Witness CCS – 7
Exhibit CCS – 7

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

	)	**Docket No. 99-035-10**
In the Matter of the Application of	)	
PacifiCorp for Approval of its	)	**PRE-FILED DIRECT TESTIMONY OF**
Proposed Electric Rate Schedules	)	**KEVIN B. CARDWELL**
And Electric Service Regulations	)	**FOR THE COMMITTEE OF**
	)	**CONSUMER SERVICES**

February 4, 2000

Non-Confidential

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I. Identification and Qualifications

Q: State your name, occupation and business address.

A: My name is Kevin B. Cardwell and I am currently employed as a Principal for Hill & Associates, Inc., which is located at 222 Severn Avenue, Annapolis, Maryland 21403. My business address is 105 LeBlanc Court, Cary, North Carolina 27513.

Q: Please summarize your professional education and experience.

A: I received a Bachelor of Science in Commerce degree from the University of Louisville in May, 1980, and a Master of Business Administration degree from the University of Louisville in May, 1987. I have served on the Board of Directors of the Lexington Coal Exchange, in Lexington, Kentucky, and on the Board of Trustees of the Southern Coals Conference, in Cincinnati, Ohio.

My professional work experience includes over twenty-five years experience in the electric utility industry. I have been employed as a Principal for Hill & Associates, Inc. since February 1999. Hill & Associates is a management consulting firm that specializes in providing consultation and advice on U.S. and International coal and electricity markets and management. I previously was the Founder and President of Strategic Energy Services, Inc., a fuel and transportation consulting company which specialized in electric utility fuel management consulting and expert testimony.

I have substantial "hands-on" experience managing the procurement of fuels for utility companies, having worked for utilities most of my professional career. I have been involved in virtually every aspect of fuel procurement, including: developing strategies, policies, plans and procedures; organizing, staffing, training, evaluating and managing fuel department employees; negotiating and developing fuel, transportation and related contracts; procuring and overseeing the maintenance of railroad cars for delivery of coal; managing and controlling fuel inventories; etc. I most recently served for almost three years as the Director of the Fossil Fuel Department for Carolina Power and Light Company ("CP&L"). In that position, I was responsible for: developing and implementing fuel procurement strategies and plans; managing and directing the fuel department staff; and overseeing an annual expenditure of $550 million for the procurement and delivery of coal, gas, oil, propane and SO2 emission allowances for CP&L's electric generating stations. Prior to this position at CP&L, I was employed by Louisville Gas and Electric Company ("LG&E") for over 18 years, spending the last 10 years managing the procurement and delivery of coal for LG&E's electric generating stations. In the position as Manager of Coal Supply, I was responsible for an annual expenditure of $150 million for coal and transportation of such coal. My resume, qualifications and summary of project experience are appended to this testimony as Exhibit CCS – 7.1.

Q: Have you previously testified in any proceedings before public utility commissions?

A: Yes. I have provided oral and/or written testimony or reports to public utility and/or city commissions in Florida, Kentucky, Louisiana, Nevada, North Carolina, Ohio and South Carolina. In my previous position as Manager of Coal Supply for LG&E, I provided oral and written testimony in numerous fuel adjustment clause and various other proceedings before the Kentucky Public Service Commission. In my previous position as Director of the Fossil Fuel Department for CP&L, I provided written and/or oral testimony regarding our fuel purchases and practices to the North and South Carolina public utility commissions. I have also provided expert testimony to the public utility commissions in Kentucky, Louisiana, Nevada and Ohio relating to coal market prices, coal contract re-negotiations, coal transportation costs and related matters. I have also provided expert testimony in other litigations between coal suppliers, industrial customers and utilities. A summary of my expert witness and other project experience is shown in Exhibit CCS – 7.1.

Q: Have your previously presented testimony before the Public Service Commission of Utah ("Commission")?

A: No.

II. Introduction

Q: On whose behalf are you testifying in this docket?

A: The Committee of Consumer Services ("CCS").

Q: What were you asked to do in performing your work for the CCS?

A: I was asked to review pertinent PacifiCorp files and documents pertaining to the fuel-related amount requested in its rate case filing for the 1998 test year. I was also asked to determine and recommend the amount of any adjustments that should be made to the fuel-related portion of the Company's pending rate case for that year.

Q: In the course of your work, what documents and records did you review?

A: I was able to briefly review the voluminous amount of the documents provided by PacifiCorp in response to discovery requests I originated, or was provided by the CCS, with a specific emphasis on the following:

- "Update to Evaluation of the Coal Procurement Policies and Coal Management Practices of PacifiCorp" produced July 1995 by Energy Ventures Analysis, Inc. ("EVA");
- PacifiCorp's Fuel Normalization Summary for the 12 Months Ended December 31, 1998;
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- .

