Q. Please state your name, business address and present position with PacifiCorp, dba Rocky Mountain Power ("Company").

A. My name is Peter C. Eelkema, my business address is 825 NE Multnomah, Suite 600, Portland, Oregon 97232, and my present position is Lead/Senior Consultant, Load and Revenue Forecasting.

Qualifications

Q. Briefly describe your education and business experience.

A. I earned an undergraduate degree in Economics from San Jose State University in San Jose, California. I also earned a PhD in Economics from the University of Kansas.

From September 1989 to October 1993, I was a Managing Research Economist at the Kansas Corporation Commission. From October 1993 to March 1996, I was an Economist at the Nevada Office of Advocate for Customers of Public Utilities. From March 1996 to March 1998, I was a Senior Economist, Forecasting, at Sierra Pacific Power/Nevada Power Company, and from March 1998 to January 2005, I was a Staff Economist, Forecasting at Sierra Pacific Power/Nevada Power Company. From January 2005 to May 2008, I was a Consultant, Load and Revenue Forecasting at PacifiCorp. I was promoted to my current position in May 2008.

Q. Please describe your current duties.

A. I am the senior consultant of the Load and Revenue Forecasting group. The Load and Revenue Forecasting group is responsible for the development of the test year kilowatt-hour sales, number of customers, system loads, and system peaks for the Company's six retail jurisdictions.

Q. Have you previously testified before a regulatory commission?

A. Yes. I have testified before the Idaho, Utah, and Wyoming Public Utility Commissions, the Nevada Public Service Commission, and the Kansas Corporation Commission.

Purpose and Summary of Testimony

Q. Please explain the purpose of your testimony in this proceeding.

A. I describe how we developed the forecasts of the number of customers, kilowatt-hour sales at the meter ("sales"), system loads and system peak loads at the system input level ("loads"), and number of bills for the 12-month period ending June 30, 2012. We produce these forecasts for all six states in which the Company serves retail customers to develop jurisdictional allocation factors, forecasted revenues, and net power costs. In addition to the class level forecasts for bills and sales, we have developed a forecast of bills and kilowatt-hour sales by rate schedule for Utah.

Q. How were the forecasts utilized in the preparation of this general rate case?

A. The forecasted loads for Utah for the 12 months ended June 2012 were used by Company witness Mr. Gregory N. Duvall to calculate Utah net power costs, and by Company witness Mr. Steven R. McDougal to calculate the revenue requirement and jurisdictional allocation factors. Additionally, forecasted sales by rate schedule are used by Company witnesses Mr. William R. Griffith and Mr. C. Craig Paice to allocate costs between customer classes and to design rates which correctly reflect the cost of service. The sum of energy by rate schedule ties to the forecasted energy by customer class.

Q. Please provide a summary of the forecasted energy sales.

A. Table 1 provides the forecasted energy sales for the test period.

Table 1, Test Period Sales Forecast (MWh)

	July 2011 to June 2012	
	Total Company	Utah
Residential	16,404,658	6,856,828
Commercial	17,364,358	8,328,358
Industrial	20,884,404	8,585,404
Irrigation	1,292,480	187,460
Public Authority	437,310	437,310
Lighting	141,300	76,840
Total	56,524,510	24,472,200

Q. How is your testimony organized?

A. My testimony is organized as follows:

- I briefly describe the discussion from the Commission Ordered workshop regarding the sales and coincident peak forecasts.
- I describe the major changes in forecast assumptions and data used to produce the forecast.
- I describe the process of developing monthly sales for the residential, commercial, irrigation, and lighting customer classes.
- I describe the process of developing monthly sales for the industrial customer class.
- I describe the process of developing monthly sales for the state.
- I describe the hourly load forecasting process.
- I describe the rate schedule forecasting process.

- I compare the weather normalized base period sales to the test year forecasted sales. I compare how well the forecast used in the settlement in the 2009 Utah general rate case is tracking actual sales for 2010.
- Finally, I conclude by indicating why this forecast is reasonable.

