—BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH—

SPECIAL REPORT ON PACIFICORP ALLOCATIONS
(UTAH DIVISION OF PUBLIC UTILTIES)

ARTIE POWELL

DPU EXHIBIT 2.2DIR-COS

DOCKET NO. 11-035-200

DIVISION OF PUBLIC UTILITIES

June 22, 2012

Utah Division of Public Utilities
ELECTRIC SECTION
SPECIAL REPORT ON PACIFICORP ALLOCATIONS

ISSUE

The Utah Public Service Commission has previously requested that the Division of Public Utilities re-examine the appropriateness of two factors used as a part of allocation procedures, 1) using the 12 monthly peaks in the demand allocation factor, and 2) using a weighting of 75% demand and 25% energy in deriving the System Generation (SG) allocation factor. These factors have been applied to all three allocation systems recently considered, Consensus, Accord and Roll-in. The decisions on these factors were first made at the time of the Pacificorp merger when little data was available about the merged company, so a new examination is desirable. This report contains a somewhat in-depth analysis of the 12 CP factor, a more subjective analysis of the 75-25 factor and a sensitivity study evaluating the impact of alternative decisions on Utah rates.

CONCLUSIONS AND RECOMMENDATIONS

The Division of Public Utilities finds that there is no evidence to suggest that 12 CP is not an appropriate allocation period. In fact, the evidence that is available indicates that all 12 months could impact capacity allocation. We also find that the 75%/25% peak to energy ratio in the capacity allocation factor reasonably represents actual capacity expansion decisions. We find that Utah expenses are quite insensitive to changes in these allocation tools and therefore more refined analysis and study is not warranted. Therefore, the Division recommends that the Public Service Commission continue to use these factors as they are presently applied. While the evidence that leads to this recommendation is not clear cut, there is substantial evidence that the factors are correct and no evidence at this time that they are incorrect.

ANALYSIS

A. ANALYSIS OF 12 CP

The issue here is, "For which months of the year could peak load or peak load growth cause additional investment in generation and transmission capacity?" If peak load or peak load growth in a particular month has some potential responsibility for new investment then generation costs ought to be assigned to that time period. Table 1 on the following page is monthly peak data for the merged Pacificorp (PC) for the past ten years. The data for the time periods before the merger represent the coincident peaks of the independent utilities. **What we have called "peak load" is the native customer firm peak load.** At the first stage of our analysis, we used sophisticated three-variable curve fitting techniques to see if data from all twelve months could be fitted to the same equation.

We found a number of equations that related peak load to a seasonal pattern of months and a time trend over the years. Figure 1 attached shows the three-dimensional curve-fit for one of these equations, one that the Division believes shows a good balance between accuracy, predictability and simplicity. As shown, the correlation coefficient (r^2) of this case is 0.75 or 75%

Table 1
Pacificorp Firm Peak Demand
[MW]
(Actual)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
January	6214	6077	5781	6246	6077	6245	6435	7019	6463	7156
February	5693	6375	5825	5733	6267	6874	6651	6178	6375	7133
March	5311	5551	5251	5355	5742	6187	6154	6097	5962	6486
April	5110	5003	5071	5090	5403	5476	5605	5962	5849	5960
May	4789	4979	5054	4990	5251	5314	5514	5607	5845	5906
June	5107	5371	5407	5616	5760	5625	6057	5793	6615	5606
July	5403	5576	5335	5626	5939	5977	6406	6405	6449	6043
August	5316	5387	5359	5531	5666	5911	6356	6351	6734	6554
September	5001	5017	5016	5413	5561	5372	5855	5987	5790	6200
October	5344	5500	5038	5146	5414	5828	5730	6350	5953	6047
November	5599	5988	5494	5627	5964	6037	6273	6290	6680	7268
December	6315	6223	5816	5982	6217	6357	7622	6607	6968	6976

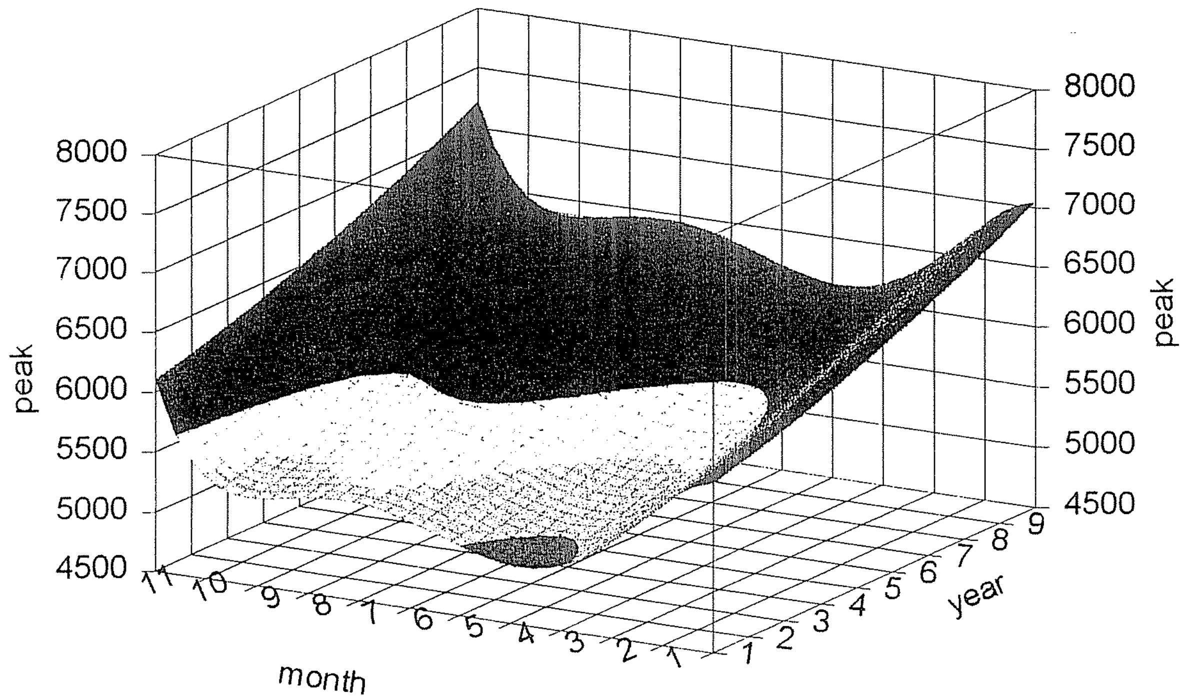
FIGURE 1-PacifiCorp Peak Load Patterns

Rank 42 Eqn 20 $z=a+bx+cx^2+dy+ey^2+fy^3+gy^4+hy^5$

$r^2=0.75219803$ DF Adj $r^2=0.73433843$ FitStdErr=291.12113 Fstat=48.567687

a=5470.5535 b=67.032197 c=5.2695707 d=930.8397

e=-691.16125 f=157.82523 g=-14.671989 h=0.4839885



(Note: this is a new program and I haven't figured out what the colors mean, except that they separate ranges of values. So, for example, all dark blue points fall in the highest block of data, though I don't know how the blocks are determined.) Figure 2 shows the SEASONAL trend of the peak load data isolated from the annual pattern and Figure 3 shows the ANNUAL pattern isolated from the time trend. **These three figures show only the curve fit equations and not the individual points of actual data.** We will discuss the divergences of actual points from the curve fit subsequently, but the fit of 75% indicates that the curve is a reasonable fit to the data, especially when we consider the possible impacts of changing weather and economic conditions in creating variability of peak load.

Although the same equation (actually many similar equations) seems to apply to all months, the modeled seasonal pattern in Figure 2 would seem to indicate that some month's peak loads are significantly less than others. For example, month 5 (May) is about 6200 in the most recent year, as compared to about 7200 in December, or a difference of about 1000 MW. However, the analysis doesn't include the need for spare capacity in Spring and Fall to provide shut-down time for maintenance and repair of generating units. Nor does the analysis include capacity for the random variations of peak load around these norms. We will look at that issue subsequently.

Figure 4, attached, is Figure 1 with the actual data points included. The "tails" on the points show the direction that the points would have to move to fit into the curve-fit. In a good curve-fit, the points would be randomly scattered above and below the curve-fit blanket. In general, that is the case here. If some months were consistently above the curve fit or below it over the years, we would conclude that those months didn't fit the general pattern. We note that the October data seems to vary consistently from the pattern in recent years, with the deviation getting worse with time. Other than that, we seem to see a more or less random spread above and below the curve fit. The only other consistent pattern we see here is that the summer month's peaks are growing more rapidly in recent years than the equation predicted. That is not significant to the issue before us here. (Supporting data on the curve fit is provided in Appendix 1.

We then re-analyzed the data using a different analysis tool, one which extracts trends and cyclic patterns to predict a variable as a function of time. Figure 5 is the result of that analysis for our Table 1 data. The blue line is the actual data and the red line is the modeled data. This approach gives a slightly higher correlation coefficient (r^2) of about 79%.

Appendix 2 contains the supporting data for this curve fit. In the data sheets in the Appendix we find that some 44% of the pattern is based on the annual time trend line, 43% on seasonal variation and about 13% unexplained (probably weather and economic patterns.) This analysis also gives us the monthly weights assigned by the model, as follows:

January	1.09	April	0.94	July	1.01	October	0.95
February	1.08	May	0.92	August	1.02	November	1.04
March	1.00	June	0.97	September	0.94	December	1.09

This fit was based on exponential smoothing of the data. We then tried another way to extract trend and seasonal data called the Census X-11 approach. This approach gave us virtually

