– BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH –

IN THE MATTER OF THE APPLICATION OF	)	Docket No. 98-2035-04
PACIFICORP AND SCOTTISH POWER PLC	)	Division of Public Utilities
FOR AN ORDER APPROVING THE ISSUANCE	)	Exhibit No. DPU 4.0
OF PACIFICORP COMMON STOCK	)	

DIRECT TESTIMONY OF WILLIAM A. POWELL

DIVISION OF PUBLIC UTILITIES

UTAH DEPARTMENT OF COMMERCE

June 18, 1999

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INTRODUCTION

Q: Please state your name and business address.

A: My name is William A. Powell Jr., but most people know me as Artie. My business office is at 160 E. 300 S., Salt Lake City, Utah, 84114.

Q: By whom are you employed and what is your official title?

A: I'm employed by the Utah State Department of Commerce, Division of Public Utilities. My official title is *Utility Economist*.

Q: Please summarize your education and other experience relevant to the current proceedings.

A: I earned a Doctorate degree in economics from Texas A&M University with emphasis in econometrics and public finance. I have published several papers in professional journals including, "A Decision Support System for In-sample Simultaneous Equations System Forecasting Using Artificial Neural Networks," published in *Decision Support Systems* (1994), and "Detecting Abnormal Returns Using the Market model with Pretested Data," published in the *Journal of Financial Research* (1996). Since 1987, I have taught undergraduate and graduate courses in economics, econometrics, and statistics. And I currently teach as an adjunct professor for Weber State University. For the past 3 ½ years I have been employed with the Division as an economist, and have attended several conferences on various aspects of regulation and restructuring in the electric industry. In the summer of 1996, I completed the NARUC Annual Regulatory Studies Program held at Michigan State University. A Vita detailing more of my experience is attached as Exhibit No. DPU 4.4.

SCOPE OF TESTIMONY

Q: For whom are you testifying?

A: I am testifying on behalf of the Division of Public Utilities (Division or DPU).

Q: What is the scope of your testimony?

A: My testimony will cover aspects dealing with:

- Foreign Currency Risk;
- The Public Utility Holding Company Act of 1935;

- The Cost of Capital; and
- The Acquisition Premium.

SUMMARY OF TESTIMONY

Q: Please summarize your testimony and major conclusions or recommendations.

A: Neither ScottishPower nor PacifiCorp's direct or supplemental testimony is overwhelming. In fact, the degree of unsubstantiated claims is enough to stagger all but the most sanguine supporter. In place of the usual quantitative evidence, ScottishPower encrusts their testimony with pleas to "trust" them. While trust may be a substantial ingredient in British regulatory practice, this trust, if it exists, would be the result of a long history between ScottishPower and British regulators. Given that a similar history has not been developed in Utah, caution may well prove to be the "better part of valor."[1] With some trepidation, therefore, I offer the following conclusions and recommendations.

Benefits of the Merger

First, it appears that ScottishPower is a financially stronger entity than PacifiCorp. And this could benefit PacifiCorp shareholders and ratepayers. Prior to the merger announcement, PacifiCorp was on a credit watch with a negative designation. After the merger announcement, PacifiCorp was placed on a credit watch with a positive designation. According to representatives at Standard and Poor's Financial Services, if the merger goes through, PacifiCorp's debt rating may be upgraded. Lower debt cost, if they materialize, would be a benefit of the merger. Given the capital structure ordered in the most recent rate case with PacifiCorp, one-half percentage point (50 basis points) in the weighted cost of capital is worth approximately $17 million in PacifiCorp's total revenue requirement.

Merger Concerns and Conditions

Second, it is possible that gains or losses on foreign transactions can occur. These transaction losses and gains are the effect of exchange rate changes on transactions denominated in a foreign

[1] William Shakespeare, *King Henry IV*, Act 5, Scene 4.

currency. The Financial Accounting Standards Board (FASB) has rules governing such transactions. Therefore, I propose that:

> ScottishPower follow the generally accepted accounting standards regarding foreign operations and exchange. Namely, FASB 52.

Third, the Public Utility Holding Company Act of 1935 (PUHCA) came about largely due to wide spread abuses and the inability of state commissions to regulate large, multi-jurisdictional holding companies. Therefore, in order to ensure that the Commission can effectively regulate the merged company, I propose that:

> PacifiCorp/ScottishPower agrees not to assert in any future Utah proceeding that the provisions of PUHCA or the related Ohio Power v FERC case preempt the Commission's jurisdiction over affiliated interest transactions and will explicitly waive any such defense in those proceedings.[2]

> In the event that PUHCA is repealed or modified, PacifiCorp/ScottishPower agrees not to seek any preemption under any subsequent modification or repeal of PUHCA until such time as the Commission can fully review its regulatory position or authority.[3]

> Within thirty days after the approval of the merger, PacifiCorp/ScottishPower should provide a detailed report indicating PacifiCorp's proportionate share of the Holding company's total assets, operating revenues, operating and maintenance expense, and number of employees. Subsequent to this initial report, this information should (could) be included as part of PacifiCorp's semi-annual filing with the Commission.[4]

> For ratemaking purposes, until otherwise approved by the Commission, a hypothetical capital structure will be used to determine the correct costs of

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[2] ScottishPower has agreed to this condition in Wyoming. See, *Wyoming Stipulation*, Condition Number 29.

[3] This condition is very similar to one ScottishPower has agreed to in Wyoming. See, *Wyoming Stipulation*, Condition Number 33.

[4] This is similar to a condition ScottishPower has already agreed to in Wyoming. See, *Wyoming Stipulation*, Condition Number 32.

> capital. The capital structure shall be constructed using a group of A-rated electric utilities comparable to PacifiCorp.[5]

> Until otherwise approved by the Commission in a separate proceeding, PacifiCorp shall maintain its own debt and, if outstanding, preferred stock.

> PacifiCorp shall apply to the Commission for approval of debt issuances.

> PacifiCorp and ScottishPower shall provide the Commission with a copy of any lobbying reports filed at the SEC.