Commission Ordered Workshop

Q. In the Company's 2009 General Rate Case ("GRC"), did this Commission order a workshop regarding the development of the jurisdictional contribution to the coincident peak?

A. Yes, on page 122 of the Commission's Final Order, this Commission directed the Division of Public Utilities "to convene a work group to examine the Company's load forecasting methods." In response to this Order, participants met seven times between May and November 2010.

Q. Did any work group participants express concern about the Company's forecasting methodology?

A. No. The methodology was discussed by participants and, as a result, the participants appear to have a much better understanding of the Company's load forecasting process than before. None of the participants expressed concern about the methodology during the work group discussions or in their reports to this Commission. During the work group meetings, the Company presented a flow diagram of its forecasting methodology. I have attached a copy of this flow diagram ("flow diagram") as Exhibit RMP___(PCE-1).

Q. Does the forecast in this case employ the same methodology as presented to the Commission in the 2009 GRC and presented to the Utah work group?

A. Yes.

Q. Please provide a general overview of the methodology.

A. In summary, this methodology consists of first developing a forecast of monthly sales by customer class and monthly peak load by state. This sales forecast becomes the basis of the load forecast by adding line losses, (*i.e.*, kWh sales levels are grossed-up to a generation or "input" level). The monthly loads are then spread to each hour based on the peak load forecast and typical hourly load patterns.

Summary of Changes in Forecast Assumptions

Q. Please summarize major updates in data used to produce the forecast.

A. There are eight notable updates in data inputs compared to the forecast prepared in the 2009 general rate case:

1. We added 18 months of actual data and updated the historical data period used to develop the monthly retail sales forecasts to January 1997 through July 2010. The historical data period used to develop the model driven portion of industrial monthly sales is from January 2002 through July 2010;

2. We updated the historical data period used to develop the monthly peak forecasts with an additional year of data so the time period is January 1997 through December 2009;

3. We updated the economic drivers from IHS Global Insight using the most recent information available for each of the Company's jurisdictions;

4. We updated the forecast of individual industrial customer usage based on data collected in August 2010;

5. We updated the time period used to define normal weather to the 20-year time period of 1990-2009;

6. We updated the line loss calculation to the five-year period ending December 2009;

7. We added another year of hourly customer class data. The temperature splines were updated based on all available hourly data; and

8. We updated the residential use-per-customer-per-day model with appliance saturation and efficiency results which were released in June 2009.

Forecasts for Non-Industrial Customer Classes

Q. How does the Company develop monthly sales forecasts by customer class?

A. We develop sales for the residential, commercial and irrigation customer classes as the product of two separate forecasts: 1) the number of customers and 2) use-per-customer.

Q. How does the Company develop the forecast for number of customers?

A. The development of the forecasted number of customers is depicted on Row 1 of the flow diagram. Inputs into the model were actual number of customers from January 1997 to July 2010 time period for all customer classes. We also used the most recently available economic drivers from IHS Global Insights, released in

June 2010. For the residential class, we forecast the number of customers using IHS Global Insight's forecast of each state's number of households as the major driver. The forecasted number of commercial customers uses the forecasted residential customer numbers as the major driver. For irrigation and street lighting classes, the forecast of number of customers is fairly static and is developed using regression models without any economic drivers.

Q. How does the Company forecast average use-per-customer?

A. The development of forecasted use-per-customer for the residential, commercial and irrigation customer classes are shown on Row 2 of the flow diagram. Use-per-customer for the residential class is forecasted through a Statistically Adjusted End-use ("SAE") model, which combines the end-use modeling concepts with traditional regression analysis techniques. Major drivers of the SAE-based residential model are heating and cooling related variables, end-use information such as equipment shares, saturation levels and efficiency trends, and economic drivers such as household size, income and energy price.

For the commercial class, we forecast use-per-customer using regression analysis techniques with non-manufacturing employment as the major economic driver in addition to weather-related variables.