FIGURE 2-PacifiCorp Seasonal Peak Load Patterns

Rank 42 Eqn 20 $z=a+bx+cx^2+dy+ey^2+fy^3+gy^4+hy^5$

r^2=0.75219803 DF Adj r^2=0.73433843 FitStdErr=291.12113 Fstat=48.567687

a=5470.5535 b=67.032197 c=5.2695707 d=930.8397

e=-691.16125 f=157.82523 g=-14.671989 h=0.4839885

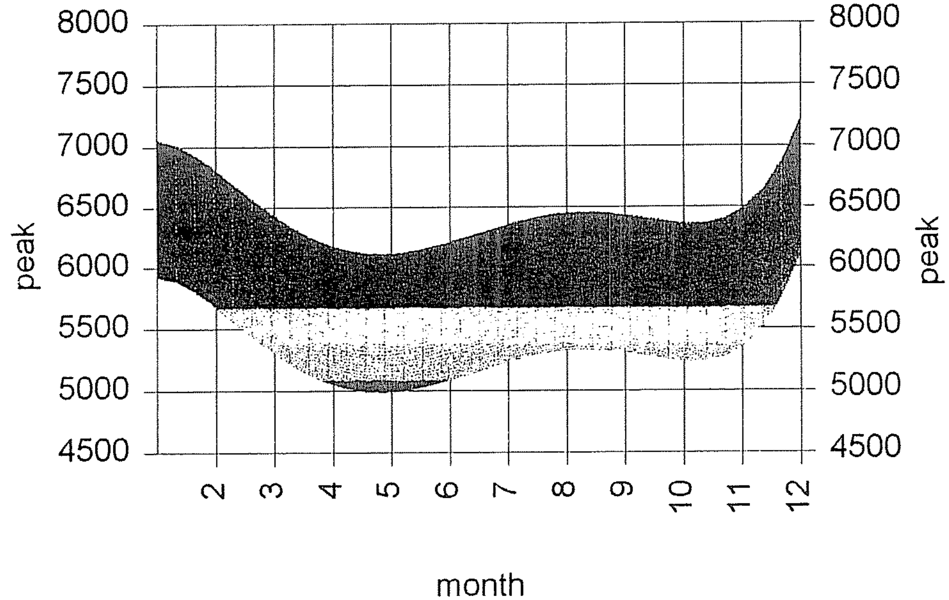


FIGURE 3-PacifiCorp Annual Peak Load Patterns

Rank 42 Eqn 20 $z=a+bx+cx^2+dy+ey^2+fy^3+gy^4+hy^5$

r^2=0.75219803 DF Adj r^2=0.73433843 FitStdErr=291.12113 Fstat=48.567687

a=5470.5535 b=67.032197 c=5.2695707 d=930.8397

e=-691.16125 f=157.82523 g=-14.671989 h=0.4839885

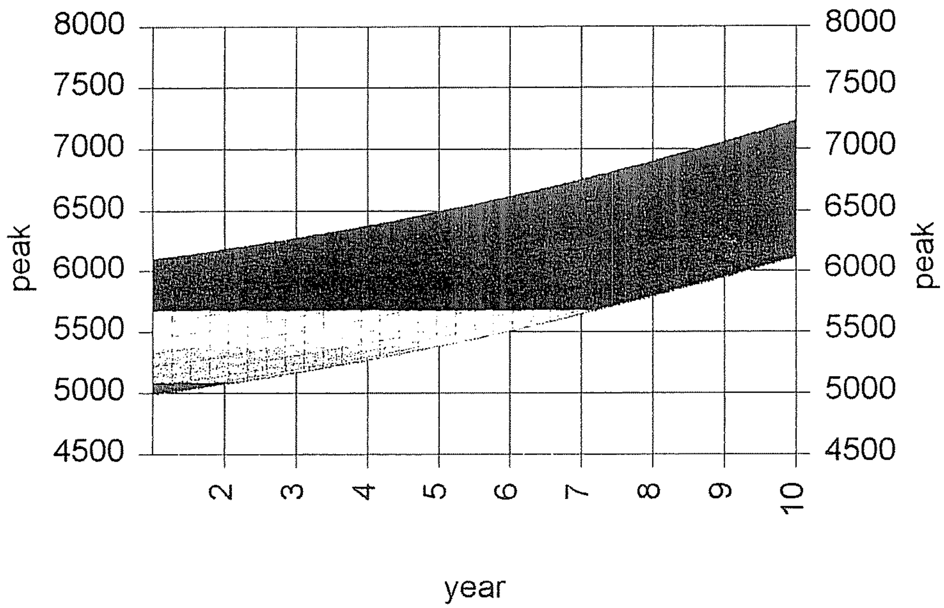


FIGURE 4-PacifiCorp Peak Load Patterns

Rank 42 Eqn 20 $z=a+bx+cx^2+dy+ey^2+fy^3+gy^4+hy^5$

r^2=0.75219803 DF Adj r^2=0.73433843 FitStdErr=291.12113 Fstat=48.567687

a=5470.5535 b=67.032197 c=5.2695707 d=930.8397

e=-691.16125 f=157.82523 g=-14.671989 h=0.4839885

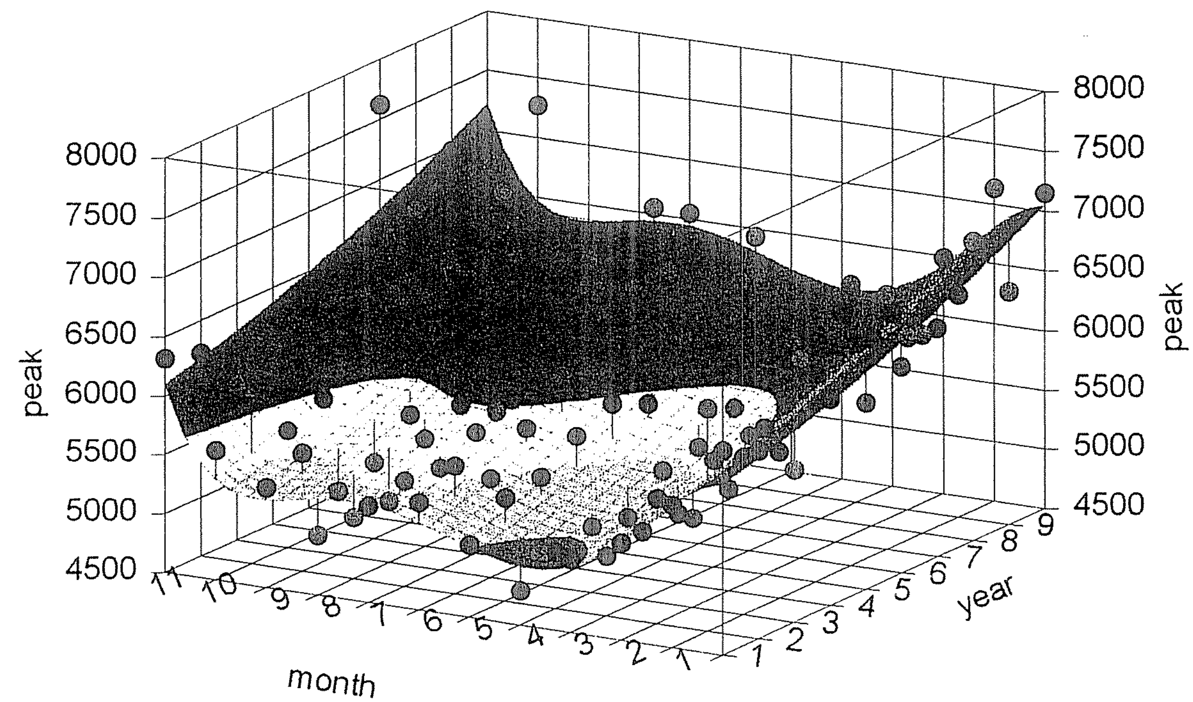
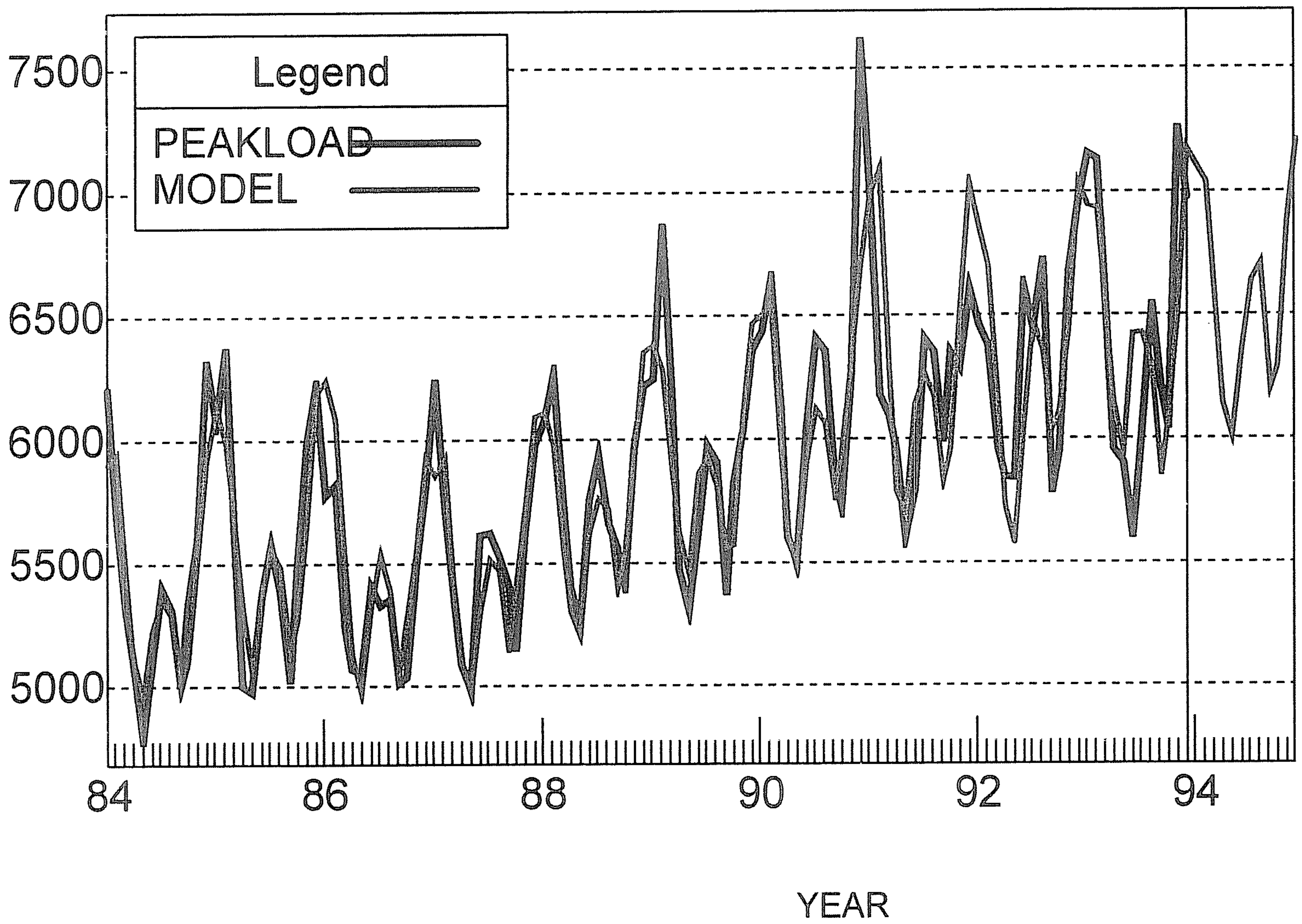


FIGURE 5-PACIFICORP PEAK LOAD MODEL



identical curve fit data, providing some support that the model results are robust statistically. We have included backup data on the Census X-11 runs in Appendix 2 as well.

Note that the monthly weighting factors with either method are all within plus or minus 9%. This small range of variation indicates that none of the months are unimportant to the pattern. The next question is whether this much variation is statistically significant.

The Appendix also shows plotted residual (difference between model and actual) data. A consistent pattern of error for the same month of the year in the same direction and of the same or growing magnitude would indicate that one month was less valid to the model than the other months. Such a pattern is not apparent. To verify that, we used the error autocorrelation function as shown in the Appendix to test if lagging the data for various numbers of months would show an autocorrelation function between a particular month and subsequent months. The twelve month lag showed no more autocorrelation than any other lag period. We conclude that there is no pattern of months that are less important to the model.

We then did some statistical analysis of the raw data to include the impacts of random variation on the possibility of contribution to peak load. Table 2 shows that analysis. Section I is the raw data from Table 1. Section II shows the mean, standard deviation and confidence intervals for the twelve months data within each year. If all the month's peaks fall within 2 standard deviations (2SD), then we are justified in concluding that there is no statistically significant difference between any of the months within the year.

Statistical note: Similar events can have values that vary randomly, but if those events are truly similar, their values should fall within a reasonable range from the mean. Some 95.5% of the values should fall within ±2SD of the mean. If a value falls outside of that range, we have reason to suspect that the data are not really similar. If we want to be really sure, we use a range of ± 3SD, which includes 99.7% of the normal variation.

Of the 120 pieces of monthly data, all but 4 fall within 2 standard deviations, and three of those four are very close to 2 standard deviations. The remaining month, December 1990, was the month of extreme weather conditions called "the Arctic Express," and so that variation (as well as the following month, January 1991) could well be caused by extreme weather conditions.

More importantly, the four cases of variation that we have are all on the high side. We found no cases where the lower peak months (typically April, May, September, October) fell outside of 2 standard deviations. Once again we are forced to conclude that none of the month's peaks are statistically insignificant and therefore each might be important in causing capacity costs.

Section III of the table examines the data in the opposite direction. For example, we look at all the January's in the last ten years and look at their standard deviation. Again the only cases where the maximums and minimums of actual data fall outside of 2 standard deviations seem to be weather related. We believe an even more useful statistic is also included in Section III, where we look at the minimum and maximum value that has occurred for each month over the ten year period. We note that the maximum value for any of the four "off-peak" months has at times exceeded the lowest peak value for the peak months. For example, May has the lowest range of peak values in the table. However, the largest May peak of 5906 MW exceeds some actually

Table 2
Pacificorp Firm-Peak-Demand-Derived Statistics
[MW]
(Actual)

I. BASE DATA / **III. SEASONAL VARIATION**

I. BASE DATA	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	10 Year Mean	Standard Deviation	Mean-2SD	Mean+2SD	10 Year Minimum	10 Year Maximum
January	6214	6077	5781	6246	6077	6245	6435	7019	6463	7156	6371	403	5,565	7,178	5781	7156
February	5693	6375	5825	5733	6267	6874	6651	6178	6375	7133	6310	457	5,396	7,224	5693	7133
March	5311	5551	5251	5355	5742	6187	6154	6097	5962	6486	5810	408	4,994	6,625	5251	6486
April	5110	5003	5071	5090	5403	5476	5605	5962	5849	5960	5453	360	4,733	6,173	5003	5962
May	4789	4979	5054	4990	5251	5314	5514	5607	5845	5906	5325	325	4,676	5,974	4789	5845
June	5107	5371	5407	5616	5760	5625	6057	5793	6615	5606	5696	405	4,886	6,505	5107	6615
July	5403	5576	5335	5626	5939	5977	6406	6405	6449	6043	5916	408	5,101	6,731	5335	6449
August	5316	5387	5359	5531	5666	5911	6356	6351	6734	6554	5917	512	4,893	6,940	5316	6734
September	5001	5017	5016	5413	5561	5372	5855	5987	5790	6200	5521	410	4,702	6,340	5001	6200
October	5344	5500	5038	5146	5414	5828	5730	6350	5953	6047	5635	397	4,841	6,429	5038	6350
November	5599	5988	5494	5627	5964	6037	6273	6290	6680	7268	6122	514	5,095	7,149	5494	7268
December	6315	6223	5816	5982	6217	6357	7622	6607	6968	6976	6508	516	5,476	7,540	5816	7622

II. ANNUAL VARIATION

II. ANNUAL VARIATION	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Annual Mean	5,434	5,587	5,371	5,530	5,772	5,934	6,222	6,221	6,307	6,445
Standard Dev.	441	462	293	349	315	433	543	360	391	545
Min--Mean-2SD	4,552	4,664	4,784	4,832	5,141	5,067	5,136	5,500	5,524	5,355
Max--Mean+2SD	6,315	6,511	5,957	6,227	6,402	6,800	7,307	6,941	7,089	7,534

Note: Boxed values are values exceeding the maximum or minimum (all exceeding the maximum in this case.)