> Additional conditions that ensure the Commission's ability to effectively regulate the new company are proposed by DPU witnesses Mary Cleveland (DPU Exhibit No. 2.0) and Ron Burrup (DPU Exhibit No, 3.0). Specifically, witness Mary Cleveland has proposals dealing with affiliate transactions, allocations, and access to books and records. Witness Ron Burrup has proposals dealing with reporting and filing requirements, dividends, and inter-company loans. I concur with these conditions.

Fourth, despite ScottishPower's promises, there is a risk that the cost of capital could increase as a result of the merger. While it is likely that PacifiCorp's debt cost will be lower with the merger than without, it can be argued that the cost of equity will be higher as a result of the merger. Therefore, I propose that:

> If ScottishPower is able to lower the costs of capital, then those savings shall be reflected in rates in a timely manner. If, however, the cost of capital increases as a result of the merger, ScottishPower's shareholders will bear that cost.

Fifth, ScottishPower has offered PacifiCorp shareholders a substantial premium as part of the merger agreement. Given current conditions, the premium is approximately $878 million. If just a portion of this premium were to find its way into rates, the promised $10 million in savings would be completely dwarfed. Therefore, I propose that:

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[5] This condition is an adaptation of that proposed by ScottishPower. See, *ScottishPower, Direct Testimony of Robert D. Green*, February 26, 1999.

> Rates will be set based upon original and not revalued costs; any premium paid by ScottishPower for PacifiCorp stock will be disregarded for ratemaking purposes. Nor will ratepayers bear any costs of the transaction.[6]

Q: Does that conclude the summary of your direct testimony?

A: Yes it does.

FOREIGN CURRENCY RISK

Q: You indicated that your testimony would cover four areas: foreign currency risk, PUHCA, the cost of capital, and the acquisition premium. Will you please explain what you mean by foreign currency risk.

A: Certainly. Foreign currency risk refers to the potential losses or gains on transactions between ScottishPower and PacifiCorp. These transaction losses and gains are the effect of exchange rate changes on transactions denominated in a foreign currency. From PacifiCorp's perspective, the foreign currency is British pounds, and from ScottishPower's perspective, the foreign currency is American dollars.

Q: How do you propose to mitigate this risk?

A: PacifiCorp should follow generally accepted accounting principles in dealing with foreign transactions. Specifically, DPU witness Mary Cleveland (exhibit no. DPU 2.0) proposes that, cost allocations should be based on generally accepted accounting standards, and that an audit trail should be maintained such that all allocated costs can be identified. Furthermore, witness Cleveland proposes that, failure to adequately support any allocated cost may result in denial of its recovery in rates. I concur with these proposals.

Q: Are these reasonable proposals?

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[6] This condition is an adaptation of that proposed by ScottishPower. See, *ScottishPower, Rebuttal Testimony of Robert D. Green*, Before the Oregon Public Utility Commission, UM 918, June 2, 1999.

A: Yes. The (American) Financial Accounting Standards Board (FASB) has a rule which covers foreign currency transactions: FASB 52. A summary of this rule is attached to my testimony as exhibit number DPU 4.2. Under this rule, foreign currency conversions or the losses and gains on foreign currency transactions are specifically identified. And, therefore, should be easy to track for ratemaking purposes.

Q: How are exchange rates determined?

A: In general, exchange rates are set in competitive markets for foreign currency. For every currency there is a market in which the exchange rate is set by the interaction of demand and supply for that currency. As events unfold in the respective economies, demand and supply for the currencies will fluctuate and, therefore, the exchange rates will change. This change or volatility can be quite dramatic.

Q: When you say dramatic, what do you mean?

A: The change in the exchange rate can be substantial, even over short periods of time. For example, over the five year period from February 26, 1980 to February 26, 1985, the exchange rate increased by 116%. Similar trends can be seen in the five and one half year period since 1993. The exchange rate fell from .71 on February 12, 1993 to .58 on October 8, 1998, a -18% change. While over the next seven month period the exchange rate increased by 6.9%. This volatility leads to the potential loses and gains mentioned above and, presumably, is one reason behind FASB 52.

PUBLIC UTILITY HOLDING ACT OF 1935

Q: What bearing does the Public Utility Holding Company Act (PUHCA) have on the proposed merger?

A: The merger applicants have stated that a merged holding company will be formed, registered with the Security Exchange Commission (SEC), and be regulated by the SEC under PUHCA like any other registered public utility holding company in the U.S. Regulation by the SEC could provide Utah ratepayers protection against abuses that state regulators may have little control over.

Alternatively, SEC methods designed to address abusive practices may work to the detriment of Utah ratepayers or PacifiCorp shareholders.

Q: What are your concerns?

A: In general, PUHCA came about as a result of wide spread abuse of the holding company structure and lack of effective regulation. PUHCA was designed to curb these abuses and provide state commissions, as well as federal regulators, the means to effectively regulate the large holding companies that came to dominate the electric industry after the turn of the century. Without PUHCA, or some similar legislation in place, it seems unlikely that the Commission could effectively regulate a large holding company, let alone one of international scope.

Q: How is PacifiCorp currently regulated?

A: From what I understand, PacifiCorp's retail operations as they relate to rates are regulated by six state commissions: California, Idaho, Oregon, Utah, Washington, and Wyoming. PacifiCorp's wholesale rates and transmission operations are regulated by the FERC. Each of the states conducts its own regulatory procedures. For instance, in Utah the DPU conducts a semi-annual audit of PacifiCorp and files a report with the Commission as to the reasonableness of rates. These procedures serve as the front line of the regulatory process for the states.

In addition, some inter-state agreements are sometimes used to coordinate regulatory activities between the states. These interstate agreements, however, are between the staffs of the various states and are not binding on the six state commissions. For example, since the last merger the staffs of the various states have participated in the PacifiCorp Inter-Jurisdictional Task Force on Allocations (PITA). Recently, the staff of the DPU determined that Utah's interests were no longer being met under the PITA agreement. The DPU (and other state agencies) recommended that the Commission adopt a plan to move to full rolled-in rates on a shorter time table than allowed under the PITA agreement. The Commission concurred and issued such an order in 1998.

Q: How will the regulation of PacifiCorp be effected if the merger is approved?