Q: Did you have any meetings or communication with any PacifiCorp employees regarding the documents or information furnished by the Company in this proceeding?

A: Yes. During the course of my work in this case, I met with and had various phone conversations with Brian Durning and Bret Morgan of the fuel department, and Ted Weston of the regulatory affairs department. I commend these employees for being helpful and cooperative in my review of the Company's information and documents. Fuel department managers Morgan and Durning were particularly helpful in pointing out pertinent information in the documents to reduce the burden and facilitate my review of the information provided by the Company.

Q: What is the subject matter of your testimony in this case?

A: My testimony covers the following three major issues:

- Were PacifiCorp's fuel procurement plans, strategies and practices reasonable and effective to ensure that ratepayers received the lowest cost for coal consistent with reliability of supply in 1998;
- Was PacifiCorp's management of plant coal inventories reasonable for ratepayers during 1998;
- Were PacifiCorp's 1998 coal costs reasonable for ratepayers, or are there any adjustments necessary to the fuel-related portion of PacifiCorp's current rate case.

Q: Please summarize the conclusions of your analysis.

A: First, PacifiCorp has not demonstrated that it has up-to-date policies, procedures, plans and strategies for all of its plants to ensure that ratepayers received or will receive the lowest cost coal consistent with reliability of supply.

Second, even though PacifiCorp's 1998 plant coal inventories appear to have been at an average level necessary to meet rate base requirements,

. PacifiCorp's coal inventory levels could be high, in some cases, given that PacifiCorp has a number of its own coal mines ("affiliate mines") and a substantial amount of coal under contract. Both of these factors can result in an over-commitment of coal supply and higher stockpile levels.

Finally, some of PacifiCorp's fuel costs for 1998 do not appear to be reasonable and ratepayers are due an adjustment for that year. My recommended adjustment to overall fuel costs relates to and to an above market price contract PacifiCorp has for its Wyodak Plant.

Q: What are your recommendations?

A: My recommendations are two-fold:

1. The Commission should require PacifiCorp to formalize and update its fuel plans, strategies, policies and procedures to ensure that ratepayers receive the lowest fuel costs possible consistent with reliability of supply.
2. Ratepayers should be entitled to an adjustment in 1998 fuel costs in the total amount of $16,915,612.00 on a total company basis. This amount is comprised of and an additional $6,785,612.00 for the amount which the Wyodak

Plant fuel cost for 1998 is above a reasonable market price.

33-month period to be determined by the Commission. These amounts have been provided to CCS Witness Falkenberg for incorporation into the PD-MAC model and such amounts could be different due to the way the model makes its calculations. CCS Witness Falkenberg can explain the amounts that have been calculated by the PD-MAC model.

III. PacifiCorp's Fuel Procurement Policies, Procedures, Plans and Strategies

Q: Please provide some background relating to your objectives regarding PacifiCorp's fuel procurement policies, procedures, plans and strategies.

A: At the beginning of this project, the CCS initially provided me with a copy of the public version of the EVA report. Following my review of this document, I submitted a number of data requests to the Company. I then proceeded to review the Company's fuel procurement policies, procedures, plans and strategies to determine if ratepayers were being charged a reasonable amount for the fuels being purchased by PacifiCorp during 1998. The review of these policies, plans, procedures and strategies was helpful in understanding the process PacifiCorp uses to purchase, deliver and account for fuel, and the working relationships between the fuel department, the plants, Company management, outside suppliers, and others. After reviewing the EVA report, I determined that a number of issues needed further examination, those being:

- Comparison of affiliate mine and long-term contract prices with market prices;
- Review of the implications of PacifiCorp's "requirements" contracts for coal;
- Review of PacifiCorp's coal inventory levels and management;
- Review of the reasonableness of PacifiCorp's delivered coal costs; and
- Review of PacifiCorp's fuel procurement policies, procedures, plans and strategies.

Q: Do PacifiCorp's fuel procurement policies, procedures, plans and strategies appear to be comprehensive and up-to-date?

A: No.

I briefly reviewed these documents at PacifiCorp's offices in December 1999, and this was also confirmed in PacifiCorp's response to applicable discovery questions.

With regard to its fuel procurement plans and strategies, PacifiCorp has stated that it has strategic fuel procurement plans <u>"for several of its plants"</u> (emphasis added). As provided in its response to Data Request 21.7, it has documents for several of its plants, but some of these are quite lengthy and others are not detailed at all. Some of these "plans" appear to be "presentation" materials and lengthy analyses, rather than a strategic planning document to be used in guiding fuel procurement activities.