IV. RATIONALIZED DATA (Percent of Annual Peak Load)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	10 Year Mean	Standard Deviation		Mean-2SD	Mean + 2SD
January	98	95	99	100	97	91	84	100	93	98	96	4.8	Jan	85.94	100.00
February	90	100	100	92	100	100	87	88	91	98	95	5.2	Feb	84.26	100.00
March	84	87	90	86	92	90	81	87	86	89	87	3.1	Mar	81.02	93.40
April	81	78	87	81	86	80	74	85	84	82	82	3.7	Apr	74.34	89.25
May	76	78	87	80	84	77	72	80	84	77	79	4.2	May	71.03	87.94
June	81	84	93	90	92	82	79	83	95	83	86	5.4	Jun	75.33	97.04
July	86	87	92	90	95	87	84	91	93	86	89	3.4	Jul	82.22	95.89
August	84	85	92	89	90	86	83	90	97	90	89	3.4	Aug	81.79	95.45
September	79	79	86	87	89	78	77	85	83	85	83	4.0	Sep	74.90	90.73
October	85	86	86	82	86	85	75	90	85	83	84	4.1	Oct	76.15	92.37
November	89	94	94	90	95	88	82	90	96	100	92	3.8	Nov	84.23	99.30
December	100	98	100	96	99	92	100	94	100	96	98	2.7	Dec	92.07	100.00

KBP
2/22/95

FIGURE 6- PACIFICORP PEAK LOAD RANGES

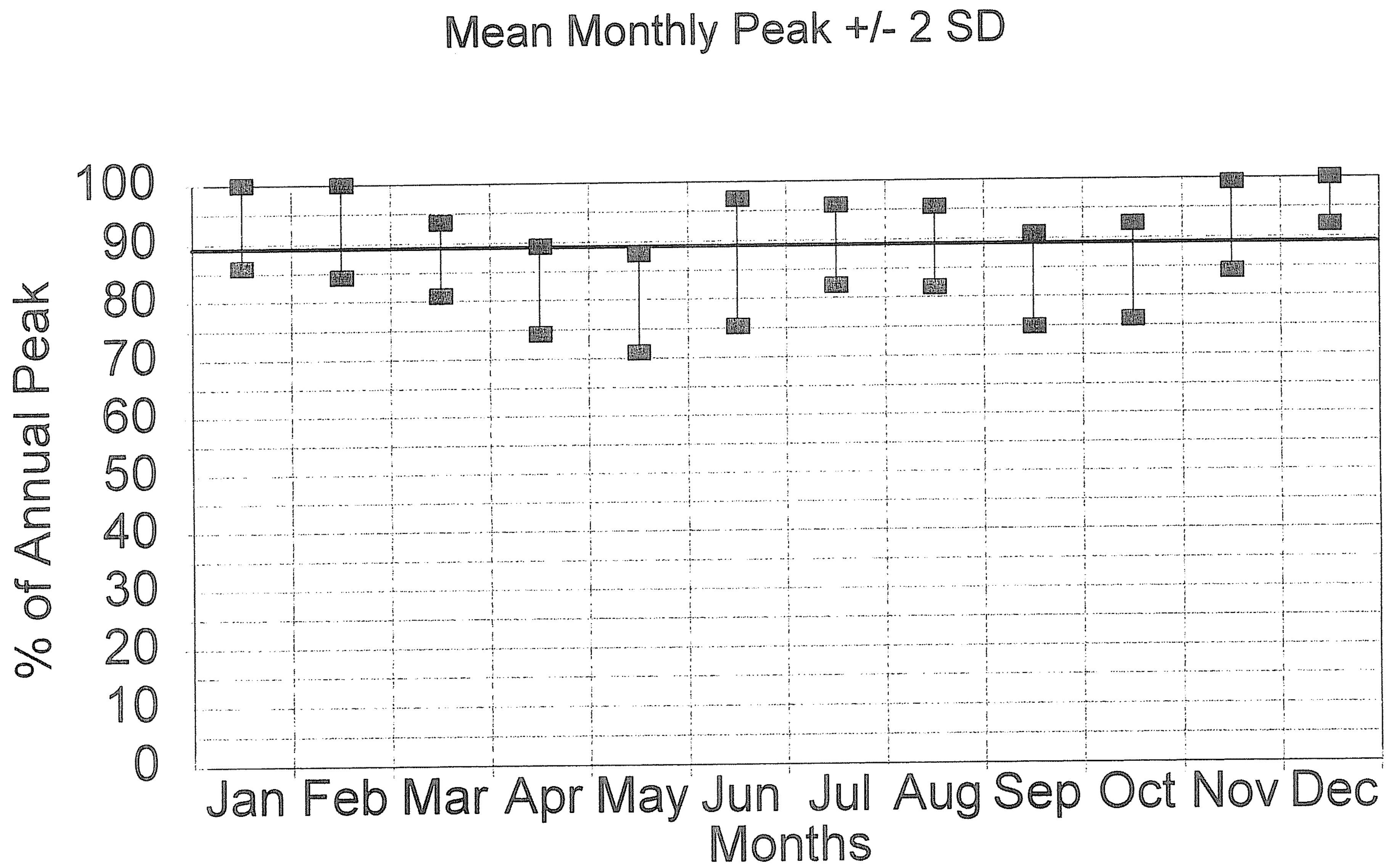
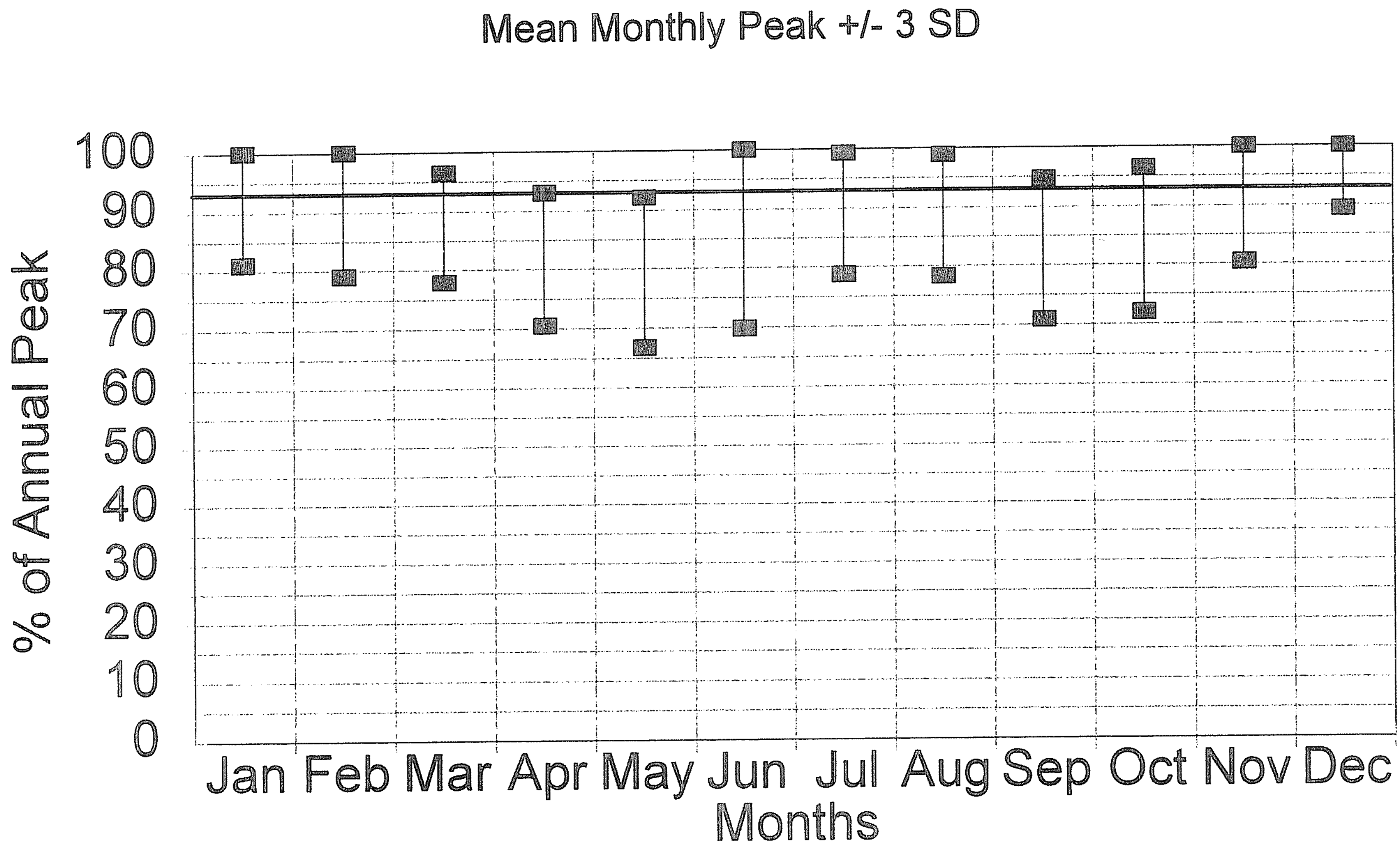


FIGURE 7- PACIFICORP PEAK LOAD RANGES



experienced peaks in November, December, January and February, the usual peak months.

We have taken this analysis one more step--We have determined the mean monthly peak for each month and the statistical range of possible values assuming the possible values could be the mean $\pm$ 2 standard deviations (SD). We have compared these monthly values in Figure 6. The heavy line indicates the maximum value of the lowest month, May. Note that this maximum possible value exceeds the minimum possible values of all the peak months except December. If we compare the mean monthly values $\pm$ 3 SD, as shown in Figure 7, we note that the May maximum could exceed all the high load peak month's values. Remember that 3 SD includes 99.7% of the expected values of the variable.

This is one way of looking at the probability of contribution to peak load. From this analysis we must conclude that there is a reasonable possibility of contribution to peak for each of the months. Therefore, we must consider each month in allocating the costs of capacity added to meet those peak loads.

PacifiCorp has provided data looking at probability of contribution to peak in a different way. That data is shown in Table 3. Their probability of contribution to peak is defined as the number of hours each month that exceed 72% of the annual peak load. The 72% represents the available energy of all resources (less WSCC spinning reserve requirements) as a percent of the peak capability of those same resources. We have charted the ranges of the values in Figure 8. Once again this chart shows that the maximum of the low months can exceed the minimum of the high months, except for December. For the last six years, the annual peak has been in February, December, January, December, November, December (but July was only 6 MW less.) With each of the 12 months having a probability of at least 42% of contributing to the system peak, we can't conclude that any month is unimportant.

We empasize once again that none of these studies takes into account the need of PacifiCorp to provide maintenance for generating units. With a peak load in excess of 7000 MW, the company can only spare about 10% of its generating units down for repair each Spring and Fall. This means that about 20% of the generating units can be down for major maintenance each year or about a five year cycle for major maintenance. This is a longer interval than is recommended for these units.

We also note here that when the concept of stress factors was first developed by Utah regulators many years ago, we looked at a number of factors, not just peak load and contribution to peak. However, PacifiCorp has stated that these two factors are the only ones that their planners use in planning capacity expansions for peak. Mr. Alt, the Chief Engineer for the Division of Public Utilities, has testified consistently that we should base our allocation factors on those factors that the utilities use to make real world decisions. We still believe that is the appropriate policy, so we have narrowed our examination to only those two factors. We don't believe that adding other factors would increase the accuracy of our determination.

AN ANALYSIS OF CAPACITY/ENERGY RATIOS IN CAPACITY ALLOCATION FACTORS

Operating experience, particularly with PacifiCorp, indicates that often capacity expansions are required to provide for the **energy** needs of the customers. To the degree that this

TABLE 3
Probability of Contribution to Peak*
(Actual)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	Minimum Value	Maximum Value
January	52.90%	58.50%	70.00%	63.50%	70.90%	58.60%	41.30%	71.10%	65.90%	75.40%	41.30%	75.40%
February	45.80%	53.50%	63.60%	55.10%	60.30%	68.50%	35.40%	48.40%	53.20%	69.80%	35.40%	69.80%
March	17.60%	34.30%	42.30%	41.60%	54.90%	34.80%	9.30%	24.60%	36.70%	46.50%	9.30%	54.90%
April	12.90%	11.50%	45.10%	23.20%	41.30%	8.80%	0.70%	36.10%	34.70%	28.50%	0.70%	45.10%
May	8.10%	19.10%	41.70%	29.50%	42.10%	15.60%	0.10%	23.80%	42.20%	24.20%	0.10%	42.40%
June	13.80%	30.30%	50.60%	49.20%	56.70%	37.20%	13.30%	35.80%	54.30%	34.40%	13.30%	56.70%
July	34.10%	44.70%	50.60%	43.70%	60.40%	45.30%	32.30%	59.70%	55.80%	44.90%	32.30%	60.40%
August	35.80%	38.90%	54.40%	47.60%	58.30%	42.60%	26.40%	52.40%	57.80%	47.00%	26.10%	58.30%
Septemb	19.10%	16.00%	44.10%	40.50%	49.00%	33.20%	13.60%	39.30%	42.60%	46.90%	13.60%	46.90%
October	28.80%	25.20%	44.10%	38.10%	42.40%	28.10%	4.20%	45.80%	44.40%	39.20%	4.20%	44.40%
Novembe	43.00%	56.30%	58.30%	50.90%	58.70%	32.00%	27.60%	54.20%	60.60%	69.70%	27.60%	69.70%
Decembe	56.90%	66.10%	69.40%	67.60%	71.70%	59.90%	62.40%	64.80%	76.50%	72.80%	56.10%	76.50%

*The number of hours each month that exceed 72% of the annual peak load.