A: Under the current regulatory structure, state commissions are bound only by state law. However, assuming that ScottishPower will form a registered holding company, the SEC could assume authority over affiliate transactions, corporate structure, cost allocations, diversification, and financial transactions. SEC decisions are likely to be quite different than those made by the Commission and, therefore, could harm Utah ratepayers or PacifiCorp shareholders.

Q: But hasn't ScottishPower agreed not to claim preemption of affiliate transactions under PUHCA?

A: Yes it has. However, according to a Wyoming Consumer Advocate Staff witness, Lou Ann Westerfield, the decision rendered in the Ohio Power case "casts doubt on the ability of states to avoid being pre-empted"[7] by the SEC.

Q: If the SEC does preempt the states in their jurisdictional authority, wouldn't the states still have the right to intervene in SEC proceedings?

A: Yes they would. But how effective this would be is questionable. According to Wyoming Consumer Advocate Staff witness, Lou Ann Westerfield, the SEC has not held a hearing under PUHCA in the last eleven years. Instead of hearings, "the SEC staff makes its recommendations . . . based on the exchange of paper pleadings . . . [bypassing] the traditional evidentiary process."[8]

Even if these concerns turn out to be unwarranted, we are still faced with the possible repeal of PUHCA in the near future. Since President Carter's administration there has been a strong movement in the United States toward deregulation. So far we have witnessed the deregulation of the airline, trucking, and banking industries. We have also seen limited deregulation in both the telecommunications and natural gas industries. Furthermore, and more to the point at hand, there is a strong movement in the United States to restructure the electric industry. (Both the Energy Policy Act of 1992 and the Telecommunications Act of 1996 allow exemptions under PUHCA).

Q: What is it that PUHCA provides for the states?

A: According to a report prepared by the Energy Information Administration (EIA),[9] major abuses of

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[7] See, Direct testimony of Lou Ann Westerfield, Wyoming Consumer Advocate Staff, Docket No. 20000-EA-98-141, pp. 9, 29-31.

[8] See, Direct testimony of Lou Ann Westerfield, Wyoming Consumer Advocate Staff, Docket No. 20000-EA-98-141, p. 31.

[9] *The Public Utility Holding Company Act of 1935: 1935 - 1992*, Energy Information Administration, U.S. Department of Energy, DOE/EIA-0563, January 1993.

the holding company system lead to passage of the Public Utilities Holding Company Act of 1935. EIA classifies the abuse in five areas: (1) Abuses of the holding company structure, (2) unwarranted inflation of securities and capital assets, (3) inappropriate inter-company financial practices and transactions, (4) excessive fees for services, and (5) destructful competition for control of strategic operating companies. As I mentioned above, PUHCA provided safeguards against these abuses and also provided state and federal regulators the means to effectively regulate large holding companies.

Q: Will you please summarize each of these five abuses?

A: Certainly.

ABUSE 1: ABUSE OF THE HOLDING COMPANY STRUCTURE

"Holding companies," according to EIA, "were established through the process of pyramiding." Pyramiding is defined as stacking or interposing one or more sub-holding companies between the parent holding company and its operating companies. EIA sites two major reasons for pyramiding. First, by manipulating the capital structures of the various subholding companies, control of the operating companies could be achieved with relatively small investments. Second, small increases in the value of the operating company's assets dramatically increases the amount of income accruing to the holding company.

"The result of pyramiding," again according to EIA, "was that the . . . holding company's principal interest was in the increased profits of the operating companies. . . . Customer service and reliability were secondary considerations. In addition, consumers often paid rates which were felt to be unfair because [ratepayers] were, in effect, subsidizing speculative ventures."

The aforementioned EIA report provides an excellent example of how this abuse might work.

ABUSE 2: UNWARRANTED INFLATION OF SECURITIES AND CAPITAL ASSETS

Another common practice directly linked to pyramiding is the inflation or writeup of securities and capital assets. These writeups are primarily the result of (1) inflating constructing cost; (2) internally selling subholding and operating companies shares above their market value; and (3) overly optimistic projections of savings and earning power. The primary beneficiaries of these practices are the shareholders of the holding company.

ABUSE 3: INTER-COMPANY FINANCIAL PRACTICES AND TRANSACTIONS

Prior to the passage of PUHCA it was argued that the holding company could "milk" the operating companies in at least three ways:

- By lending money to the operating company at above market rates.
- By requiring unjustifiably high dividends from the operating company.
- By borrowing money from the operating company in exchange for an unsecured note.

ABUSE 4: EXCESSIVE FEES FOR SERVICES

By virtue of its control over the operating company, the holding company is in a position to both require the purchase of its services and to charge excessive fees for services rendered. Ratepayers are harmed when the excessive fees find their way into rates.

ABUSE 5: COMPETITION FOR CONTROL OF STRATEGIC OPERATING COMPANIES

To ensure their position, holding companies sought to purchase potential competitors. The increased competition naturally drove up the price of the securities of the targeted company. In order to purchase the targeted companies, holding companies turned to investment bankers. The investment bankers, whose primary interest was in making a profit, encouraged the holding companies to use debt and fixed return preference shares to finance the purchase. This practice contributed to the "financial instability of the holding companies by driving up their debt to equity ratios and saddling them with significant fixed costs."

Q: What remedies does PUHCA provide these abuses?

A: The afore mentioned EIA report classifies the provisions of PUHCA into seven categories: (1) Regulation of Security Issues, (2) Acquisition of Securities, (3) Limitations on Intra-system Transactions, (4) Accounts, Records, and Filing Reports, (5) Limitations on Political Activity; (6) Elimination of Uneconomical Holding Companies; and (7) Removal of Needless Complexities.

Q: Will you please summarize these remedies?

A: Certainly.

REMEDY 1: REGULATION OF SECURITY ISSUES

In addition to complying with any issuance restrictions imposed by the state in which the holding company was organized, PUHCA prohibited the holding company from issuing any securities without receiving prior approval from the SEC. PUHCA also provides guidelines for the SEC to follow in approving security issuances:

- Approved securities should not create an improper risk for the holding company.
- Fees and commissions associated with the sale of securities should be reasonable.
- Approved securities should not be detrimental to the public interest, utility investors, or consumers.
- Only those securities which are "reasonably adapted" to the existing holding companies securities' structure were to be approved.
- Approved securities should reflect the earning power of the holding company, be necessary, and promote economic and efficient operation of the holding company.