Since PacifiCorp does not have a comprehensive set of strategic plans for all of its plants contained in one document, it is not effective as a strategic guide for PacifiCorp's management, plants, fuel staff, and others who have a need to know. It is my opinion that the Company and ratepayers would benefit by having a comprehensive strategic plan contained in a single document. It is my experience that such a plan improves the fuel department's, plants', and management's focus on fuel cost reduction and management because everyone is moving in the same direction with defined vision, mission, strategies, objectives, and plans.

Q: How could ratepayers benefit if PacifiCorp were to develop comprehensive strategic fuel procurement plans and up-to-date policies and procedures?

A: First of all, as already mentioned, the fuel department, company management and the plants would all be pulling together in the same direction to accomplish defined objectives for reducing and/or controlling fuel costs. The written plans would enable the constituents to be aware of the objectives and provide them with the opportunity to work together to reach the objectives by focusing their efforts and resources on meeting them.

Second, it provides corporate management with information necessary to clearly understand and manage such a major expense and to ensure that the fuel procurement objectives are in alignment with corporate goals and objectives. Fuel for electric generation is typically a utility's single largest expense. Therefore, it deserves the attention of senior management.

Third, written strategic plans for all plants ensure that each plant and the entire system are focused on reducing fuel costs so that adequate pressure, resources and efforts can be expended to accomplish such reductions. It simply makes sense to have strategic fuel plans for all plants rather than excluding some. Having such plans can also help the plants maintain or improve their place in the dispatch order, particularly if there are opportunities to reduce fuel costs at these plants.

Finally, ratepayers should certainly benefit if there are concerted and defined efforts to keep pressure on reducing fuel costs, especially with built-in accountabilities to ensure that the objectives are met. I would recommend that the Company develop fuel procurement plans and strategies with defined objectives and joint accountability measurements to ensure that the constituents (fuel department, plants, management) are making appropriate efforts to meet the objectives. It would also seem that the Commission would be interested in having these plans and strategies developed for all the plants in a comprehensive document since it would help it to oversee the Company's fuel procurement activities.

Q: Why would it be helpful for PacifiCorp to up date its fuel procurement policies and procedures?

A: Many of the same reasons above are applicable to PacifiCorp's need to up date its fuel procurement policies and procedures, but one significant fact remains: the current utility industry is in a significant transition from a monopolistic model to an increasingly competitive one. This transition alone should point out the need to review and possibly revise the Company's policies and procedures in order to guide fuel procurement activities in the "new world."

Furthermore, since there are a number of relatively new personnel in the Fuel Department, it would be advantageous to the department and the newcomers to participate in the development of a new policies and procedures manual so that <u>current</u> activities and practices could be documented and understood by all. This could also be beneficial to

PacifiCorp management, especially with the integration that will result from PacifiCorp's merger with ScottishPower.

Exhibit CCS – 7.2 is a list of the current fuel department personnel. This exhibit shows each employee's time in various positions within the department and years of service with the Company. As shown on this exhibit, six of the twelve employees in the fuel department have five or less years of experience in the department.

Q: Can you explain some of your concerns that PacifiCorp's fuel costs might be affected by the lack of a comprehensive strategic plan document to guide its fuel procurement activities?

A: Yes. I will discuss this more specifically later, but in its response to Data Request 21.7, PacifiCorp provided:

That is all.

PacifiCorp did not furnish any other strategic plans or documents for its other plants, including

I will discuss this plant in more detail later in my testimony.

Furthermore, I have conducted a number of analyses to compare PacifiCorp's delivered fuel costs with those of other western utilities that have electric generating stations in reasonable proximity to PacifiCorp's. Based upon these analyses, I have determined that PacifiCorp's fuel costs are not the lowest. Therefore, it appears that the Company might need to develop strategies and/or revise other ones to ensure that it is purchasing the lowest cost fuel for each plant in its system.

Q: Could you elaborate on some of the strategic issues you think might need to be developed, reviewed and/or revised?

A: Yes. I think the three primary areas that need to be reviewed are: PacifiCorp's affiliate mine and long-term contract costs; PacifiCorp's contract/spot mix strategy; and PacifiCorp's coal inventory targets.

From the ratepayers' perspective, one would think that a utility's affiliate mines would produce coal at a price that is equal to or lower than what is available in the open market. Furthermore, one would also want a utility's long-term fuel contracts to be at or near the market price. In practice, however, this is not always the case, and, sometimes, there can be pertinent reasons why this is so.

It generally requires a closer review of the situation to determine if the affiliate mine(s) and contract prices are reasonable. I have undertaken such a review, and I will elaborate on the results of this review later in my testimony. But first, it is interesting to see what effort the Company is making, or not making, to review and compare its affiliate mine and long-term contract prices with others.