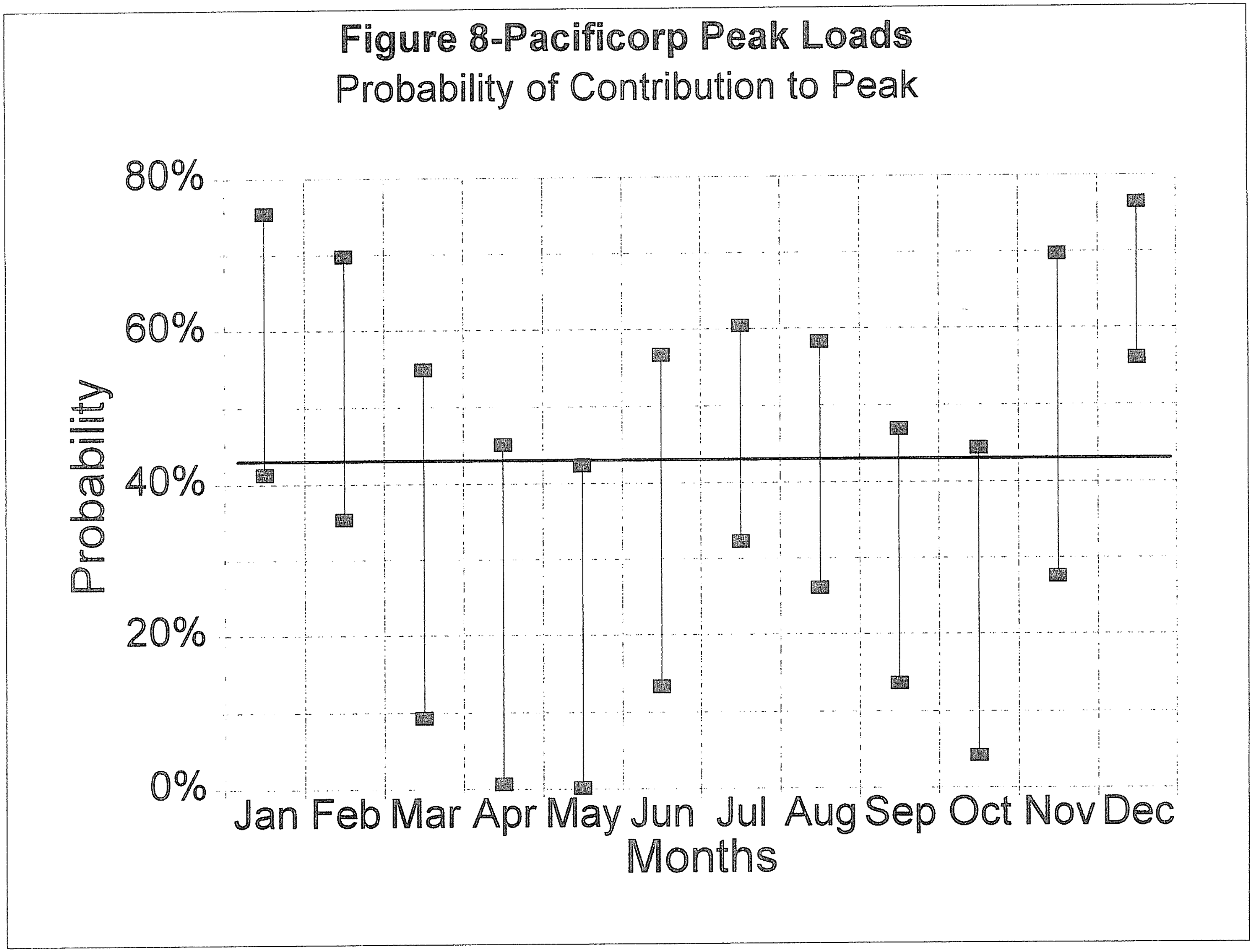


Figure 8-Pacificorp Peak Loads
Probability of Contribution to Peak
80%
60%
40%
20%
0%
Probability
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Months

happens, the capacity allocation factor should reflect the role of energy needs in triggering investment in capacity additions. Unfortunately, this area is not even as susceptible to analysis as the question of how many months are important to capacity expansion.

The company's Integrated Resource Plan (IRP) is the best source of information on what factors trigger capacity expansion. The RAMPP-4 version of the IRP is nearly completed. While it shows that both summer and winter peak needs are triggering capacity expansion for the next twenty years, it also shows that the model is selecting resources with higher energy availability over resources with lower first cost and lower energy availability. This is an indication that energy needs are still playing some role in capacity expansion. We would not conclude from this data that it has a major role.

Probably the current level of 25% energy in the allocation factor is reasonable. We know from RAMPP-4 that the value is not 0% and that it is not 100%. We would conclude that if energy were the specific trigger of capacity expansion some significant percentage of the time, a larger energy factor ought to be used. Since energy shows up only as a factor in selecting the type of resource added, we conclude that it has a relatively minor role.

VALUE OF BETTER INFORMATION

We recognize that the conclusions that we draw are based on judgements made on data rather than on firm data. An appropriate question is: is it worthwhile to establish better data to make these decisions on. For Utah, the answer is no. Appendix 3 contains a summary of model runs at various CP's and energy ratios to examine Utah's sensitivity to changing these factors. The model runs indicate that Utah is relatively insensitive to these conclusions. Table 4 below summarizes the results in Appendix 3.

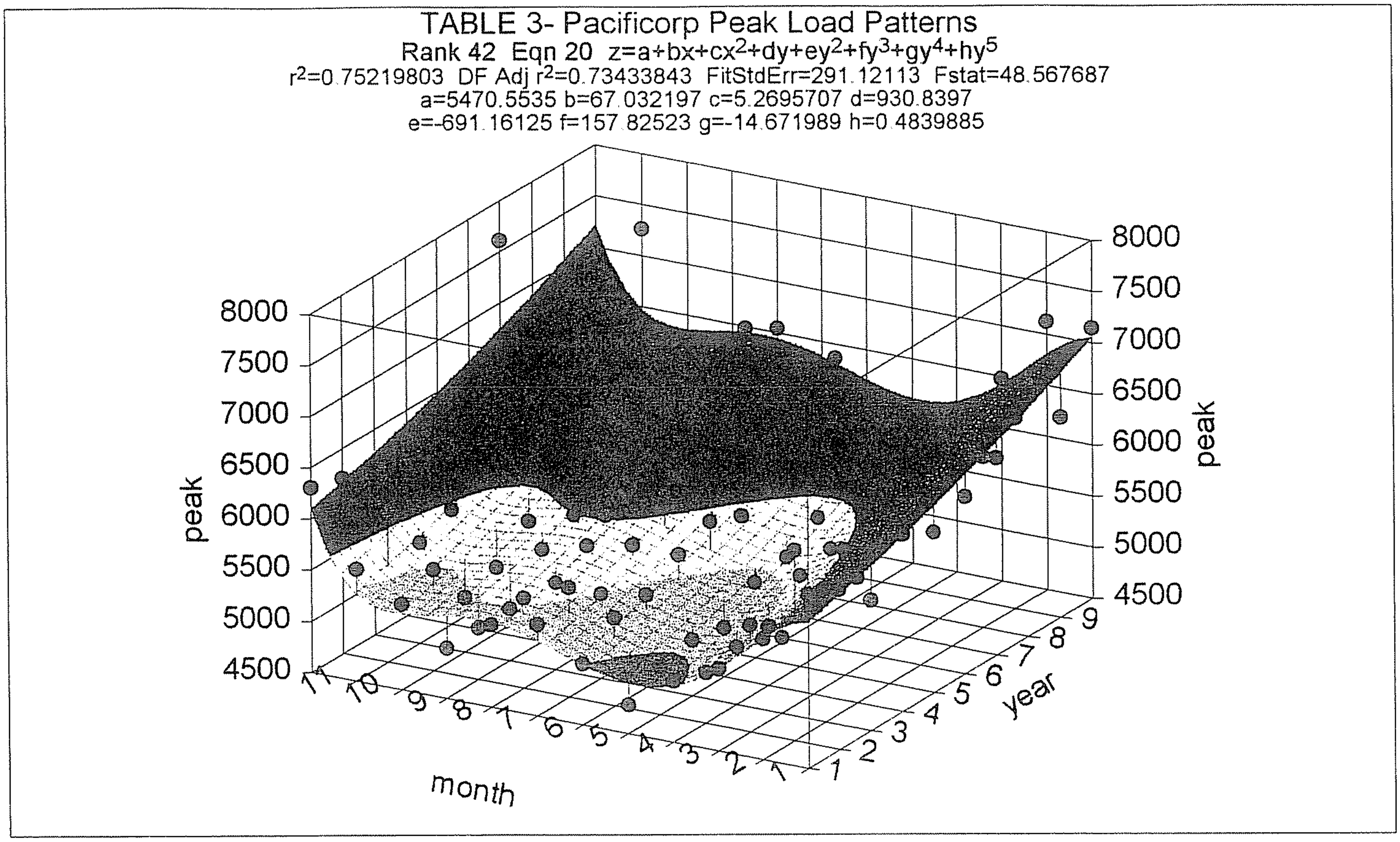
Table 4
Forecast Utah ROE for Different Modeling Assumptions
(Based on earnings as of December 1993)

Modeling Assumptions	ROE Calculated
12 months peaks, 50% demand-50% energy	11.265%
12 months peaks, 75% demand-25% energy (Accord Method)	11.189%
12 months peaks, 100% demand	11.114%
8 months peaks, 75% demand-25% energy	11.175%

Under these circumstances, the cost of developing better studies is not warranted, since they won't change the resulting allocations much, even if they change the factors. (Even if the cost of addtional studies were warranted, we are uncertain at this time as to what additional studies could be run.)

September 5, 1995 Kenneth B. Powell

APPENDIX 1
COMPUTER MODEL OF PACIFICORP PEAK LOAD



Rank 42 Eqn 20 $z=a+bx+cx^2+dy+ey^2+fy^3+gy^4+hy^5$

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.7521980322	0.7343384309	291.12112553	48.567687426

Parm	Value	Std Error	t-value	95% Confidence Limits	
a	5470.553535	413.3546176	13.23452866	4651.52726	6289.57981
b	67.03219697	41.28106104	1.623800244	-14.7626402	148.8270342
c	5.269570707	3.65734675	1.440817912	-1.97714424	12.51628565
d	930.8397042	533.1739719	1.745846109	-125.598215	1987.277624
e	-691.161254	230.045797	-3.00445069	-1146.97702	-235.345487
f	157.8252327	42.81136264	3.686526729	72.99823576	242.6522296
g	-14.6719886	3.570466475	-4.10926378	-21.7465578	-7.59741932
h	0.483988499	0.109471885	4.421121459	0.267079467	0.700897531

Date	Time	File Source
May 15, 1995	8:39:24 AM	CLIPBRD.WK3

APPENDIX 2
TIME SERIES MODEL OF
PACIFICORP PEAK LOAD DATA

Forecast Pro for Windows

File Edit Graph Expert Model Forecasts Options Help

Exponential smoothing

Audit Trail

```
Expert data exploration of dependent variable PEAKLD6
----------------------------------------------------------------------

Length 120  Minimum 4789.000  Maximum 7622.000
Mean 5881.975 Standard deviation 564.989

Classical decomposition (multiplicative)
    Trend-cycle: 43.79%  Seasonal: 42.57%  Irregular: 13.64%

Series is trended and seasonal.

Recommended model: Exponential smoothing

Forecast Model for PEAKLD6
Automatic model selection
Multiplicative Winters: Linear trend, Multiplicative seasonality
Confidence limits proportional to indexes and level

                    Smoothing     Final
Component            Weight       Value
--------------------------------------
Level               0.22595      6525.5
Trend               0.00786      8.7499
Seasonal            0.22281      1.0874

Seasonal Indexes
------------------------------------------------------------
January - March              1.08718     1.07610     0.99642
April - June                 0.93676     0.91513     0.96731
July - September             1.00820     1.01726     0.93938
October - December           0.95108     1.03828     1.08737

Standard Diagnostics
---------------------------------------------------------------
Sample size 120                 Number of parameters 3
Mean 5882                       Standard deviation 567.4
R-square 0.7871                 Adjusted R-square 0.7834
Durbin-Watson 1.678             Ljung-Box(18)=25.77 P=0.8949
Forecast error 264              BIC 276.8 (Best so far)
MAPE 0.03209                    RMSE 260.7
MAD 193.5
```

