR SCHEDULE 9 RATES THAT ARE DIFFERENTIATED BY TIME?

4 A. Yes, there are several optional time-of-day rates for each rate schedule. As with
5 the residential time-of-day rate, these rates have an extremely long peak period, lasting
6 from 7 a.m. to 11 p.m. As a result, only 13 percent of the Schedule 6 customers take
7 service under one of the time-of-day options and only 8 percent of Schedule 9 customers
8 do. Moreover, these customers are not the largest users of electricity in these rate classes.
9 The largest users are the customers that should be on time-of-day rates, if the Company
10 wants to better charge customers for their cost of being served. Schedule 6 time-of-day
11 customers consume only about 2.5 percent of the electricity, even though they amount to
12 13 percent of the customers. Schedule 9 time-of-day customers consume about 2.1
13 percent of the electricity while they are about 8 percent of the customers.

14 Q. WHAT DO YOU PROPOSE FOR SCHEDULES 6 AND 9?

15 A I propose two changes to Schedules 6 and 9. First the peak period for the time-of-
16 day options should be shortened to better reflect the high cost of the peak period power.

1 Second, the largest customers on these rate schedules that have proper metering for being
2 billed on time-of-day rates should be billed on mandatory time-of-day rates.

3 These customers are the ones that can best adjust their usage to the financial
4 incentives of avoiding power usage during the highest cost hours. They are the customers
5 with the highest power bills who are among the most sophisticated customers and the
6 ones with the greatest incentive to keep their costs as low as possible. Mandatory billing
7 of these customers on time-of-day rates could make a significant difference in the peak
8 period loads on the PacifiCorp system.

9 Q WHAT SHOULD THE PEAK PERIOD BE FOR THE TIME-OF-DAY
10 OPTIONS IN RATE SCHEDULES 6 AND 9?

11 A. I would find any reduced period acceptable that covered the highest cost hours of
12 from about 2 or 3 p.m. to 8 p.m.

13 Q. HOW SHOULD THE RATES BE STRUCTURED?

14 A. Structuring time-of-day rates for schedules 6 and 9 has many more problems than
15 was the case with the residential time-of-day rate and the development must be done by

1 the Company. It has the data for doing so. However, I would like to point out several
2 problems in developing an appropriate rate.

3 First, with a mandatory change to time-of-day rates, there will be some customers
4 who would have their charges increased because their load patterns are more peak-
5 oriented than average and other customers who would have their charges decreased
6 because their load patterns are more off-peak-oriented than average. These “winners and
7 losers” always exist when a rate structure is changed and the losers always complain.
8 Recall that under the Company’s inverted rate proposals for residential rates, the largest
9 consumers are “losers” compared to smaller consumers. Bear in mind that what it means
10 for a customer to be more peak-oriented than average is that the customer is imposing
11 greater than average costs on the system, but is only paying for average costs. In other
12 words, these “losers” under the change in rate structure are currently being subsidized by
13 others and are not paying their fair share.

14 Second, the large number of options available make development of the rate
15 difficult to maintain consistency between rates. Each of rate schedules 6 and 9 has two
16 options. The Energy Time-of-day Option is one in which the energy charge is higher
17 during the peak period and the demand charge is imposed for maximum demand. The
18 Demand Time-of-day Option is one in which the demand charge is imposed only during

1 the peak period, but the energy charge is a flat rate. Switching from one rate schedule
2 option to another could greatly disrupt the Company's revenue stream.

3 Third, the Company must be concerned with its revenue stability from changing
4 usage patterns. If the customers that are billed under mandatory time-of-day rates
5 suddenly change their usage patterns, the Company could see revenue erosion. Therefore,
6 the rates cannot be changed so radically that customers can too easily avoid the higher
7 peak period charges. For this reason, it might be necessary to have a longer peak period
8 for the optional time-of-day rates for schedules 6 and 9 than for the residential time-of-
9 day rate. This is particularly true of the demand-charged time-of-day rate, where the
10 demand charge is imposed only during the peak period.

11 Lastly, it might be appropriate for the Company to phase in the application of
12 mandatory time-of-day rates for Schedules 6 and 9. This would enable PacifiCorp to
13 adjust to the changes in customer behavior as the customers are phased in to the time-of-
14 day rate. This phase-in should not be delayed too long, as the benefits from shifting
15 customers to time-of-day rates can be significant in these times of extremely high power
16 costs.