Q: Does PacifiCorp routinely compare or benchmark its delivered fuel costs with other utilities?

A: The Company might say that it does, but I would not totally agree. I say this because of PacifiCorp's response to my Data Request 7.29, in which I asked the Company if it routinely compared its coal prices with others during the years 1997 – 1999, and, if so, to provide a copy of each such comparison. PacifiCorp responded that it "does periodically compare its coal prices with other utilities" and it furnished 9 pages, of which only a couple of pages were relevant coal price comparisons, the most relevant of which is furnished as Exhibit CCS – 7.3 (3 pages). This exhibit appears to have been produced recently, and it is a somewhat irrelevant comparison of PacifiCorp's fuel costs with others.

Q: Why is this comparison somewhat an irrelevant comparison of PacifiCorp's fuel costs and why does it trouble you that it has been produced very recently?

A: First of all, most of the utilities which PacifiCorp compared itself to in the exhibit are eastern utilities with plants located in states in which PacifiCorp does not have operations. This is important because most of the eastern utilities do not purchase coal from the same sources in the Powder River Basin, Utah, Colorado, or other western states where PacifiCorp typically purchases its coals. Therefore, these cost comparisons are not very useful.

Second, since PacifiCorp did not furnish a copy of a number of cost comparisons that it made during the 1997 – 1999 period, it is my assumption that PacifiCorp does not routinely make relevant cost comparisons with many other western utility plants.

Third, where PacifiCorp did provide some cost comparisons with some other western plants, they are general comparisons, summarized by plant, not specific comparisons of contract and spot coal prices.

Q: **Would it be of value for PacifiCorp's ratepayers to have the Company make relevant and periodic comparisons of its contract and spot fuel costs with other western utility plants?**

A: Yes it would. It would serve to ensure that PacifiCorp is aware of its contract and spot fuel costs as compared to others, and it would help it focus on reducing its fuel costs for the benefit of ratepayers.

Q: Did you conduct any analyses of PacifiCorp's contract and spot fuel costs as compared to others?

A: Yes. I performed a number of analyses that compared PacifiCorp's delivered contract and spot fuel costs with those of <u>western</u> utilities that had plants <u>operating in the same states</u> as PacifiCorp.

Q: What were the results of your comparisons?

A: When I compared PacifiCorp's 1998 delivered contract and spot coal costs with these other utilities, the results were mixed. In Exhibit CCS – 7.4, I summarized the <u>total</u> delivered coal costs for all of these comparison plants, sorted in ascending order. On this exhibit, it appears that PacifiCorp's total delivered costs appear to be within a reasonable range.

However, as shown in Exhibit CCS – 7.5, when I compared PacifiCorp's <u>total</u> delivered coal costs to the comparison utility plants, <u>sorted by the states</u> in which they are located, it became apparent that PacifiCorp had the lowest costs in Utah and Washington, but not in Arizona, Colorado, Montana or Wyoming.

I then proceeded to compare PacifiCorp's 1998 delivered <u>contract</u> coal costs with these same utilities (Exhibit CCS – 7.6), and one of the most significant match-ups stands out, as shown in the table below:

Table 1

1998 Delivered Costs – Contracts

Company	Plant	Plant State	C/MMBTU	$/ton
Black Hills	Simpson 2	Wyoming	45.9	$ 7.39
PacifiCorp	Wyodak	Wyoming	72.8	$11.72 *

* Note:

Next, I compared PacifiCorp's 1998 delivered <u>spot</u> coal prices with these same utility plants, as shown in Exhibit CCS – 7.7, and determined that some of PacifiCorp's spot coal prices were favorable. However, what also became apparent from this review was that <u>a number of PacifiCorp's plants were not still not purchasing any spot coal during 1998</u> because of their affiliate mine and long-term coal contract commitments.

The fact that the Company has limited its spot coal purchasing capability was pointed out by EVA <u>years ago</u> in the July 1995 report. The report specifically stated on page 8 that "Four power plants (i.e. Cholla, Hayden, Naughton, and Wyodak) are supplied under requirements contracts and are precluded from the spot market." The report also stated on page 2 that "…in some situations PacifiCorp is paying more for coal from its affiliates than it could obtain coal for on the open market. EVA believes that this is being done to maintain the affiliate sources of production for PacifiCorp's long-term strategic objectives."

Even though EVA brought this to PacifiCorp's attention in 1995, it does not appear that PacifiCorp has developed or changed its strategies (if they exist) to ensure that all of its plants are able to receive the lowest cost fuel consistent with reliability of supply. Therefore, it is evident to me that the combination of PacifiCorp's affiliate mine and contracts commitments have kept it from purchasing additional amounts of lower cost spot market coal, an effort which could reduce fuel costs for ratepayers.