For the irrigation class, we forecast use-per-customer through regression analysis techniques using time trend variables.

As already described, the sales forecast for the residential, commercial and irrigation classes is the product of the number of customer forecast and the use-per-customer forecast. However, the development of the forecast of monthly commercial sales involves an additional step. To reflect the addition of a large "lumpy" change in sales such as a new data center, monthly commercial sales are increased based on input from the Customer and Community Managers ("CCMs"). The development of forecasted monthly sales for the residential, commercial and irrigation customer classes are shown on Row 4 of the flow diagram. Although the scale is much smaller, the treatment of large commercial additions is similar to the methodology for industrial sales which I discuss below.

The development of the monthly sales for the lighting and public authority classes is shown on Row 3 of the flow diagram. Monthly sales for lighting and public authority are forecasted directly for the class, instead of the product of the use-per-customer and number of customers. We develop the forecast by class because the customer sizes in these two classes are more diverse.

Industrial Class Forecasts

Q. How does the Company forecast sales for the industrial customer class?

A. The development of forecasted monthly sales for the industrial class is shown on Row 5 of the flow diagram. We separate industrial customers into three categories: 1) existing customers that are tracked by the CCMs; 2) new large customers or expansions by existing large customers; and 3) industrial customers that are not tracked by the CCMs. CCMs track industrial customers individually if they have a peak load of one megawatt or more at a single site.

We develop the forecast for the first two categories through the data gathered by the CCM assigned to each customer. The CCMs have ongoing direct contact with large customers and are in the best position to know about the customer's plans for changes in business processes, which might impact their energy consumption.

We develop the portion of the industrial forecast related to new large customers and expansion by existing large customers based on direct input of the customers, forecasted load factors, and the probability of the project occurrence.

Smaller industrial customers are more homogeneous and are modeled using regression analysis with trend and economic variables. Employment is used as the major economic driver.

We develop the total industrial sales forecast by aggregating the forecast for the three industrial customer categories.

Q. Why do you forecast industrial sales using a different methodology than the other customer classes?

A. We model this class differently because of the diverse makeup of the customers within the class. In the industrial class, there is no "typical" customer. Large customers have very diverse usage patterns and power requirements. It is not unusual for the entire class to be strongly influenced by the behavior of one customer or a small group of customers.

In contrast, customer classes that are made up of mostly smaller, more homogeneous customers are best forecasted as a use-per-customer multiplied by number of customers. Those customer classes are generally composed of many smaller customers that have similar behaviors and usage patterns. No small group of customers, or single customer, influences the movement of the entire class.

This difference for large industrial customers requires the different processes for forecasting sales.

Monthly State Sales

Q. Please explain how you develop the monthly sales forecast.

A. The monthly sales forecast is shown on Row 6 of the flow diagram. The sales forecast is the sum of the monthly customer class forecast.

Hourly Load Forecast

Q. Please outline how you develop the hourly load forecast.

A. After we develop the forecasts of monthly energy sales by customer class, we develop a forecast of hourly loads in two steps:

First, we develop monthly and seasonal peaks for each state. This step is shown on Row 7 of the flow diagram. The monthly peak model uses historic peak-producing weather for each state, and incorporates the impact of weather on peak loads through several weather variables which drive heating and cooling usage. These weather variables include the average temperature on the peak day and lagged average temperatures. The peak forecast is based on average monthly historical peak-producing weather for the period 1990-2009.

Second, we forecast hourly loads for each state from hourly load models using state-specific hourly load data and daily weather variables. This step is shown on Row 8 and the left hand portion of Row 9 in the flow diagram. We develop hourly loads using a model that incorporates the 20-year average temperatures, a typical weather pattern for each year, and day-type variables such as weekends and holidays. We adjust hourly loads for line losses and adjust peak loads to monthly and seasonal peaks.