REMEDY 2: ACQUISITION OF SECURITIES

In addition to complying with any restrictions imposed by the state in which the holding company was organized, PUHCA prohibited the holding company from acquiring any securities without receiving prior approval from the SEC. PUHCA also provides guidelines for the SEC to follow in approving security acquisitions:

- The acquisition would not unduly complicate the capital structure of the holding company.
- The holding company must demonstrate that the acquisition would bring about a more efficient and integrated utility.
- Fees and commissions associated with the acquisition would be reasonable and reflect the earning potential of the utility's assets.
- Any approved acquisition would not lead to a concentration (i.e., market power) that would be harmful to the general public, investors, or ratepayers.

REMEDY 3: LIMITATIONS ON INTRA-SYSTEM TRANSACTIONS

PUHCA specifically forbids some of the activities that were meant to "milk" the operating companies. Operating companies are not permitted to:

- Make unsecured loans to the holding company.
- Pay excessive dividends to the holding company.

In addition, holding companies are restricted to providing only engineering and managerial services to the operating company, and these services must be provided at cost.

REMEDY 4: ACCOUNTS, RECORDS, AND FILING REPORTS

PUHCA authorizes the SEC to require such reports as it sees are necessary to promote the public interest and to protect investors and consumers.

REMEDY 5: LIMITATIONS ON POLITICAL ACTIVITIES

Holding companies are prohibited from promoting candidates for public office, or supporting political parties or their agencies. Holding companies must also report all political lobbying activities to the SEC.

REMEDY 6: ELIMINATION OF UNECONOMICAL HOLDING COMPANIES

The holding company must be integrated – interconnected or at least capable of interconnection – and operated as a consolidated system. In addition to promoting efficiency, the purpose of this provision was to restrict the holding company to operations within only one state or a few contiguous states. This would, hopefully, promote effective regulation by the state commissions.

REMEDY 7: THE REMOVAL OF NEEDLESS COMPLEXITIES

PUHCA effectively limited the corporate structure to two layers of holding companies. Furthermore, PUHCA provided that the voting power of security holders be fairly distributed.

In summary, let me quote at length from the EIA report:

> What permitted the growth of the utility holding companies was basically the lack of effective regulation. States were unwilling or unable to regulate the

> large holding companies that came to dominate the utility business after the turn of the century. The holding company approach led to pyramiding. The result of pyramiding was the extensive use of bonds and preference shares which paid fixed returns as a means of financing the acquisition of operating companies and other holding companies. This growth in debt and fixed interest payments required to service the debt made the holding companies more vulnerable to the business cycle.
>
> Holding companies were also felt to have abused the system by the use of questionable Inter-company transactions and the charging of exorbitant service fees to subsidiary companies. The excessive fees . . . were then capitalized into the accounts of the holding company which in turn inflated the operating utility's book value and caused the rates charged to the customers to increase. The result was unrealistic prices for the holding companies securities. The desire of the holding companies to continue to acquire operating utilities and other holding companies caused them to purchase these entities at prices well above the market value.[10]

Q: Do you have any proposals to ensure that the remedies included in PUHCA continue even if PUHCA is repealed, and to ensure that state regulation is not preempted by less effective federal remedies?

A: Yes I do.

First, to mitigate abuse of the holding company structure and unwarranted inflation of securities and capital assets, I propose that,

> For ratemaking purposes, until other wise approved by the Commission, a hypothetical capital structure will be used to determine the correct costs of capital. The capital structure shall be constructed using a group of A-rated electric utilities comparable to PacifiCorp.

[10] *The Public Utility Holding Company Act of 1935: 1935 - 1992*, Energy Information Administration, U.S. Department of Energy, DOE/EIA-0563, January 1993, p. 11.

> Within thirty days after the approval of the merger, PacifiCorp shall provide a detailed report indicating PacifiCorp's proportionate share of the ScottishPower's total assets, operating revenues, operating and maintenance expense, and number of employees. Subsequent to this initial report, this information should (could) be included as part of PacifiCorp's semi-annual filing with the Commission.[11]

> Until approved by the Commission in a separate proceeding, PacifiCorp shall maintain its own debt and, if outstanding, preferred stock.

> PacifiCorp shall apply to the Commission for approval of debt issuances.

> In addition to these proposals, DPU witness Ron Burrup (Exhibit Number DPU 3.0) proposes, and I concur, that,

> The merged company shall file annually a five year financial plan and forecast of financial condition for the total company, PacifiCorp division, and the Utah jurisdiction.

Second, to mitigate abuse of inter-company financial practices and transactions and excessive fees for services, I concur with witness Ron Burrup (exhibit number 3.0) that,

> For two years following the merger, PacifiCorp shall file a cash flow summary with its dividend report, showing that service will not be impaired by payment of the dividend.

> PacifiCorp and ScottishPower shall apply to the Commission for approval of intra-company loan agreements. For two years following the merger, PacifiCorp shall file a cash flow summary (or other evidence) with its dividend report, showing that service will not be impaired by payment of

[11] This is similar to a condition ScottishPower has already agreed to in Wyoming. See, *Wyoming Stipulation*, Condition Number 32.

the dividend.

In addition to this proposal, DPU witness Mary Cleveland (Exhibit Number DPU 2.0) proposes, and I concur, that,

ScottishPower/PacifiCorp should be required to notify the Utah Commission subsequent to ScottishPower plc's Board approval and as soon as practicable following any public announcement of and acquisition of a regulated or non-regulated business representing 5% or more of the market capitalization of ScottishPower plc.

The Applicants should be required to provide notification of and file for Commission approval of the divestiture, spin-off, or sale of any integral utility assets or functions.

The Merged Company shall notify the Commission, and provide sufficient information and documentation to the Commission, prior to the implementation of plans (1) to form an affiliate entity for the purpose of transacting business with the electric divisions of PacifiCorp, (2) to commence new business transactions between an existing affiliate and the electric utility divisions of PacifiCorp, (3) to dissolve an affiliate which has transacted any substantial business with such divisions, (4) to enter into new business ventures or expand existing ones, or (5) to merge combine, transfer stock or assets of any part or all of the Merged Company.