Q: Do you have any further evidence to support your opinion regarding PacifiCorp's inability to purchase lower cost coal on the spot market?

A: Yes. I also prepared a summary that compared PacifiCorp's 1998 contract and spot purchase percentages with these same utility plants, as shown on Exhibit CCS – 7.8. The summary of this exhibit is shown in the table below:

Table 2

1998 PacifiCorp Contract/Spot Summary

Plant	Captive/Long Term Contract	Spot/Short Term
Cholla	55.2 %	44.8 %
Colstrip	100.0 %	0.0 %
Bridger	77.2 %	22.8 %
Carbon	100.0%	0.0 %
Centralia	75.7 %	24.3 %
Hunter	100.0 %	0.0 %
Huntington	100.0 %	0.0 %
Johnston	99.3 %	0.7 %
Naughton	100.0 %	0.0 %
Wyodak	100.0 %	0.0 %
Hayden	91.9 %	8.1 %
Craig	90.0 %	10.0 %
PacifiCorp Average	88.8 %	11.2 %
AVERAGE	**85.1 %**	**14.9 %**

What this table shows is that most of PacifiCorp's plants are totally or almost totally committed to contract or affiliate mine coals and very little of PacifiCorp's coal was purchased on the spot market in 1998. In its response to Data Request 7.14, PacifiCorp's own data confirmed that its combined "captive" (affiliate) and "long term contracts" purchases totaled 88.8% of its purchases in 1998, as shown on Exhibit CCS – 7.9. This figure is higher than the average for all of the utility plants in the comparison and, in my opinion, it seems very high given that PacifiCorp has its own affiliate mines <u>and</u> a significant amount of its coal needs under long-term contracts.

Q: Is PacifiCorp's 89% contract and 11% spot mix for 1998 typical in the industry?

A: Generally, most utilities have been decreasing their reliance upon long term contracts and they have been transitioning toward more short-term and spot purchases. Likewise, many utilities have sold the coal mines they owned or controlled because, in many cases, such mines' prices were much higher than market prices. In the industry today, it is not uncommon to see contract/spot ratios in the 70/30 percent range or even 60/40 percent. Contract/spot ratios of near 90/10 percent are much more rare. This is why I compared PacifiCorp to other western utility plants and, as shown in Exhibit CCS – 7.8, PacifiCorp is still above the average for the group (in which it is included).

Q: What typically results when a utility has too much coal under contract?

A: When a utility has too much coal under contract, at least two things generally happen. First, the utility is unable to purchase lower priced coal on the spot market. Second, the utility can have coal inventory levels that are too high, i.e. too much coal will be stockpiled at the plant(s).

Q: Has either of these situations occurred at any PacifiCorp plant(s) during 1998?

A: Yes. Actually both situations appeared to have occurred, but the most significant one has to do with PacifiCorp's inability to purchase additional coal on the spot market.

This issue might need to be revisited again in future rate cases or Commission reviews of PacifiCorp's fuel costs.

Q: Are you stating that PacifiCorp should buy all of its coal in the market and that its costs could be reduced by the total difference between the sum of its contract and affiliate mine prices versus the spot market?

A: No, not at all. I do not believe that it is necessarily reasonable to assume that PacifiCorp should buy all of its coal on the spot market all the time. Furthermore, there are a number of factors that need to be considered in order to determine the appropriate amount of coal that PacifiCorp should purchase annually on the spot market.

Most utilities generally develop a strategy and procurement plan that provides for purchases of a certain percentage of coal under: long-term contracts; short-term contracts; and in the spot market. Since PacifiCorp purchases approximately 28 million tons of coal per year, I would not recommend that it try to buy all of this coal on the spot market. However,

Q: Does PacifiCorp appear to recognize that it could reduce its fuel costs by purchasing more coal in the open market?

A: Perhaps, though I cannot speak for the Company. However, PacifiCorp may be making some efforts to reduce its costs, Time did not permit for me to review

Q: Do you recommend that PacifiCorp close all of its affiliate mine operations and purchase all of its coal on the market?

A: No, not necessarily. As I stated earlier

. Likewise, I believe,

and I think the Company agrees,).

Because of the substantial amount of coal that PacifiCorp purchases annually, having a secure and dependable amount of coal from its affiliates can have significant value to the Company and its ratepayers, provided that the coal costs are reasonable and market-related. For these and other reasons, I am currently not recommending any adjustments in the pending rate case relating to the Company's delivered fuel prices, except for the Wyodak Plant, which will be discussed later in my testimony.