17 Q. WHAT SHOULD PACIFICORP DO IN THE MEANTIME?

1 A. In order to expedite the implementation of mandatory time-of-day rates for large
2 schedule 6 and 9 customers, it would be helpful if PacifiCorp offered a proposal in its
3 rebuttal testimony that moved toward my proposals and not wait for the Commission to
4 order it to implement an improved time-of-use program. I urge it to do so.

1 **VII. SPECIAL CONTRACTS**

2 Q WHAT PROBLEM DO YOU SEE WITH THE SPECIAL CONTRACTS THAT
3 ARE IN PLACE TODAY?

4 A. The special contracts that are currently in place are apparently fixed for the
5 duration of the contract, unless the customer and PacifiCorp renegotiate the contract.
6 Parties have argued that the Commission has no authority to change the charges set in the
7 contract during a general rate case, no matter what the change in cost circumstances
8 surrounding the utility. However, when the terms of the contract result in far higher rates
9 for the customer than the standard tariff, the customer filed a complaint to change the
10 contract. As I understand it, the terms of the contract were ultimately renegotiated with
11 PacifiCorp to reduce the charges to the customer from those provided for in the contract.
12 The public should be protected in this same way from the special contracts customers
13 receiving power at continuing low costs when the cost of electricity increases
14 dramatically. Faced with 20 percent increases in cost as we are in this rate case, the
15 customers under special contracts should not be immune from paying their share of those
16 additional costs.

17 Q. WHAT DO YOU PROPOSE TO MODIFY THIS SITUATION?

1 A. I recommend that the Commission direct PacifiCorp to include in each special
2 contract submitted in the future to the Commission, the provision that the Commission
3 can modify the terms and charges of the contract with due process, such as in a general
4 rate case or other proceeding.

5 Secondly, the Special Contracts customers should have rates that adequately
6 reflect the costs by time of day. I recommend that the Commission direct PacifiCorp to
7 negotiate future special contracts with time-of-day pricing before they are submitted to
8 the Commission for approval.