The Merged Company shall provide notification of all asset transfers to or from PacifiCorp, its affiliates, or subsidiaries in accordance with current Public Service Commission (PSC) rules (see in particular PSC R750-401).

Establish agreed upon procedures by which Division staff can have access to documentation supporting the purpose and/or circumstances attributable to costs charged to PacifiCorp.

The holding company(s) and subsidiaries' employees, officials, directors, or agents shall be available to testify before the Utah Commission to provide information relevant to matters within the jurisdiction of the Utah Commission.

The Utah Commission shall establish procedures by which the Public Service Commission and Division staffs, or their authorized agents can obtain needed access to subsidiary books and records, other relevant documents, data and records. Failure to provide adequate supporting documentation of costs may result in those costs being denied rate recovery. Requests by the Utah Commission, the Division, or their authorized agents shall be deemed presumptively valid, material and relevant, with the burden falling to ScottishPower/PacifiCorp to prove otherwise. ScottishPower/PacifiCorp shall reserve the right to challenge any such request before the Utah Commission and shall have the burden of demonstrating that any such request is not valid, material or relevant. In addition, ScottishPower shall pay for the expense incurred by Utah regulatory personnel in accessing corporate records and personnel located outside of the state of Utah.

Finally, to ensure against preemption of Commission authority, I propose that,

PacifiCorp/ScottishPower agrees not to assert in any future Utah proceeding that the provisions of PUHCA or the related Ohio Power v FERC case preempt the Commission's jurisdiction over affiliated interest transactions and will explicitly waive any such defense in those proceedings.[12]

In the event that PUHCA is repealed or modified, PacifiCorp/ScottishPower agrees not to seek any preemption under any subsequent modification or repeal of PUHCA until such time as the Commission can fully review its

[12] ScottishPower has agreed to this condition in Wyoming. See, *Wyoming Stipulation*, Condition Number 29.

> regulatory position or authority.[13]
>
> PacifiCorp and ScottishPower shall provide the Commission with a copy of any lobbying reports filed at the SEC.

Q: Are these reasonable conditions for the merger?

A: Yes, I believe they are.

Despite the “good old-boy” feeling projected by ScottishPower, history has taught us that there are strong incentives for firms to abuse the holding company structure. I can’t help but recall the words of the father of economics and philosopher of the Scottish Enlightenment, Adam Smith, who said:

> People of the same trade seldom meet together, even for the merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.[14]

These conditions provide several benefits. First, they remove, or at least expose, the incentives for abuse of the multi-tiered holding company structure. Second, it is not ScottishPower’s stated intent to circumvent such requirements as they intend to be regulated as a registered public utility holding company. Finally, in combination with the other conditions proposed by the Division, they will provide the Commission with means to effectively regulate PacifiCorp.

Q: Are these conditions adequate to ensure that the Commission can effectively regulate PacifiCorp in the future?

A: In general, yes. However, the SEC still needs to look at this merger and grant its approval.

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[13] This condition is very similar to one ScottishPower has agreed to in Wyoming. See, *Wyoming Stipulation,* Condition Number 33.

[14] Adam Smith, *An Inquiry Into the Nature and Causes of the Wealth of Nations*, The Glasgow Edition, Liberty Classics, 1981, p. 145

Therefore, the Division reserves the right to revisit these issues in the event that either: (1) Conditions of the merger imposed by the SEC are either in conflict with conditions proposed by the Division or make it difficult to effectively regulate PacifiCorp, (2) Scottish Power requests an exemption, either in whole or part, to the provisions set out in PUHCA, or (3) PUHCA is repealed or modified.

COST OF CAPITAL

Q: What concerns do you have relating to the cost of capital?

A: The cost of capital may actually increase as a result of the merger.

ScottishPower indicates that they expect the cost of capital to be lower in the long-run than what would be the case if the merger does not take place.[15] ScottishPower has, however, offered little or no evidence to support their optimism. In the absence of such evidence, one must take seriously arguments that support the possibility that the cost of capital may actually go up after – as result of – the merger.

One such argument is that the U.K. electric market, as a result of deregulation, is more competitive than the U.S. market and, thus, inherently more risky. If investors actually impute relatively more risk to the U.K. market, then, according to economic and financial theory, they will expect or demand a higher return on their investment. If, therefore, the cost of capital for the combined firm is simply a blend of the current capital costs of PacifiCorp and ScottishPower, PacifiCorp's effective cost of capital could actually increase.

Q: Do you have any proposals regarding the cost of capital?

A: Yes. If ScottishPower is able to lower the costs of capital, then those savings shall be reflected in rates in a timely manner. If, however, the cost of capital increases as a result of the merger, ScottishPower's share holders will bear that cost.

[15] See Company's Response to Wyoming Consumer Advocate Staff, Third Data Request, Question No. 82 .

Q: Is there any evidence to support your contention that the cost of capital could change, or possibly increase, as a result of the merger?

A: Yes there is. However, since the weighted cost of capital is determined by both equity and debt costs, I would like to answer that question in two corresponding parts.

PART I: EQUITY

The simple or basic Discounted Cash Flow (DCF) model indicates that the expected or required return on an investment is equal to the dividend yield plus the rate of growth in the dividend. That is,

$$\begin{aligned} \textit{Required Return} &= \textit{Dividend Yield} + \textit{Dividend Growth} \\ &= \frac{D}{P} + g \end{aligned}$$

where D is the dividend (usually defined as being paid in the next period), P is the current stock price, and g is the dividend growth rate. Generally speaking, the riskier an investment is, the greater will be the required rate of return.

Using information gathered from several sources,[16] the difference in the required return (on equity) for ScottishPower and PacifiCorp may be as great as 5.6%, which indicates that investors view ScottishPower as an inherently riskier investment than PacifiCorp.

Another indication of the comparative risk of PacifiCorp and ScottishPower, and thus the required return sought by investors, can be inferred from the Capital Asset Pricing Model (CAPM).