Q. How does the Company derive monthly system coincident peaks?

A. The derivation of monthly coincident peaks is depicted on the right hand portion of Row 9 in the flow diagram.

After we develop the hourly load forecasts for each state, we sum hourly loads to the total system level. We then identify system coincident peaks as well as the contribution of each jurisdiction to those monthly peaks.

Forecasts by Rate Schedule

Q. Are there any additional forecasts that you created for this proceeding?

A. Yes. As mentioned earlier, Mr. Griffith and Mr. Paice require two additional forecasts that are based on the kWh sales forecast and the number of customers forecast. Once the kWh sales forecast is complete, it must be applied to individual rate schedules to forecast kWh sales by rate schedule. In addition, the forecast of number of customers must be expressed in number of bills.

Q. How does the Company forecast sales by rate schedule?

A. We develop this forecast in two steps. First, we forecast test year sales test year by rate schedule. Then, we proportionally adjust the rate schedule sales forecasts so that the total matches the customer class forecast.

Q. How does the Company forecast the number of bills by rate schedule?

A. The forecast of the rate schedule bills forecast follows the same process as the rate schedule sales forecast. First, we forecast test year bills by rate schedule. Then, we proportionally adjust the rate schedule bills forecasts so that the total matches the customer class forecast.

Summary of Results

Q. How does the sales forecast for the 12 months ending June 30, 2012, compare to the weather normalized MWh sales for the 12 months ending June 30, 2010 base period?

A. Table 2 shows that for the total Company, over this two year time period, forecasted test period sales are 7.1 percent higher than weather normalized sales for the historical base period.

Table 2, Total Company Sales Comparison (MWh)

	July '09 to June '10 Actual	July to June 2012 GRC Forecast
Residential	15,908,306	16,404,658
Commercial	16,043,066	17,364,358
Industrial	19,096,485	20,884,404
Irrigation	1,156,561	1,292,480
Public Authority	423,037	437,310
Lighting	144,116	141,300
Total	52,771,571	56,524,510

Table 3 shows that for Utah, over this two year time period, forecasted test period sales are 10.1 percent higher than weather normalized sales in the base period.

Table 3, Utah Sales Comparison (MWh)

	July '09 to June '10 Actual	July to June 2012 GRC Forecast
Residential	6,529,671	6,856,828
Commercial	7,522,795	8,328,358
Industrial	7,497,181	8,585,404
Irrigation	184,084	187,460
Public Authority	423,037	437,310
Lighting	79,536	76,840
Total	22,236,304	24,472,200

Q. How are the actual sales tracking with the previous GRC forecast?

A. Table 4 shows that for the 2009 GRC test period weather normalized total Company sales are tracking about 1.1 percent lower than the forecast.

Table 4, Total Company Sales Comparison (MWh)

	July 2009 to June 2010	
	Actual	Previous GRC
Residential	15,908,306	15,772,148
Commercial	16,043,066	15,902,388
Industrial	19,096,485	19,744,434
Irrigation	1,156,561	1,346,600
Public Authority	423,037	436,110
Lighting	144,116	139,740
Total	52,771,571	53,341,420

Table 5 shows that for the 2009 GRC test period weather normalized total Utah sales are tracking about 0.5 percent higher than the forecast.

Table 5, Utah Sales Comparison (MWh)

	July 2009 to June 2010	
	Actual	Previous GRC
Residential	6,529,671	6,616,982
Commercial	7,522,795	7,491,422
Industrial	7,497,181	7,314,906
Irrigation	184,084	188,820
Public Authority	423,037	436,110
Lighting	79,536	76,070
Total	22,236,304	22,124,310

Conclusion

Q. Do you consider this sales and load forecasts to be reasonable?

A. Yes. Given the available data at the time this forecast was completed, this is the best possible forecast. This forecast has an equal probability of under forecasting or over forecasting both sales and peak. Also, an indication that this is a reasonable forecast is to consider the forecast error from the previous GRC forecast. The forecast results from the 2009 Utah GRC indicate that actual sales are well within a reasonable tolerance.

Q. Does this conclude your direct testimony?

A. Yes.