However, there needs to be a periodic (at least annual) re-assessment of the value that these affiliate mines provide, especially considering their production and operating cost structures. In other words, the Company should perform a periodic strategic assessment of the value that these mines offer, with a specific emphasis on the delivered cost to each plant that the mine can supply.

Q: How could the Company determine what value the affiliate mines provide to it?

A: Without discussing every factor the Company should consider in its annual review of these affiliate mines, one of the most significant reviews that should be conducted annually is a comparison of the affiliate mines' delivered fuel cost versus the market alternatives available for each plant.

In order to consider these market alternatives, I believe that the Company should solicit competitive bids <u>for each plant</u> in its system, at least once per year. This would provide the Company with an annual, competitive assessment (gauge) of the market price for fuel <u>for each of its plants.</u>

Furthermore, the Company would have the competitive cost information necessary to annually determine whether to operate its affiliate mines

Q: Doesn't the Company currently solicit bids annually for coal for all of its plants?

A:

. Such

information can be instrumental and irreplaceable in good decision-making and fuel risk management.

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Q: What do you mean when you mention the term "requirements" contracts?

A: PacifiCorp has apparently contracted for coal supplies for some of its plants under a "requirements" contract agreement. This generally means that all of the coal needed by a certain plant will be supplied by a single contract or single supplier, sometimes from a single mine.

In its 1995 report, EVA stated that the Cholla, Hayden, Naughton, and Wyodak plants are supplied under requirements contracts. Although I think that the Cholla plant may have some flexibility in receiving other coals now, I believe that the Hayden, Naughton and Wyodak plants are still under requirements contract arrangements.

I have already mentioned earlier how these contract commitments can many times keep a utility from purchasing lower-priced coal in the market. However, another potential problem with these contracts is that they can result in higher coal inventory levels than desirable, especially if plant loads are curtailed due to weather or other reasons. I will discuss PacifiCorp's coal inventory management for 1998 in the next section.

IV. PacifiCorp's Management of Plant Coal Inventory Levels During 1998

Q: Please provide some background regarding your objectives relating to PacifiCorp's management of coal inventory levels at its plants during 1998.

A: In its 1995 report, EVA pointed out on page 9 that "Inventory levels at Craig, Hayden and Huntington are still high." On page 19 of the same report, EVA mentioned the Peabody Seneca mine requirements contract for the Hayden Plant and stated that "Because the contract covers the plant requirements, the plant owners have not been able to reduce the stockpile levels." When I reviewed the entire EVA report, there appeared to be evidence that some of PacifiCorp's requirements contracts and its affiliate mine commitments might be to blame for high coal inventory levels and higher delivered fuel prices at some of the plants. Based upon this information, I performed some independent analyses of PacifiCorp's coal inventory management and results.

Q: Did PacifiCorp experience any higher coal inventory levels than it had planned for in 1998?

A: In some cases, yes, but it appears that they were generally able to work through them effectively to avoid any excess carrying charges for high inventories.

Fuel inventory management is somewhat an art, rather than a science, and the fuel department is generally trying to balance fuel deliveries with fuel usage, which varies depending upon outages, load, weather, etc. PacifiCorp appears to have managed its coal inventories reasonably well during 1998. However, I further discuss PacifiCorp's inventory management because of the trend that was mentioned in the EVA report and because I want to be sure that PacifiCorp has overall fuel strategies to ensure that its coal purchases (and inventory levels) are reasonable and beneficial to ratepayers.

.

Q: Did you observe anything particular concerning PacifiCorp’s management of coal inventory levels during 1998?

A: Yes.

. Based upon my experience, this inventory level seems to be very high, especially since the plant has all of its coal supply under a requirements contract from . However, according to the Company’s response to Data Request 21.37, I learned that a dispute had been ongoing over who had ultimate control over , and this dispute was settled in favor of the plant owners.

Furthermore, is reasonably small compared to most of PacifiCorp’s other plants. Therefore, I was satisfied were not a major concern during 1998.

Additionally, I conducted an analysis of PacifiCorp’s allowed coal inventory dollar amounts in its Rate Base, and such analysis showed that the Company was apparently within the allowed ranges for its total coal inventory levels, .

However, there is one troubling aspect of this analysis: a substantial adjustment was made to inventory level for 1998 based, according to the Company’s records, upon an aerial survey of the plant’s stockpile level. The dollar amount of this adjustment, on its face, does not appear to be significant, especially when compared to the dollar adjustment , but on a percentage basis, this adjustment is huge! **I recommend that the Company be asked by the Commission to fully explain and justify this adjustment.**

I would like to point out one final thing about . According to the figures provided by the Company, its coal inventory management for 1998 was notable in that, in most cases, there was no dollar variance between the Rate Base allowance and the average actual dollar balance for each plant for the period. The only exception was at , but after the aerial survey adjustments were made, the total system inventory was within the allowable levels. For these reasons, PacifiCorp's plant coal inventory management appears to be reasonable and within Rate Base allowances during 1998. **Therefore, I have not recommended any adjustments to the current PacifiCorp rate case relating to coal inventories**.