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[16] Dividend yields for both PacifiCorp and Scottish (5.78% and 4.52% respectively) were gathered from Yahoo Finance, June 5, 1999. Since PacifiCorp's dividend has not change since, at least, before June 1994, PacifiCorp's dividend growth rate was assumed to be zero. ScottishPower's estimated dividend growth rate, 6.84% , was calculated from actual dividends as reported on ScottishPower's Web site: http://www.scottish.power.plc/aboutus, *Five Year Financial Summary*.

According to the underlying theory,[17] the systematic risk of a stock's return can be measured by the beta (β) coefficient in the model

$$k_e = r_f + \beta(r_m - r_f)$$

where k_e is the return required by investors, r_f is a risk-free rate of return, and r_m is the market rate of return as measured by a well diversified portfolio of stocks. Thus, beta measures the relative risk or variability of a stock to that of a well diversified portfolio of stocks.

Publicly available information indicates that ScottishPower's beta coefficient may be as much as five times that of PacifiCorp's.[18] This also indicates that investors view ScottishPower as a riskier investment than PacifiCorp. Thus, there is a potential that PacifiCorp's cost of equity capital could increase as a result of the merger.

PART II: DEBT

Prior to the merger announcement, PacifiCorp was on "credit watch" with a "negative" designation. According to Standard and Poor's own definition, a credit watch,

> Highlights the potential direction of a short — or long – term rating. . . . Ratings appear on credit watch when . . . an event or a deviation from an expected trend occurs and additional information is necessary to evaluate the current rating. A listing, however, does not mean a rating change is inevitable.

[17] The following discussion of the CAPM is adopted from William F. Shughart, William F. Chappell, and Rex L. Cottle, *Modern Managerial Economics*, South-Western Publishing Company, Cincinnati, Ohio, 1994.

[18] As of June 7, 1999, Market Guide reported PacifiCorp's β as 0.19 (See Market Guide, Comparison Report for PacifiCorp, http://yahoo.marketguide.com/mgi/ratio/6820N.html). The value of ScottishPower's β, 0.91, was obtained from, *Review of Public Electric Suppliers 1998-2000, Distribution Price Control Review*, Offer, May, 1997.

A positive designation, again according to Standard and Poor's, means that a rating may be increased while a negative designation means that a rating may be decreased. In other words, absent the merger announcement, PacifiCorp's debt rating would likely have decreased, increasing the cost of debt financing.

At or near the time of the merger announcement, however, Standard and Poor's rating service placed PacifiCorp on "credit watch" with a "positive" designation, while ScottishPower was placed on credit watch with a negative designation. According to recent news releases, Standard and Poor's affirms both ratings. Both PacifiCorp and ScottishPower are to remain on credit watch, PacifiCorp with a positive designation and ScottishPower with a negative designation. Standard and Poor's currently rates ScottishPower's long term debt at "A+" and PacifiCorp's at "A." If Standard and Poor's does re-rate both companies, the likely outcome would be an "A" or "A+" rating for the combined company. In any event, Standard and Poor's believes that "its long-term ratings on ScottishPower will not fall below single-'A'"[19] if the merger is completed. We can expect, therefore, that PacifiCorp's debt rating will, at least in the short-run, stay the same or improve slightly if the merger goes forward. If the merger does not take place, it is likely that, in the absence of any changes on PacifiCorp's part, PacifiCorp's bond rating will be downgraded.[20]

How the potential changes in the cost of equity and debt play out after the merger is uncertain at this point. If debt costs go down, but equity costs go up, then the overall cost of capital may decrease, increase, or stay the same depending on the relative weight assigned to each. Since ScottishPower has not presented convincing evidence that it can lower the cost of capital after the merger, it seems reasonable to hold the shareholders at risk for increases in the weighted cost of capital that result from the merger.

Q: Can you quantify the effect of a change in the weighted cost of capital?

A: Every 100 basis points in equity return is worth approximately $17 million in PacifiCorp's revenue

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[19] "S&P affirms, may still cut, ScottishPower," Reuter's News Release, Yahoo Finance, June 7, 1999, http://biz.yahoo.com/rf/990607.

[20] Raymond Leung, a rating analyst with Standard and Poor's New York office, confirmed over the phone (June 7, 1999) that PacifiCorp's bond rating would likely be downgraded absent the merger.

requirement. In other words, if the cost of equity goes up by 1%, PacifiCorp's revenue requirement will increase by about $17 million, an amount that easily dwarfs the $10 million in savings promised by ScottishPower. An increase in equity costs, however, could potentially be offset by a corresponding decrease in the cost of debt.

For example, suppose we have a capital structure that is 49% debt and 51% equity with costs 7.5% and 10.5% respectively. The weighted cost of capital for this example is equal to 9.04%.

Table 1

Weighted Cost of Capital

	Percent	Cost	Weighted
debt	49.00%	7.50%	3.68%
equity	51.00%	10.50%	5.36%
			9.04%

Assuming the capital structure does not change, if the cost of equity changes, the offsetting change in the cost of debt is given by

$$\Delta C_d = -\frac{E}{D} * \Delta C_e$$

$$= (-1.41) * \Delta C_e$$

where Δ is read as "the change in," C_e is the cost of equity, C_d is the cost of debt, D is the percent of debt, and E is the percent of equity. If the cost of equity increases by 1%, to prevent the weighted cost of capital changing, the cost of debt must decrease by 1.41%. If the cost of debt decreases by more than 1.41%, the weighted cost of capital would likewise decrease. If the cost of debt decreases by less than the 1.41%, the weighted cost of capital would increase as a result of the increase in the cost of equity. Without an offsetting change in the cost of debt, a 1% increase in the cost of equity is equivalent to a 0.51% (1%*51%) increase in the weighted cost of capital.

Using the currently authorized capital structure, and assuming the preferred stock percentage and cost stay the same, every 1% increase in the cost of equity would have to be met by a 1.02% decrease in the cost of debt to maintain the weighted cost of capital at the currently authorized rate of 8.84%. If, as a result of the merger, PacifiCorp's debt financing costs remain about the same as they are now, then a 1% increase in equity cost would mean a 0.476% increase in the weighted cost of capital. Again, a 0.476% increase in the weighted cost of capital would be equivalent to a $17 million increase in PacifiCorp's revenue requirement. Any decrease in the cost of debt would offset any potential increases in the cost of equity.

