SAMPLE SELECTION CRITERIA
DPU Exhibit 6.4
DPU Witness: Artie Powell
Docket No. 01-035-01

PacifiCorp uses what appears to be a logical set of criteria to screen and arrive at its sample of utilities. This set of criteria are similar to those used in previous rate cases. Namely, all electric utilities, (1) with a single-A or higher bond rating, (2) that have electric revenues at least 75 percent of total revenues, and (3) for which complete and reliable data are available. While these criteria seem reasonable, preliminary results indicate a lack of correlation with the estimated ROEs coming from the DCF models.

A sample of fifty-six utilities was taken from Value Line reports. For these utilities ROE estimates were calculated using the constant growth DCF model. The price and dividends are from Value Line while the growth rate is an earnings growth weight from Zacks' web site. Moody's bond ratings and the percent of income from electric operations were obtain from "C. A. Turner, Utility Reports," information obtained in response to DPU Data Request 3.9.

The Null hypothesis is that the correlation between the variables is zero. If the selection criteria are an indication of risk, we would expect to reject this hypothesis in favor of the alternative that the variables are significantly correlated. Specifically,

$$H_0: \rho = 0 \quad H_A: \rho \neq 0$$

where ρ is the correlation coefficient.

Table 1: Correlation Results

Correlation with the Estimated ROE

	Income	Bond Rating
n	56	56
Correlation	-0.23	-0.17
t-stat	-1.76	-1.30
Critical Value	2.00	2.00
p-Value	0.08	0.20

The correlation between the estimated ROEs and income is -0.23. The tests statistic for this correlation is -1.76 which has a p-value of 0.08. The p-value indicates that we would fail to reject our null hypothesis for significance levels as great as 8 percent.

To calculate a correlation between the bond rating and the ROEs, I assigned numbers to Moody's

letter rating, ranging from 1 to 5.67. The resulting correlation coefficient is -0.17. The t-statistic and p-value for this correlation are -1.3 and 0.20 respectively. Given this large of a p-value indicates that we would fail to reject the Null hypothesis for all conventional significant levels (1 to 10 percent).