V. Reasonableness of PacifiCorp's 1998 Coal Costs for Ratepayers

Q: Please provide some background regarding your objectives in reviewing the reasonableness of PacifiCorp's 1998 coal costs for ratepayers.

A: At the outset, following my review of the EVA management report, I determined that there was a need to compare PacifiCorp's delivered fuel costs from its affiliate mines and under its long-term contracts with market prices for comparable coals. As stated before, EVA had pointed out that some of these affiliate mines' prices were higher than market prices and that PacifiCorp was unable to take advantage of additional spot market coals (generally with lower prices) because of some of its requirements contracts for certain plants. My review was, therefore, focused toward ensuring that ratepayers received coal at reasonable prices for the year 1998 and, if not, toward determining what adjustments might be appropriate to PacifiCorp's current rate case.

Q: Please describe the process you used to make your determinations.

A: . I also had performed a number of other comparisons of PacifiCorp's 1998 contract, spot and total delivered costs with a number of selected western utilities that were operating plants in the same states as PacifiCorp.

During this review, it became readily apparent that PacifiCorp's 1998 delivered coal cost for the Wyodak Plant was much higher than Black Hills Power & Light Company's Simpson Plant, which is located in close proximity to PacifiCorp's Wyodak Plant. Coincidentally, both plants apparently: receive coal from the same mine (Wyodak Mine); receive coal from this mine ; and have their coal supply under a long-term contract until the year 2013.

Since the coal is delivered to both plants , and one would expect that their delivered fuel costs would be reasonably close to same amount. In reality, however, their <u>reported</u> delivered coal costs are substantially different – **in the amount of $4.33 per ton!**

Exhibit CCS – 7.12 (2 pages) provides the reported delivered costs, quality and details for the Simpson and Wyodak Plants for 1998. The 1998 delivered cost data for this exhibit was sourced from the King's COALBASE software.

In order to verify the accuracy of the Simpson Plant's cost reported by King's, the delivered cost information was also downloaded from the FERC 423 data on the Energy Information Administration's web-site. The EIA's information verified the cost information for the Simpson Plant and such is shown in Exhibit CCS – 7.13

I then prepared

(figures are rounded by the spreadsheet software).

One might notice

. This is the case because, as I stated

earlier, . However, I do believe it is reasonable to expect that the Wyodak Plant's delivered fuel cost should be as low as the Simpson Plant's. **Therefore, it is my opinion that the ratepayers should be entitled to an adjustment for PacifiCorp's 1998 fuel costs in the amount of $6,785,612, for the following two reasons.**

First, PacifiCorp appears to be paying about too much for the coal it is purchasing from the Wyodak Mine, compared to the same coal, to Black Hills Power & Light's Simpson Plant. There does not seem to be any apparent reason why this coal is so much higher in price than what the Simpson Plant is paying. Therefore, this coal should be priced at the "market" to match the Simpson Plant price.

Second, if the Wyodak Plant's coal is re-classified as a market-related ("spot/short-term") price, this would re-balance PacifiCorp's contract/spot mix to a ratio that is closer to the utility comparison group average, as shown in the table below:

Table 3

PacifiCorp 1998 Contract/Spot Mix with Re-definition*

	Captive/LT Contract	Spot/Short Term
PacifiCorp Avg. (Table 2)	89 %	11 %
Average (Table 2)	85 %	15 %
Actual after re-definition *	83 %	17 %

* Re-defined Wyodak delivered costs as market-related (spot)

Another reason why I believe that the Wyodak tonnage should be re-classified as "market-related" is that the re-defined contract/spot mix is a risk management profile that PacifiCorp can afford to take. I think that this revised contract/spot mix is a certainly a manageable risk tolerance level when one considers the amount of coal PacifiCorp has under long-term contract agreements with its affiliate mines and other suppliers, many of which are "all requirements" agreements.