ACQUISITION PREMIUM

Q: What concerns do you have concerning the acquisition premium?

A: According to current market conditions, the acquisition premium may be as much as or more than $878 million. If even a small portion of this amount were to find its way into rates, the $10 million in promised savings would be dwarfed.

Q: Do you have a proposal regarding the acquisition premium?

A: Just that which ScottishPower has stated:

> Rates will continue to be set based upon the original (not revalued) costs, and any premium paid by ScottishPower for PacifiCorp stock will be disregarded for ratemaking purposes. . . They will never bear any costs associated with it. Nor will ratepayers bear any costs of this transaction.[21]

Q: Do you believe this is a reasonable condition?

A: As long as ScottishPower commits to making all the necessary books and records available to

[21] See, Robert D. Green, "ScottishPower Rebuttal Testimony of Robert D. Green," Before the Public Utility Commission of Oregon, June 2, 1999, UM 918.

regulators, I believe this is a reasonable condition.

Q: You indicated that the acquisition premium may be as much as $878 million. How did you come to that figure?

A: The acquisition premium is defined as any price paid in excess of market value of PacifiCorp's stock. The premium is calculated as the difference between the purchase price of PacifiCorp's outstanding shares minus the market value of PacifiCorp's outstanding shares. ScottishPower has proposed purchasing PacifiCorp's outstanding shares at a rate of .58 American Depository Shares (ADS) for each PacifiCorp share. Each ADS represents four ordinary shares. So the swap is equal to 2.32 ScottishPower shares for each PacifiCorp outstanding share. Therefore, we can write the premium as,

$$Prem = \left[0.58 * Price_{sp} - Price_{pc}\right] * Shares$$

where $Price_{sp}$ is the price of the ADS; $Price_{pc}$ is the price of PacifiCorp's common shares; and Shares is the number of PacifiCorp's outstanding shares. Thus there are three factors that influence the premium: the two share prices and the total number of shares outstanding.

On the day the merger was announced, December 7, 1998, PacifiCorp's share price was $19.50, ScottishPower's ADS price was $43.50. With approximately 285,000,000 outstanding shares at the time of the merger announcement, the premium would be $1.6 billion. By June 4, 1999, however, both share prices had fallen dramatically. The closing prices for PacifiCorp and ScottishPower were, respectively, $18.69 and $37.31. Given 297,334,000 current outstanding shares, the premium would be $878 million.

Table 2

Acquisition Premium

	SP ADS Price	PC Stock Price	Shares Outstanding	New PC Stock Price	Premium Per Stock	Premium Percent	Premium Total
12/7/98	$43.50	$19.50	285,000,000	$25.23	$5.73	29.38%	$1,633,050,000
6/4/99	$37.31	$18.69	297,334,000	$21.64	$2.69	15.81%	$878,250,303

Q: Can the acquisition premium increase or decrease between now and the time the merger is likely to close?

A: Yes. However, the difference in ScottishPower's stock price and that of PacifiCorp's should remain fairly constant until the merger is completed. Therefore, I assume that the magnitude of the premium will remain in the neighborhood of $800 million to $1 billion.

Q: Can you explain why this may be the case?

A: Yes. Stock prices reflect the investors expectations about the present value of future cash flows. Since ScottishPower has announced their intention of purchasing PacifiCorp's Stock at .58 ADS to 1 share of PacifiCorp stock, and since some time has intervened since the announcement, investors have incorporated the information in their valuations. Sellers of PacifiCorp stock will demand, as part of the price of the stock, the premium they could receive if they held onto the stock. Likewise buyers of PacifiCorp stock should be willing to pay a price that includes the known premium. The two stocks then, should, after some initial adjustments, begin to track one another. This is apparently what is happening.

Immediately after the merger announcement, both share prices briefly increased, but then began to fall within a matter of weeks. This trend continued until around the first of May when both share prices began to increase. (See DPU Exhibit 4.3, Figures 1 and 2) Interestingly, but not surprisingly, since the announcement the prices of the two stocks have been closely tracking one another. Over the five month period prior to the merger announcement, the correlation coefficient

Table 3

Stock Price Correlation: PacifiCorp and ScottishPower

	Before the Merger Announcement July 1, 1998 to December 4, 1998	**After the Merger Announcement December 7, 1998 to June 4, 1999**
Correlation Coefficient	-0.44	0.95

for the two stock's prices was -0.44, after the announcement, the correlation increased to 0.95. Without any further announcements, this trend or correlation in the two prices will continue until the merger is closed.

The number of outstanding shares, however, may change over the intervening period. As this occurs, the total premium will also change. I'm assuming that the change in the number of outstanding shares will not change by much and, thus, the total premium will remain around the current $878 million.

Q: In your opinion, does the acquisition premium have any implications for stranded costs?

A: Yes, I believe it does.

A stock's price, as I indicated before, reflects the investors expectations about the present value of future cash flows. If ScottishPower is willing to pay a premium for PacifiCorp's stock, the implication is that they anticipate earnings to be greater in the future than is indicated by the current price (i.e., absent the merger) of PacifiCorp's stock. This is essentially the argument put forth by a couple of authors in a recent article:

> Since most utilities already enjoy a market price that is 150% or more above book value, merger-related premiums clearly contemplate future earnings from other than regulated operations, where profits are limited by

book value.[22]

In the present case, the anticipated future earnings may be a simple expansion by ScottishPower into another regulated market, as much as it is in anticipation of future restructuring in the United States.

In either case, the willingness of ScottishPower to pay an acquisition premium may be an indication that PacifiCorp would not face any stranded costs if the electric industry were restructured.

As is well known, however, stranded costs is a very controversial topic and need not be decided here in these proceedings.

Q: Does this conclude your direct testimony?

A: Yes it does.

[22] Robert P. Knickerbocker and Florence K.S. Davis, "The Acquisition Premium: A U-Turn in Merger Policy?," *Public Utilities Fortnightly*, May 15, 1999, p. 45.