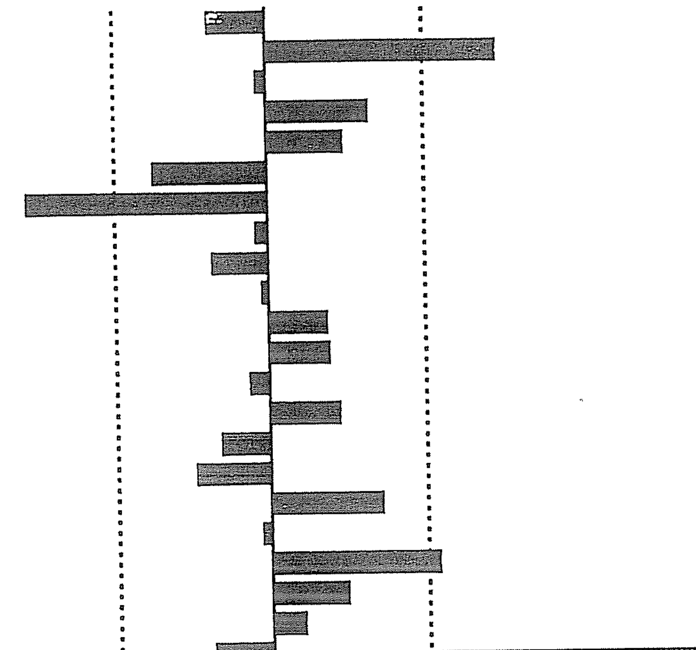
Forecast Pro for Windows

File Edit Graph Expert Model Forecasts Options Help

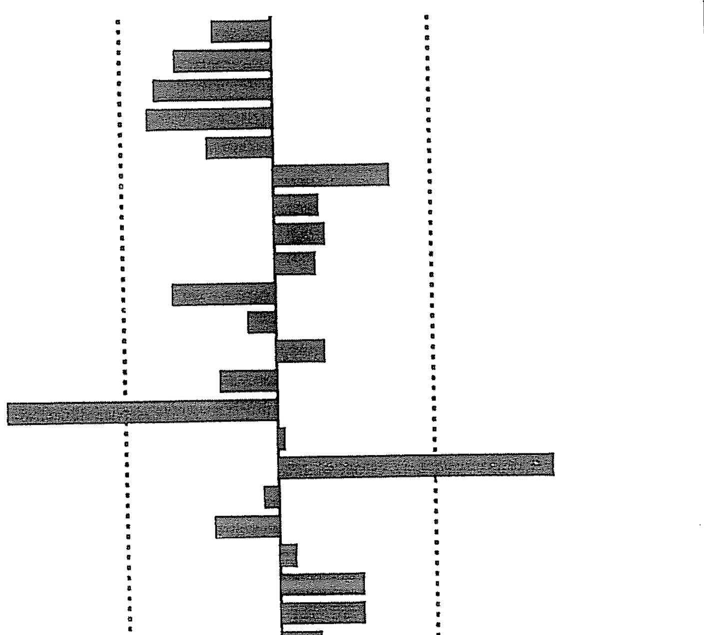
Exponential smoothing

Residual Errors

Period	Actual	Error
12-1993	6976.000	-198.765
11-1993	7268.000	763.798
10-1993	6047.000	-35.155
9-1993	6200.000	342.417
8-1993	6554.000	257.618
7-1993	6043.000	-389.233
6-1993	5606.000	-819.373
5-1993	5906.000	-44.909
4-1993	5960.000	-191.646
3-1993	6486.000	-21.206
2-1993	7133.000	198.535
1-1993	7156.000	208.674
12-1992	6968.000	-67.361
11-1992	6680.000	238.814
10-1992	5953.000	-166.060
9-1992	5790.000	-252.770
8-1992	6734.000	379.141
7-1992	6449.000	-29.172
6-1992	6615.000	558.805
5-1992	5845.000	261.641
4-1992	5849.000	117.560



Period	Actual	Error
3-1992	5962.000	-198.643
2-1992	6375.000	-328.119
1-1992	6463.000	-401.382
12-1991	6607.000	-429.897
11-1991	6290.000	-227.459
10-1991	6350.000	390.192
9-1991	5987.000	153.566
8-1991	6351.000	174.599
7-1991	6405.000	140.417
6-1991	5793.000	-347.513
5-1991	5607.000	-94.158
4-1991	5962.000	167.457
3-1991	6097.000	-191.619
2-1991	6178.000	-916.497
1-1991	7019.000	27.833
12-1990	7622.000	915.894
11-1990	6273.000	-50.060
10-1990	5730.000	-216.057
9-1990	5855.000	62.895
8-1990	6356.000	288.011
7-1990	6406.000	283.504



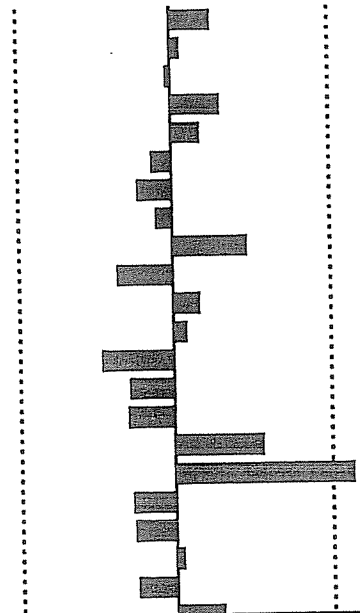
Forecast Pro for Windows

File Edit Graph Expert Model Forecasts Options Help

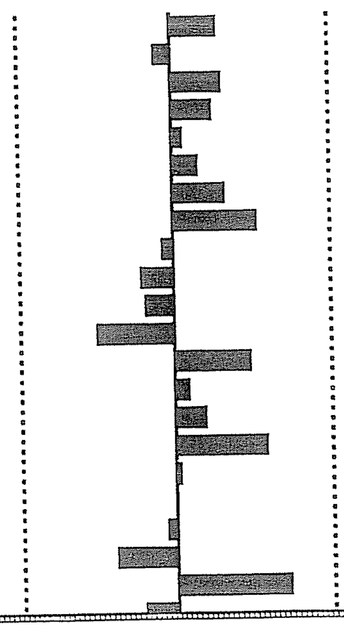
Exponential smoothing

Residual Errors

Period	Actual	Error
6-1990	6057.000	142.785
5-1990	5514.000	33.789
4-1990	5605.000	-13.230
3-1990	6154.000	167.450
2-1990	6651.000	102.974
1-1990	6435.000	-72.009
12-1989	6357.000	-111.781
11-1989	6037.000	-56.451
10-1989	5828.000	254.784
9-1989	5372.000	-189.638
8-1989	5911.000	92.736
7-1989	5977.000	46.494
6-1989	5625.000	-238.149
5-1989	5314.000	-146.162
4-1989	5476.000	-153.543
3-1989	6187.000	298.623
2-1989	6874.000	590.124
1-1989	6245.000	-137.973
12-1988	6217.000	-133.366
11-1988	5964.000	26.884
10-1988	5414.000	-127.777



Period	Actual	Error
9-1988	5561.000	158.872
8-1988	5666.000	-57.447
7-1988	5939.000	174.427
6-1988	5760.000	139.187
5-1988	5251.000	42.189
4-1988	5403.000	95.185
3-1988	5742.000	179.181
2-1988	6267.000	282.159
1-1988	6077.000	-36.900
12-1987	5982.000	-110.752
11-1987	5627.000	-96.799
10-1987	5146.000	-256.175
9-1987	5413.000	257.903
8-1987	5531.000	57.065
7-1987	5626.000	106.473
6-1987	5616.000	307.790
5-1987	4990.000	20.155
4-1987	5090.000	0.857
3-1987	5355.000	-30.985
2-1987	5733.000	-196.610
1-1987	6246.000	384.960



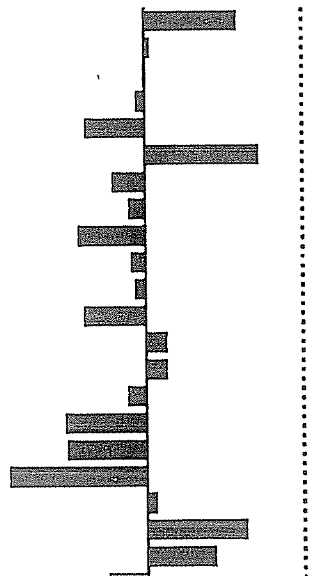
Forecast Pro for Windows

File Edit Graph Expert Model Forecasts Options Help

Exponential smoothing

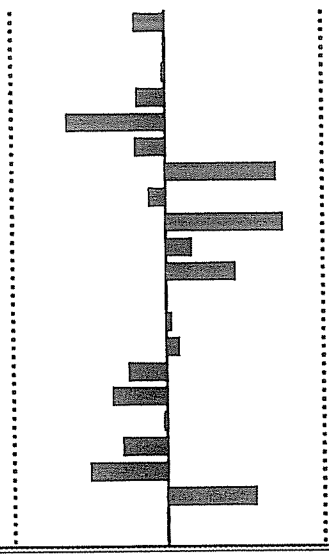
Residual Errors

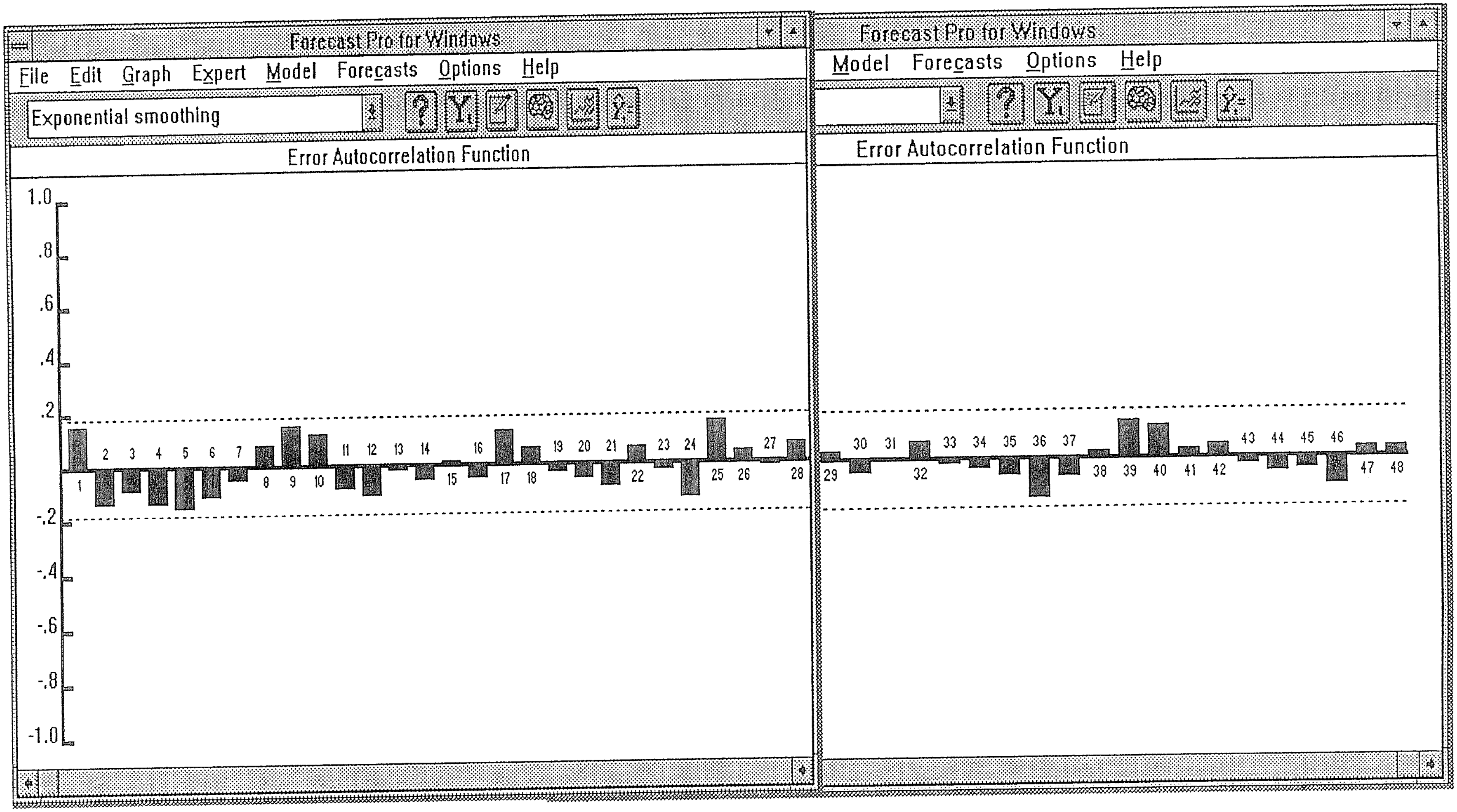
Period	Actual	Error
6-1987	5616.000	307.790
5-1987	4990.000	20.155
4-1987	5090.000	0.857
3-1987	5355.000	-30.985
2-1987	5733.000	-196.610
1-1987	6246.000	384.960
12-1986	5816.000	-110.391
11-1986	5494.000	-58.185
10-1986	5038.000	-228.283
9-1986	5016.000	-47.433
8-1986	5359.000	-36.199
7-1986	5335.000	-203.814
6-1986	5407.000	75.397
5-1986	5054.000	76.829
4-1986	5071.000	-64.408
3-1986	5251.000	-273.198
2-1986	5825.000	-262.480
1-1986	5781.000	-462.427
12-1985	6223.000	34.737
11-1985	5988.000	333.988
10-1985	5500.000	229.159