9 Q. DOES THIS COMPLETE YOUR PREPARED DIRECT TESTIMONY?

10 A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

**In the Matter of the Application of)
PACIFICORP for an Increase in its Rates and)
Charges.)**

Docket No. 01-035-01

EXHIBITS ACCOMPANYING THE DIRECT TESTIMONY OF

DR. CHARLES E. JOHNSON

ON BEHALF OF

**SALT LAKE COMMUNITY ACTION PROGRAM
CROSSROADS URBAN CENTER
AND
UTAH LEGISLATIVE WATCH**

JUNE 15, 2001

PACIFICORP

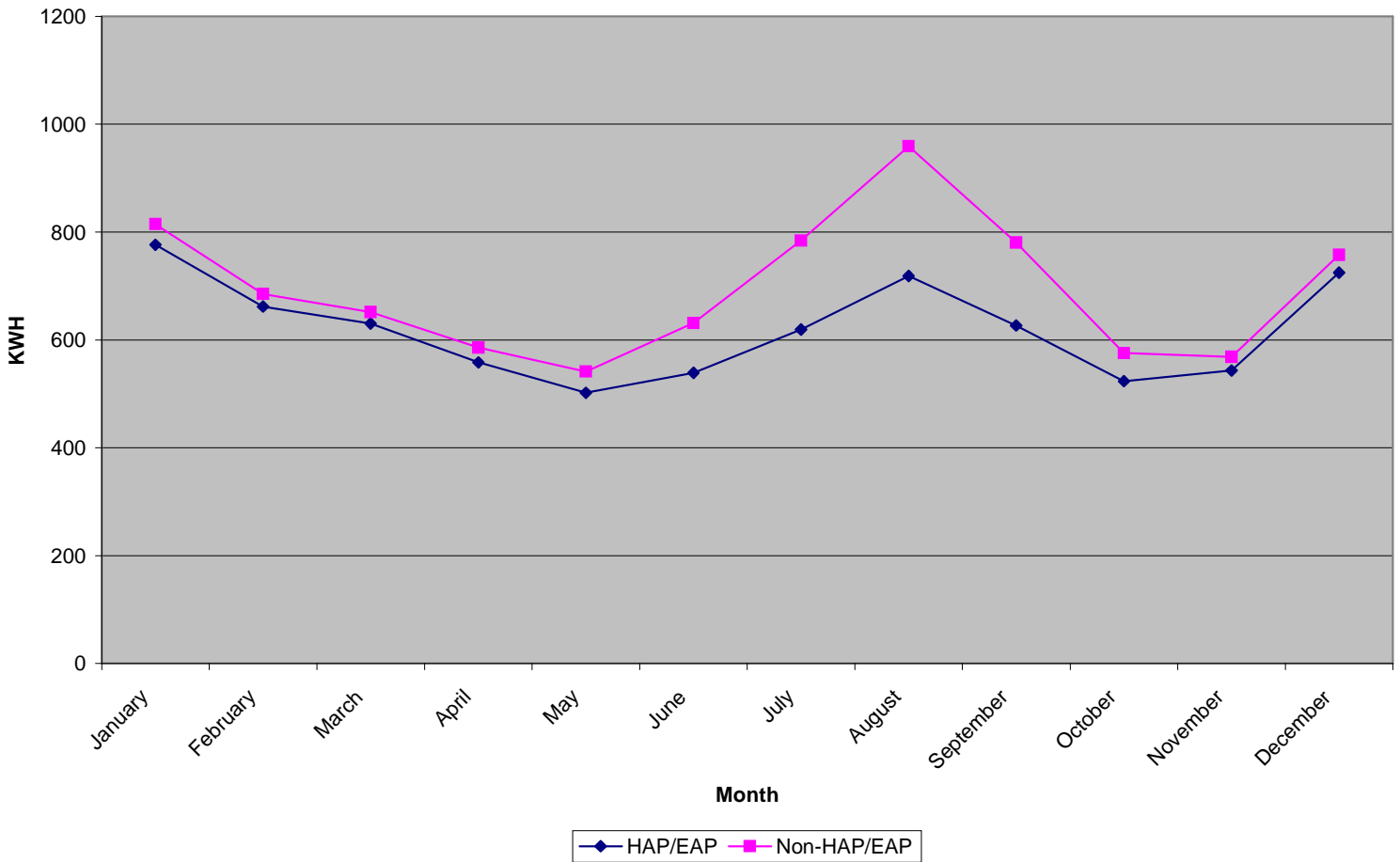
Comparison of Electricity Usage by Customers Receiving Assistance (HAP/EAP)
with Those Not Receiving Assistance (Non-HAP/EAP)

Month	HAP/EAP Usage (kWh)	Non-HAP/EAP Usage (kWh)	Percent That Non-HAP/EAP is Greater
January	776	815	4.7
February	662	685	3.4
March	631	652	3.2
April	558	586	4.8
May	502	541	7.3
June	539	631	14.7
July	619	785	21.1
August	719	959	25.1
September	627	780	19.7
October	524	576	9.0
November	543	569	4.5
December	725	757	4.3
Annual	7,424	8,337	11.0

PACIFICORP

Comparison of Electricity Usage by Customers Receiving Assistance (HAP/EAP)
with Those Not Receiving Assistance (Non-HAP/EAP)

Monthly kWh Consumption



PACIFICORPResidential Billing Comparison Between
Utah Ratepayers Alliance Proposal and PacifiCorp Proposal

Monthly Usage (kWh)	UP&L Proposal	URA Proposal	Percent URA Proposal Exceeds UP&L Proposal
250	18.20	17.98	-1.2
500	35.43	35.47	0.1
750	52.65	53.68	1.9
1000	69.88	71.89	2.9
1500	104.33	108.32	3.8
2000	138.77	150.50	8.4
2500	173.22	192.68	11.2
3000	207.67	234.87	13.1
4000	276.57	319.24	15.4
5000	345.47	403.61	16.8

PACIFICORP

Residential Billing Comparison Between
Utah Ratepayers Alliance Proposal and Current Rates

Monthly Usage (kWh)	Current Rates	URA Proposal	Percent URA Proposal Exceeds Current Rates
250	16.31	17.98	10.3
500	31.63	35.47	12.1
750	46.96	53.68	14.3
1,000	62.29	71.89	15.4
1,500	92.94	108.32	16.5
2,000	123.59	150.50	21.8
2,500	154.25	192.68	24.9
3,000	184.90	234.87	27.0
4,000	246.21	319.24	29.7
5,000	307.52	403.61	31.2