In other words, I do not think that the Company or ratepayers would be subjected to unreasonable risk if the Company were to plan for a contract/captive target of 83% and a corresponding short-term/spot target of 17% of its annual coal purchases. In fact, I would recommend that the Company re-assess whether this revised 17% spot percentage is high enough or if it should be increased to a higher level**. In any case, for the reasons mentioned, I am recommending that PacifiCorp's 1998 fuel costs be adjusted by the amount of $6,785,612 to bring the Wyodak Plant coal contract to a "market-related" price.**

For reasons stated previously,

but the Commission might want to periodically review the Company's fuel costs versus market prices to ensure that the ratepayers' interests are being protected. I do also want to emphasize to the Commission that the Wyodak Plant's costs may continue to be above market prices until the expiration of the contract in 2013 and reiterate that my recommended adjustment is for the 1998 fuel costs only.

Q: Do you have any other comments to make about the reasonableness of PacifiCorp's 1998 fuel costs?

A: Yes. I have one additional issue that needs to be discussed. In the course of my review of PacifiCorp's normalization and accounting adjustments of its 1998 fuel costs, I noticed that, in December 1998, PacifiCorp had received a Surface Transportation Board ("STB") ordered refund, apparently for a rail rate adjustment for the Cholla Plant.

Exhibit CCS – 7.15 is a copy of a May 1998 article that appeared in King's Domestic Bidding Guide in which the STB decided that the Burlington Northern Santa Fe rail rates to Arizona Public Service Company's Cholla Plant were subject to a 35 percent reduction. As part of its participation in the Cholla Plant, PacifiCorp was apparently entitled to a significant refund. According to PacifiCorp, the amount of this refund was $8,951,495.00, and .

The Company apparently booked all or part of this refund in its 1998 fuel costs,

However, in the normalization/accounting adjustment revisions to its 1998 fuel costs, it appears that the Company removed this $8,951,495.00 from its 1998 fuel costs (shown on Exhibit CCS – 7.17 as “Rail Rate Overcharge Settlement”). In other words, it appears that ratepayers may not have received the refund for the reduced rail rates.

Furthermore,

As a result, it appears to me that ratepayers are entitled to the total refund amount of $10,130,000.00) for the STB-ordered rail rate refund for the Cholla Plant.

I have . **This results in an adjustment of**

$2,701,333 for 1998, and leaves an additional amount of $7,428,667 to be amortized over a remaining 33-month period to be determined by the Commission.

Q: Do you have any other closing remarks before you summarize your recommended adjustments?

A: Yes. Before I conclude my testimony, I would like to mention that the 1998 Wyodak Plant costs reported monthly by the Company on the FERC Form 423 reports (Data Request 7.44) do not match the figures on the Company's report, as shown . This is important to note since I relied upon the costs contained in the Company's report, rather than information that was available from other sources, in order to calculate the amount of my recommended adjustment for the Wyodak Plant.

The figures reported on the report and the FERC Form 423 reports are reasonably close, except for the months of November and December, which have substantial differences. The reason I wanted to mention this matter before I conclude my testimony is that I wanted the record to show that I tried to be as conservative as possible in calculating the recommended Wyodak Plant adjustment. This is so because I used the cost information provided by the Company, rather than that from an outside source, even though the accuracy of some of the Company's information is questionable or contains discrepancies.

Q: Do you have any additional testimony regarding your review of PacifiCorp's fuel procurement activities and the reasonableness of PacifiCorp's 1998 fuel costs?

A: No.

VI. Summary of Recommended Adjustments to PacifiCorp's 1998 Fuel Costs

Q: Would you please summarize your recommendations and adjustments again for the Commission?

A: Yes.

1. The Commission should require PacifiCorp to formalize and update its fuel plans, strategies, policies and procedures to ensure that ratepayers are receiving and will receive the lowest fuel costs possible consistent with reliability of supply. The Commission might want to establish a procedure to periodically review and ensure that such formalized plans, strategies, policies and procedures are being kept up-to-date and followed, to ensure that

ratepayers are receiving the lowest cost fuel consistent with reliability of supply.

2. Ratepayers should be entitled to an adjustment in 1998 fuel costs in the total amount of $16,915,612.00 on a total company basis. This amount is comprised of a refund received by PacifiCorp for the Cholla Plant, in the amount

and an additional $6,785,612.00 for the amount which the Wyodak Plant fuel cost for 1998 is above a reasonable market cost. I do want to emphasize again to the Commission that the Wyodak Plant's costs may continue to be above market prices until the expiration of the contract in 2013 and reiterate that this recommended adjustment is for the 1998 fuel costs only. A portion of the total Cholla Plant adjustment is applicable for 1998 only, in the amount of $2,701,333.00. The remaining $7,428,667.00 should be amortized over a 33-month period to be determined by the Commission. These amounts have been provided to CCS Witness Falkenberg for incorporation into the PD-MAC model and such amounts could be different due to the way the model makes its calculations. CCS Witness Falkenberg can explain the amounts that have been calculated by the PD-MAC model.

Q: Does this conclude your testimony?

A: Yes.