Residual Errors

Period	Actual	Error
8-1985	5387.000	-102.863
7-1985	5576.000	10.209
6-1985	5371.000	-7.659
5-1985	4979.000	-95.614
4-1985	5003.000	-332.319
3-1985	5551.000	-100.760
2-1985	6375.000	379.312
1-1985	6077.000	-56.294
12-1984	6315.000	395.278
11-1984	5599.000	92.137
10-1984	5344.000	240.717
9-1984	5001.000	12.835
8-1984	5316.000	21.422
7-1984	5403.000	47.521
6-1984	5107.000	-125.215
5-1984	4789.000	-177.037
4-1984	5110.000	-10.196
3-1984	5311.000	-149.667
2-1984	5693.000	-258.782
1-1984	6214.000	306.409





Forecast Pro for Windows
File Edit Graph Expert Model Forecasts Options Help
Exponential smoothing
Error Autocorrelation Function
1.0
.8
.6
.4
.2
-.2
-.4
-.6
-.8
-1.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Forecast Pro for Windows
Model Forecasts Options Help
Error Autocorrelation Function
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

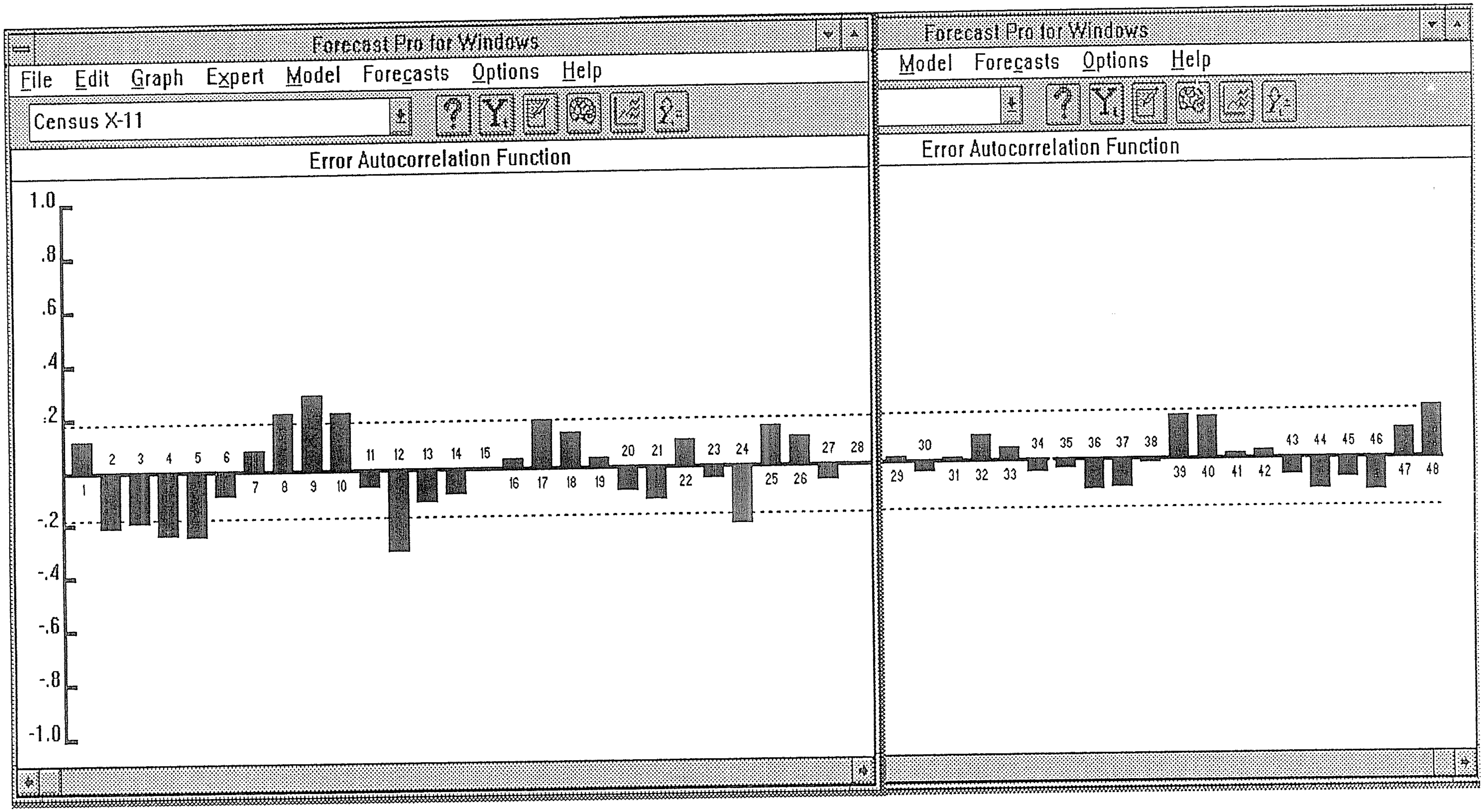
Forecast Pro for Windows

File Edit Graph Expert Model Forecasts Options Help

Census X-11

Audit Trail

```
Forecast Pro for Windows Extended Edition Version 2.00
Wed Feb 08 13:03:27 1995

Forecast Model for PEAKLD6
Automatic model selection
Multiplicative Winters: Linear trend, Multiplicative seasonality
Confidence limits proportional to indexes and level

                       Smoothing      Final
Component               Weight        Value
-------------------------------------------
Level                  0.22595       6525.5
Trend                  0.00786       8.7499
Seasonal               0.22281       1.0874

Seasonal Indexes
-------------------------------------------------------------
January - March               1.08718     1.07610     0.99642
April - June                  0.93676     0.91513     0.96731
July - September              1.00820     1.01726     0.93938
October - December            0.95108     1.03828     1.08737

Standard Diagnostics
-----------------------------------------------------------------
Sample size 120                        Number of parameters 3
Mean 5882                              Standard deviation 567.4
R-square 0.7871                        Adjusted R-square 0.7834
Durbin-Watson 1.678                    Ljung-Box(18)=25.77 P=0.8949
Forecast error 264                     BIC 276.8
MAPE 0.03209                           RMSE 260.7
MAD 193.5

Forecast Model for PEAKLD6
Census X-11 Parts B, C and D multiplicative
23-term Henderson trend-cycle weights
Trading day adjustment: off
```


Forecast Pro for Windows
File Edit Graph Expert Model Forecasts Options Help
Census X-11
Error Autocorrelation Function
1.0
.8
.6
.4
.2
-.2
-.4
-.6
-.8
-1.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Forecast Pro for Windows
Model Forecasts Options Help
Error Autocorrelation Function
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

APPENDIX THREE
UTAH REVENUE REQUIREMENT SENSITIVITY
TO ALLOCATION FACTORS SHOWN

Utah DPU
January 1995

THE IMPACT OF STRESS FACTOR CHANGES ON STATE RATES OF RETURN
(BASED ON EARNINGS AS OF DECEMBER 1993)

Allocation Method	Accord	Accord	Accord
Months of Coincident Peaks	12	12	8
Demand/Energy Percentages	75% D –25% E	100% D	75% D –25% E
State			
California	13.635%	13.426%	13.114%
Oregon	11.374%	11.170%	11.278%
Washington	12.925%	12.706%	12.249%
Idaho–PP&L	18.300%	18.024%	17.926%
Montana	10.591%	10.441%	10.252%
Wyoming–PP&L	10.093%	10.819%	10.997%
Utah	11.189%	11.114%	11.175%
Idaho–UP&L	10.628%	10.424%	9.135%
Wyoming–UP&L	11.082%	12.183%	13.426%
FERC	9.123%	8.894%	9.248%

ACCORD ALLOCATION METHOD
12 CP 100% DEMAND

UNADJUSTED RESULTS OF OPERATIONS
METHOD: STEP 2-HYDRO/TRANS
YEAR ENDED DECEMBER 1993
FILED FINAL 06/28/94

ACCT CONSENSUS FACTOR	CALIFORNIA	OREGON	WASHINGTON	IDAHO-PPL	MONTANA	WYOMING-PP	UTAH	IDAHO-UPL	WYOMING-UP	FERC	OTHER	STATE TOTAL	REPORT TOTAL	DIFFERENCE NON-UTIL
														0
Operating Revenues	65,799,789	779,333,766	211,575,571	16,506,424	43,268,356	313,942,785	862,549,738	104,054,861	105,001,150	3,849,090	0	2,505,881,531	2,505,881,531	0
Operating Expenses:														
Production	19,478,909	294,458,364	77,777,105	4,752,434	16,509,299	149,690,544	347,746,695	29,434,901	50,252,040	2,076,359	0	992,176,649	992,176,649	0
Transmission	1,143,648	18,443,785	5,156,118	351,153	1,007,895	7,860,937	21,705,978	2,986,649	2,857,372	130,969	0	61,644,505	61,644,505	0
Distribution	2,636,479	27,430,659	5,737,899	912,729	1,947,313	5,252,249	33,576,043	5,037,132	1,510,372	0	0	84,040,876	84,040,876	0
Customer Accounts	1,621,289	19,519,518	4,690,294	474,173	1,090,162	4,671,603	18,807,904	2,874,036	967,395	0	0	54,716,374	54,716,374	0
Customer Service	1,320,843	4,947,708	6,723,244	30,646	174,598	237,868	5,215,130	588,414	147,815	0	0	19,386,266	19,386,266	0
Sales	181,458	2,504,817	596,538	36,006	275,182	198,628	2,089,112	93,175	24,112	0	0	5,999,028	5,999,028	0
Administrative & General	3,764,507	43,268,902	11,220,170	958,822	2,748,255	16,041,942	51,727,885	7,927,779	5,347,983	185,334	0	143,191,579	143,191,579	0
Total O & M Expenses	30,147,133	410,573,753	111,901,368	7,515,963	23,752,704	183,953,771	480,868,748	48,942,086	61,107,089	2,392,663	0	1,361,155,277	1,361,155,277	0
Depreciation	6,504,859	72,109,798	18,240,245	1,607,139	3,933,519	25,415,689	85,902,770	13,293,451	9,051,612	338,406	0	236,397,488	236,397,488	0
Amortization Expense	437,660	5,753,501	2,627,911	109,476	322,851	2,897,158	5,108,815	737,122	1,761,654	21,650	0	19,777,897	19,777,897	0
Taxes Other Than Income	2,898,807	39,216,747	7,902,204	587,748	1,517,760	11,299,667	32,151,551	4,659,293	3,748,360	140,037	(18)	104,122,156	104,122,156	0
Income Taxes - Federal	4,827,427	42,404,896	12,883,338	1,350,256	2,173,061	14,565,897	29,856,073	4,068,936	3,846,306	71,581	(14,236)	116,033,535	116,033,535	(0)
Income Taxes - State	590,830	5,189,945	1,576,795	165,258	265,961	1,782,723	3,654,091	497,998	470,750	8,761	(552)	14,202,560	14,202,560	(0)
Income Taxes - Def Net	2,228,009	16,839,885	4,780,207	(92,726)	1,117,500	7,957,914	32,353,875	4,781,276	3,440,303	138,411	0	73,544,653	73,542,650	2,003
Investment Tax Credit Adj	0	0	0	0	0	0	(5,413,266)	(746,748)	(700,359)	(32,722)	0	(6,893,095)	(6,893,095)	0
Misc Revenue & Expense	809	16,530	3,659	249	716	5,740	147,129	12,484	1,998	(73)	0	189,241	189,241	(0)
Total Operating Expenses	47,635,533	592,105,054	159,915,727	11,243,363	33,084,073	247,878,559	664,629,887	76,245,897	82,727,713	3,078,713	(14,807)	1,918,529,712	1,918,527,709	2,003
Operating Revenue for Return	18,164,256	187,228,712	51,659,844	5,263,061	10,184,283	66,064,226	197,919,851	27,808,964	22,273,437	770,377	14,807	587,351,819	587,353,822	(2,003)
Rate Base:														
Electric Plant in Service	246,077,218	2,813,331,885	744,694,379	60,407,955	161,092,877	1,073,568,747	3,366,915,200	497,454,860	377,060,438	14,687,900	0	9,355,291,458	9,355,291,458	0
Plant Held for Future Use	113,818	1,730,228	457,444	31,679	89,946	729,302	2,527,456	345,241	281,645	11,031	0	6,317,790	6,317,790	0
Misc Deferred Debits	1,232,568	18,783,722	6,470,600	357,714	1,341,393	11,837,119	17,915,272	2,494,308	3,208,313	97,513	0	63,738,522	63,738,522	0
Elec Plant Acq Adj	1,736,391	27,957,152	7,812,916	532,732	1,526,146	15,641,354	20,902,360	2,883,433	2,704,312	126,352	0	81,823,149	81,823,149	(0)
Nuclear Fuel	0	1	0	0	0	0	1	0	0	0	0	2	2	0
Prepayments	730,239	20,299,441	3,072,113	214,936	610,969	4,792,963	9,644,553	1,356,541	1,437,432	48,802	0	42,207,990	42,207,990	0
Fuel Stock	1,131,950	18,544,546	5,201,622	350,209	1,023,651	9,459,594	19,917,477	2,666,811	3,095,696	117,862	0	61,509,417	61,509,417	0
Material & Supplies	2,807,794	36,248,598	9,643,066	746,455	2,147,344	15,551,686	43,658,297	6,344,720	5,436,736	227,979	0	122,812,677	122,812,677	(0)
Working Capital	2,321,177	26,487,248	7,425,901	597,431	1,829,629	7,775,978	15,447,762	3,518,732	2,140,332	26,757	0	67,570,947	67,570,947	0
Weatherization Loans	2,906,657	51,485,250	2,204,615	1,266,349	946,738	166,383	4,451,086	3,869,947	27,885	158	0	67,325,069	67,325,069	0
Miscellaneous Rate Base	844,090	13,891,595	3,805,856	259,182	743,972	5,806,885	4,703,495	642,980	646,156	28,248	0	31,372,460	31,372,460	0
Total Electric Plant	259,901,901	3,028,759,663	790,788,512	64,764,643	171,352,666	1,145,330,011	3,506,082,959	521,577,574	396,038,946	15,372,602	0	9,899,969,479	9,899,969,479	0
Rate Base Deductions:														
Accum Prov For Depr	(69,343,868)	(831,939,366)	(229,290,067)	(17,010,965)	(48,913,660)	(331,233,404)	(997,356,067)	(154,008,888)	(108,699,555)	(4,366,993)	0	(2,792,162,834)	(2,792,162,834)	0
Accum Prov For Amort	(1,442,671)	(18,410,757)	(4,874,531)	(377,699)	(946,182)	(9,976,444)	(17,719,206)	(2,996,640)	(1,981,237)	(68,706)	0	(58,794,073)	(58,794,073)	(0)
Accum Def Income Taxes	(7,862,267)	(99,434,951)	(25,002,774)	(4,357,399)	(5,556,669)	(60,746,046)	(320,661,201)	(49,201,872)	(53,437,435)	(1,495,029)	0	(627,755,644)	(634,407,662)	6,652,018
Unamortized ITC	(2,224,047)	(35,560,753)	(7,182,572)	(3,714)	(699,477)	(6,382,527)	(855,236)	(181,559)	(159,186)	(2,067)	0	(53,251,138)	(53,251,138)	(0)
Customer Adv for Const	(733,079)	(902,230)	(114,773)	(32,247)	(32,749)	(3,208,935)	(6,853,709)	(847,312)	(674,280)	(1,679)	0	(13,400,993)	(13,400,993)	0
Customer Service Deposits	0	0	0	0	0	0	(2,651,620)	(235,722)	(59,424)	0	0	(2,946,766)	(2,946,766)	0
Miscellaneous Rate Base Deduc	(409,238)	(6,606,056)	(1,847,151)	(125,712)	(361,220)	(2,848,943)	(1,814,372)	(245,984)	(262,393)	(10,832)	0	(14,531,901)	(14,531,901)	(0)
Total Rate Base Deductions	(82,015,170)	(992,854,114)	(268,311,868)	(21,907,735)	(56,509,957)	(414,396,299)	(1,347,911,410)	(207,717,977)	(165,273,510)	(5,945,307)	0	(3,562,843,347)	(3,569,495,366)	6,652,018
Total Rate Base	177,886,732	2,035,905,549	522,476,644	42,856,908	114,842,709	730,933,713	2,158,171,549	313,859,597	230,765,436	9,427,295	0	6,337,126,132	6,330,474,114	6,652,018
Return on Rate Base	10.21%	9.20%	9.89%	12.28%	8.87%	9.04%	9.17%	8.86%	9.65%	8.17%	0.00%		9.28%	
Return on Equity	13.426%	11.170%	12.706%	18.024%	10.441%	10.819%	11.114%	10.424%	12.183%	8.894%	-9.266%		11.352%	
100 Basis Points in Equity:														
Revenue Requirement Impact	1,288,205	14,743,442	3,783,626	310,357	831,658	5,293,212	15,628,857	2,272,881	1,671,137	68,270	(23,828)		45,843,472	
Rate Base Decrease	(7,508,490)	(94,974,663)	(22,743,859)	(1,514,909)	(5,546,154)	(34,665,747)	(100,946,425)	(15,169,921)	(10,279,612)	(492,043)	3,290,404		(292,830,575)	

ACCORD ALLOCATION METHOD
12 CP 75% DEMAND 25% ENERGY

UNADJUSTED RESULTS OF OPERATIONS
METHOD: STEP 2-HYDRO/TRANS
YEAR ENDED DECEMBER 1993
FILED FINAL 04/29/94

	ACCT	CONSENSUS FACTOR	CALIFORNIA	OREGON	WASHINGTON	IDAHO-PPL	MONTANA	WYOMING-PP	UTAH	IDAHO-UPL	WYOMING-UP	FERC	OTHER	STATE TOTAL	REPORT TOTAL	(0) DIFFERENCE NON-UTIL
175																
176																
177		Operating Revenues	65,639,275	777,289,791	211,036,784	16,462,122	43,175,949	315,999,283	862,584,255	103,915,067	105,934,246	3,844,760	0	2,505,881,531	2,505,881,531	0
178																0
179		Operating Expenses:														0
180		Production	19,333,279	292,634,608	77,298,696	4,712,521	16,428,224	151,734,411	347,532,836	29,257,560	51,174,090	2,070,424	0	992,176,649	992,176,649	0
181		Transmission	1,124,276	18,199,352	5,091,857	345,827	996,945	8,122,186	21,686,058	2,963,789	2,983,999	130,217	0	61,644,505	61,644,505	0
182		Distribution	2,636,479	27,430,659	5,737,899	912,729	1,947,313	5,252,249	33,576,043	5,037,132	1,510,372	0	0	84,040,876	84,040,876	0
183		Customer Accounts	1,621,289	19,519,518	4,690,294	474,173	1,090,162	4,671,603	18,807,904	2,874,036	967,395	0	0	54,716,374	54,716,374	0
184		Customer Service	1,320,843	4,947,708	6,723,244	30,646	174,598	237,868	5,215,130	588,414	147,815	0	0	19,386,266	19,386,266	0
185		Sales	181,458	2,504,817	596,538	36,006	275,182	198,628	2,089,112	93,175	24,112	0	0	5,999,028	5,999,028	0
186		Administrative & General	3,740,045	42,970,045	11,142,350	952,186	2,735,311	16,428,629	51,629,439	7,884,641	5,525,122	183,811	0	143,191,579	143,191,579	0
187		Total O & M Expenses	29,957,670	408,206,706	111,280,878	7,464,087	23,647,735	186,645,575	480,536,521	48,698,747	62,332,905	2,384,452	0	1,361,155,277	1,361,155,277	0
188		Depreciation	6,460,686	71,570,134	18,099,723	1,595,156	3,910,145	26,114,098	85,711,451	13,210,513	9,390,108	335,474	0	236,397,488	236,397,488	(0)
189		Amortization Expense	433,653	5,704,911	2,615,287	108,392	320,763	2,962,608	5,096,560	731,955	1,782,301	21,467	0	19,777,897	19,777,897	(0)
190		Taxes Other Than Income	2,881,778	39,007,574	7,847,649	583,118	1,508,648	11,562,389	32,083,351	4,627,888	3,880,846	138,934	(18)	104,122,156	104,122,156	0
191		Income Taxes - Federal	4,901,158	43,299,969	13,115,953	1,370,205	2,211,562	13,367,036	30,242,175	4,224,683	3,237,897	77,133	(14,236)	116,033,535	116,033,535	(0)
192		Income Taxes - State	599,854	5,299,493	1,605,264	167,700	270,674	1,635,994	3,701,347	517,060	398,287	9,440	(552)	14,202,560	14,202,560	0
193		Income Taxes - Def Net	2,213,819	16,666,314	4,734,995	(96,577)	1,109,972	8,181,058	32,283,709	4,751,095	3,562,925	137,343	0	73,544,653	73,542,650	2,003
194		Investment Tax Credit Adj.	0	0	0	0	0	0	(5,390,080)	(738,075)	(732,530)	(32,410)	0	(6,893,095)	(6,893,095)	0
195		Misc Revenue & Expense	809	16,530	3,659	249	716	5,740	147,181	12,503	1,926	(73)	0	189,241	189,241	0
196		Total Operating Expenses	47,449,426	589,771,631	159,303,409	11,192,330	32,980,215	250,474,498	664,412,214	76,036,369	83,852,665	3,071,761	(14,807)	1,918,529,712	1,918,527,709	2,003
197																0
198		Operating Revenue for Return	18,189,850	187,518,159	51,733,376	5,269,791	10,195,734	65,524,785	198,172,041	27,878,698	22,081,580	772,999	14,807	587,351,819	587,353,822	(2,003)
199																0
200																0
201		Rate Base:														
202		Electric Plant in Service	244,190,011	2,790,264,946	738,687,177	59,895,907	160,093,305	1,103,344,481	3,359,112,722	494,035,938	391,099,799	14,567,172	0	9,355,291,458	9,355,291,458	(0)
203		Plant Held for Future Use	112,639	1,715,745	453,666	31,359	89,315	747,446	2,522,668	343,033	290,967	10,953	0	6,317,790	6,317,790	0
204		Misc Deferred Debits	1,222,933	18,664,040	6,439,281	355,082	1,336,118	11,978,072	17,903,458	2,484,773	3,257,573	97,193	0	63,738,522	63,738,522	0
205		Elec Plant Acq Adj	1,704,169	27,551,393	7,706,305	523,881	1,508,007	18,080,622	20,916,298	2,864,111	2,842,594	125,769	0	81,823,149	81,823,149	0
206		Nuclear Fuel	0	1	0	0	0	0	1	0	0	0	0	2	2	0
207		Prepayments	721,467	20,190,302	3,043,540	212,538	606,150	4,920,253	9,642,245	1,350,780	1,472,099	48,617	0	42,207,990	42,207,990	(0)
208		Fuel Stock	1,131,950	18,544,546	5,201,622	350,209	1,023,651	9,459,594	19,917,477	2,666,811	3,095,696	117,862	0	61,509,417	61,509,417	0
209		Material & Supplies	2,780,720	35,915,395	9,556,111	739,089	2,132,799	15,965,617	43,582,040	6,298,474	5,636,071	226,362	0	122,812,677	122,812,677	0
210		Working Capital	2,314,394	28,404,267	7,404,285	595,590	1,826,030	7,882,565	15,421,170	3,506,887	2,189,420	26,340	0	67,570,947	67,570,947	(0)
211		Weatherization Loans	2,906,636	51,485,000	2,204,550	1,266,344	946,728	166,705	4,451,002	3,869,911	28,037	157	0	67,325,069	67,325,069	0
212		Miscellaneous Rate Base	831,379	13,736,647	3,765,536	255,737	737,277	6,009,812	4,701,416	639,385	667,138	28,132	0	31,372,460	31,372,460	0
213																0
214		Total Electric Plant	257,916,298	3,004,472,282	784,462,073	64,225,735	170,299,378	1,176,555,166	3,498,150,497	518,060,101	410,579,393	15,248,557	0	9,899,969,479	9,899,969,479	0
215																0
216		Rate Base Deductions:														0
217		Accum Prov For Depr	(68,766,437)	(824,955,323)	(227,477,080)	(16,854,968)	(48,614,464)	(340,771,951)	(994,696,253)	(152,959,922)	(112,736,940)	(4,329,497)	0	(2,792,162,834)	(2,792,162,834)	0
218		Accum Prov For Amort	(1,433,399)	(18,297,535)	(4,845,053)	(375,185)	(941,281)	(10,123,306)	(17,682,754)	(2,980,682)	(2,046,737)	(68,143)	0	(58,794,073)	(58,794,073)	0
219		Accum Def Income Taxes	(7,847,826)	(99,255,002)	(24,955,639)	(4,353,449)	(5,548,711)	(60,953,935)	(320,675,204)	(49,198,665)	(53,472,260)	(1,494,952)	0	(627,755,644)	(634,407,662)	6,652,018
220		Unamortized ITC	(2,224,011)	(35,560,295)	(7,182,451)	(3,704)	(699,456)	(8,382,983)	(853,972)	(181,051)	(161,166)	(2,049)	0	(53,251,138)	(53,251,138)	(0)
221		Customer Adv for Const	(732,767)	(898,280)	(113,733)	(32,161)	(32,571)	(3,213,014)	(6,853,693)	(847,030)	(676,074)	(1,670)	0	(13,400,993)	(13,400,993)	0
222		Customer Service Deposits	0	0	0	0	0	0	(2,651,620)	(235,722)	(59,424)	0	0	(2,946,766)	(2,946,766)	0
223		Miscellaneous Rate Base Deduc	(403,491)	(6,536,289)	(1,829,020)	(124,157)	(358,219)	(2,942,378)	(1,814,874)	(245,288)	(267,373)	(10,811)	0	(14,531,901)	(14,531,901)	0
224		Total Rate Base Deductions	(81,407,932)	(985,502,724)	(266,402,976)	(21,743,623)	(56,194,702)	(424,387,567)	(1,345,228,368)	(206,648,359)	(169,419,973)	(5,907,122)	0	(3,562,843,347)	(3,569,495,366)	6,652,018
225																
226		Total Rate Base	176,508,366	2,018,969,557	518,059,097	42,482,112	114,104,676	752,167,599	2,152,922,128	311,411,741	241,159,421	9,341,435	0	6,337,126,132	6,330,474,114	6,652,018
227																
228																
229		Return on Rate Base	10.31%	9.29%	9.99%	12.40%	8.94%	8.71%	9.20%	8.95%	9.16%	8.27%	0.00%		9.28%	
230																
231		Return on Equity	13.635%	11.374%	12.925%	18.300%	10.591%	10.093%	11.189%	10.628%	11.082%	9.123%	-9.266%		11.352%	
232																
233		100 Basis Points in Equity:														
234		Revenue Requirement Impact	1,278,223	14,620,797	3,751,635	307,643	826,313	5,446,981	15,590,843	2,255,154	1,746,407	67,648	(23,828)		45,843,472	
235		Rate Base Decrease	(7,385,030)	(93,299,810)	(22,338,695)	(1,487,153)	(5,470,943)	(36,945,574)	(100,345,485)	(14,904,268)	(11,296,788)	(481,796)	3,290,404		(292,830,575)	

ACCORD ALLOCATION METHOD
8 CP 75% DEMAND 25% ENERGY

UNADJUSTED RESULTS OF OPERATIONS
METHOD: STEP 2-HYDRO/TRANS
YEAR ENDED DECEMBER 1993
FILED FINAL 06/29/94

	ACCT	CONSENSUS FACTOR	CALIFORNIA	OREGON	WASHINGTON	IDAHO-PPL	MONTANA	WYOMING-PP	UTAH	IDAHO-UPL	WYOMING-UP	FERC	OTHER	STATE TOTAL	REPORT TOTAL	0 DIFFERENCE NON-UTIL
175																
176																
177		Operating Revenues	65,964,189	777,772,477	212,303,203	16,507,320	43,320,349	313,132,703	863,113,029	105,682,292	104,242,893	3,843,077	0	2,505,881,531	2,505,881,531	(0)
178																0
179		Operating Expenses.														0
180		Production	19,653,408	293,207,499	78,550,608	4,758,169	16,573,418	149,015,653	347,890,367	31,037,950	49,421,959	2,067,619	0	992,176,649	992,176,649	0
181		Transmission	1,165,344	18,267,440	5,252,227	351,621	1,015,409	7,767,542	21,741,623	3,206,983	2,746,442	129,875	0	61,644,505	61,644,505	0
182		Distribution	2,636,479	27,430,659	5,737,899	912,729	1,947,313	5,252,249	33,578,043	5,037,132	1,510,372	0	0	84,040,876	84,040,876	0
183		Customer Accounts	1,621,289	19,519,518	4,690,294	474,173	1,090,162	4,671,603	18,807,904	2,874,036	967,395	0	0	54,716,374	54,716,374	0
184		Customer Service	1,320,843	4,947,708	6,723,244	30,646	174,598	237,868	5,215,130	588,414	147,815	0	0	19,386,266	19,386,266	0
185		Sales	181,458	2,504,817	596,538	36,006	275,182	198,628	2,089,112	93,175	24,112	0	0	5,999,028	5,999,028	0
186		Administrative & General	3,799,974	43,098,861	11,377,625	960,979	2,763,138	15,943,069	51,660,628	8,234,523	5,169,775	183,006	0	143,191,579	143,191,579	0
187		Total O & M Expenses	30,378,795	408,976,501	112,928,435	7,524,322	23,839,220	183,086,613	480,980,807	51,072,213	59,987,870	2,380,501	0	1,361,155,277	1,361,155,277	0
188		Depreciation	6,568,922	71,802,833	18,524,655	1,611,037	3,960,405	25,237,176	85,768,967	13,879,543	8,710,029	333,922	0	236,397,488	236,397,488	0
189		Amortization Expense	443,769	5,727,603	2,655,043	109,887	325,489	2,881,670	5,099,614	772,856	1,740,596	21,369	0	19,777,897	19,777,897	0
190		Taxes Other Than Income	2,922,577	39,092,364	8,007,702	589,071	1,527,506	11,228,660	32,110,263	4,888,828	3,616,846	138,358	(18)	104,122,156	104,122,156	0
191		Income Taxes - Federal	4,715,775	42,886,351	12,387,507	1,342,832	2,125,026	14,852,634	30,167,168	3,016,357	4,474,004	80,117	(14,236)	116,033,535	116,033,535	(0)
192		Income Taxes - State	577,165	5,248,870	1,516,110	164,350	260,082	1,817,817	3,692,166	369,173	547,574	9,806	(552)	14,202,560	14,202,560	(0)
193		Income Taxes - Def Net	2,248,417	16,740,157	4,870,802	(91,507)	1,126,022	7,900,164	32,303,965	4,993,573	3,316,283	136,776	0	73,544,653	73,542,650	2,003
194		Investment Tax Credit Adj.	0	0	0	0	0	0	(5,392,247)	(802,344)	(666,263)	(32,240)	0	(6,893,095)	(6,893,095)	0
195		Misc Revenue & Expense	809	16,530	3,659	249	716	5,740	147,176	12,359	2,075	(72)	0	189,241	189,241	0
196		Total Operating Expenses	47,856,230	590,491,209	160,893,914	11,250,241	33,164,467	247,010,474	664,877,879	78,202,557	81,729,013	3,068,536	(14,807)	1,918,529,712	1,918,527,709	2,003
197																0
198		Operating Revenue for Return	18,107,959	187,281,268	51,409,289	5,257,079	10,155,882	66,122,229	198,235,150	27,479,735	22,513,880	774,540	14,807	587,351,819	587,353,822	(2,003)
199																0
200																0
201		Rate Base:														0
202		Electric Plant in Service	248,805,365	2,800,159,900	756,805,688	60,572,774	162,235,646	1,065,921,348	3,361,584,697	521,766,260	362,936,383	14,503,398	0	9,355,291,458	9,355,291,458	(0)
203		Plant Held for Future Use	115,457	1,721,584	464,720	31,770	90,617	724,375	2,524,567	361,391	272,396	10,913	0	6,317,790	6,317,790	0
204		Misc Deferred Debits	1,244,926	18,706,242	6,525,409	358,250	1,346,178	11,794,375	17,822,322	2,579,940	3,163,839	97,041	0	63,738,522	63,738,522	0
205		Elec Plant Acq Adj	1,773,148	27,668,196	7,975,776	533,641	1,539,093	15,487,587	21,000,537	3,124,794	2,594,816	125,560	0	81,823,148	81,823,149	(0)
206		Nuclear Fuel	0	1	0	0	0	0	1	0	0	0	0	2	2	0
207		Prepayments	741,341	20,227,921	3,121,348	215,396	615,226	4,753,691	9,659,511	1,416,929	1,408,090	48,538	0	42,207,990	42,207,990	0
208		Fuel Stock	1,131,955	18,544,626	5,201,645	350,210	1,023,656	9,459,635	19,917,298	2,666,822	3,095,708	117,863	0	61,509,417	61,509,417	0
209		Material & Supplies	2,845,052	36,047,380	9,808,409	748,455	2,162,482	15,437,542	43,606,685	6,690,208	5,240,939	225,524	0	122,812,677	122,812,677	0
210		Working Capital	2,330,919	26,439,467	7,469,146	598,011	1,833,693	7,748,327	15,430,352	3,603,746	2,091,166	26,119	0	67,570,947	67,570,947	0
211		Weatherization Loans	2,906,686	51,485,107	2,204,745	1,266,351	946,751	166,300	4,451,029	3,870,210	27,733	156	0	67,325,069	67,325,069	0
212		Miscellaneous Rate Base	862,803	13,805,091	3,888,943	260,358	751,895	5,756,180	4,711,420	679,516	628,174	28,081	0	31,372,460	31,372,460	0
213																0
214		Total Electric Plant	262,757,653	3,014,805,515	803,465,830	64,935,216	172,545,236	1,137,249,360	3,500,808,418	546,759,816	381,459,243	15,183,193	0	9,899,969,479	9,899,969,479	0
215																0
216		Rate Base Deductions.														0
217		Accum Prov For Depr	(70,239,431)	(828,305,787)	(233,267,802)	(17,073,197)	(49,303,969)	(329,037,153)	(995,132,615)	(160,991,542)	(104,502,102)	(4,309,236)	0	(2,792,162,834)	(2,792,162,834)	0
218		Accum Prov For Amort	(1,456,156)	(18,346,585)	(4,834,400)	(378,525)	(951,852)	(9,939,069)	(17,694,253)	(3,110,063)	(1,915,325)	(67,845)	0	(58,794,073)	(58,794,073)	(0)
219		Accum Def Income Taxes	(7,880,306)	(99,315,658)	(25,082,766)	(4,358,110)	(5,563,518)	(60,680,828)	(320,703,351)	(49,282,877)	(53,413,281)	(1,494,948)	0	(627,755,644)	(634,407,662)	6,652,018
220		Unamortized ITC	(2,224,083)	(35,560,400)	(7,182,733)	(3,714)	(699,488)	(6,382,344)	(854,212)	(184,984)	(157,141)	(2,039)	0	(53,251,138)	(53,251,138)	(0)
221		Customer Adv for Const	(733,410)	(899,283)	(116,241)	(32,251)	(32,858)	(3,207,393)	(6,854,656)	(850,439)	(672,795)	(1,666)	0	(13,400,993)	(13,400,993)	(0)
222		Customer Service Deposits	0	0	0	0	0	0	(2,651,620)	(235,722)	(59,424)	0	0	(2,946,766)	(2,946,766)	0
223		Miscellaneous Rate Base Deduc	(417,939)	(6,568,508)	(1,885,789)	(126,290)	(364,963)	(2,826,583)	(1,817,898)	(254,677)	(258,450)	(10,804)	0	(14,531,901)	(14,531,901)	(0)
224		Total Rate Base Deductions	(82,951,325)	(988,996,221)	(272,469,731)	(21,972,086)	(56,916,647)	(412,073,371)	(1,345,708,605)	(214,890,304)	(160,978,519)	(5,886,538)	0	(3,562,843,347)	(3,569,495,366)	6,652,018
225																
226		Total Rate Base	179,806,327	2,025,809,294	530,996,099	42,963,130	115,628,588	725,175,989	2,155,099,813	331,869,512	220,480,724	9,296,654	0	6,337,126,132	6,330,474,114	6,652,018
227																
228																
229		Return on Rate Base	10.07%	9.24%	9.68%	12.24%	8.78%	9.12%	9.20%	8.28%	10.21%	8.33%	0.00%		9.28%	
230																
231		Return on Equity	13.114%	11.278%	12.249%	17.926%	10.252%	10.997%	11.175%	9.135%	13.426%	9.248%	-9.266%		11.352%	
232																
233		100 Basis Points in Equity														
234		Revenue Requirement Impact	1,302,106	14,670,328	3,845,321	311,127	837,349	5,251,516	15,606,613	2,403,304	1,596,658	67,324	(23,828)		45,843,472	
235		Rate Base Decrease	(7,690,741)	(94,031,611)	(23,584,290)	(1,523,965)	(5,635,414)	(34,105,977)	(100,513,331)	(17,106,121)	(9,306,240)	(476,405)	3,290,404		(292,830,575)	