ATTACHMENTS

DPU EXHIBIT NUMBER DPU 4.1:

MERGER BENEFITS AND PROPOSED MERGER CONDITIONS

Merger Benefits

It appears that ScottishPower is a financially stronger entity than PacifiCorp. And this could benefit PacifiCorp shareholders and ratepayers. Prior to the merger announcement, PacifiCorp was on a credit watch with a negative designation. After the merger announcement, PacifiCorp was placed on a credit watch with a positive designation. According to representatives at Standard and Poor's Financial Services, if the merger goes through, PacifiCorp's debt rating may be upgraded. Lower debt cost, if they materialize, would be a benefit of the merger. Given the capital structure ordered in the most recent rate case with PacifiCorp, one-half percentage point (50 basis points) in the weighted cost capital is worth approximately $17 million in PacifiCorp's total revenue requirement.

Concerns and Proposed Merger Conditions

Concern: Foreign Currency Risk	**Proposed Condition**
It is possible that gains or losses on foreign transactions can occur. These transaction losses and gains are the effect of exchange rate changes on transactions denominated in a foreign currency. The Financial Accounting Standards Board (FASB) has rules governing such transactions.	ScottishPower shall follow the generally accepted accounting standards regarding foreign operations and exchange. Namely, FASB 52.

Concern: PUHCA	**Proposed Conditions**

The Public Utility Holding Company Act of 1935 (PUHCA) came about largely due to wide spread abuses and the inability of state commissions to regulate large, multi-jurisdictional holding companies.

For ratemaking purposes, a hypothetical capital structure will used to determine the correct costs of capital. The capital structure shall be constructed using a group of A-rated electric utilities comparable to PacifiCorp.

Within thirty days after the approval of the merger PacifiCorp/ScottishPower should provide a detailed report indicating PacifiCorp's proportionate share of the Holding company's total assets, total operating revenues, operating and maintenance expense, and number of employees. Subsequent to this initial report, this information should (could) be included as part of PacifiCorp's semi-annual filing with the Commission.

Until approved by the Commission in a separate proceeding, PacifiCorp shall maintain its own debt and, if outstanding, preferred stock.

PacifiCorp shall apply to the Commission for approval of debt issuances.

PacifiCorp/ScottishPower agrees not to assert in any future Utah proceeding that the provisions of PUHCA or the related Ohio Power v FERC case preempt the Commission's jurisdiction over affiliated interest transactions and will explicitly waive any such defense in those proceedings.

In the event that PUHCA is repealed or modified, PacifiCorp/ScottishPower agrees not to seek any preemption under any subsequent modification or repeal of PUHCA until such time as the Commission can fully review its regulatory position or authority.

	PacifiCorp and ScottishPower shall provide the Commission with a copy of any lobbying reports filed at the SEC.
Concern: Cost of Capital	**Proposed Conditions**
Despite ScottishPower's promises, there is a risk that the cost of capital could increase as a result of the merger.	If ScottishPower is able to lower the costs of capital, then those savings shall be reflected in rates in a timely manner. If, however, the cost of capital increases as a result of the merger, ScottishPower's shareholders will bear that cost.
Concern: Acquisition Premium	**Proposed Conditions**
Sottish Power has offered PacifiCorp shareholders a substantial premium as part of the merger agreement. Given current conditions, the premium is approximately $878 million. If just a portion of this premium were to find its way into rates, the promised $10 million in savings would be completely dwarfed.	Rates will be set based upon original and not revalued costs; any premium paid by ScottishPower for PacifiCorp stock will be disregarded for ratemaking purposes. Nor will ratepayers bear any costs of the transaction.

DPU EXHIBIT NUMBER DPU 4.2:

FASB NO. 52 , *FOREIGN CURRENCY TRANSLATION* [23]

"Application of this Statement will affect financial reporting of most companies operating in foreign countries. The differing operating and economic characteristics of varied types of foreign operations will be distinguished in accounting for them. Adjustments for currency exchange rate changes are excluded from net income for those fluctuations that do not impact cash flows and are included for those that do. The requirements reflect these general conclusions:

"The economic effects of an exchange rate change on an operation that is relatively self-contained and integrated within a foreign country relate to the net investment in that operation. Translation adjustments that arise from consolidating that foreign operation do not impact cash flows and are not included in net income.

"The economic effects of an exchange rate change on a foreign operation that is an extension of the parent's domestic operations relate to individual assets and liabilities and impact the parent's cash flows directly. Accordingly, the exchange gains and losses in such an operation are included in net income.

"Contracts, transactions, or balances that are, in fact, effective hedges of foreign exchange risk will be accounted for as hedges without regard to their form.

"More specifically, this Statement replaces FASB Statement No. 8, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements*, and revises the existing accounting and reporting requirements for translation of foreign currency transactions and foreign currency financial statements. It presents standards for foreign currency translation that are designed to (1) provide information that is generally compatible with the expected economic effects of a rate change on an enterprise's cash flows and equity and (2) reflect in consolidated statements the financial results and relationships as measured in the primary currency in which each entity conducts its business (referred to as its "functional currency").

"An entity's functional currency is the currency of the primary economic environment in which that entity

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[23] *Summary of Statement No. 52 Foreign Currency Translation*, Financial Accounting Standards Board, http://www.rutgers.edu/Accounting/raw/fasb/.

operates. The functional currency can be the dollar or a foreign currency depending on the facts. Normally, it will be the currency of the economic environment in which cash is generated and expended by the entity. An entity can be any form of operation, including a subsidiary, division, branch, or joint venture. The Statement provides guidance for this key determination in which management's judgment is essential in assessing the facts.

“A currency in a highly inflationary environment (3-year inflation rate of approximately 100 percent or more) is not considered stable enough to serve as a functional currency and the more stable currency of the reporting parent is to be used instead.

“The functional currency translation approach adopted in this Statement encompasses:

“14.Identifying the functional currency of the entity's economic environment

“15.Measuring all elements of the financial statements in the functional currency

“16.Using the current exchange rate for translation from the functional currency to the reporting currency, if they are different

“17.Distinguishing the economic impact of changes in exchange rates on a net investment from the impact of such changes on individual assets and liabilities that are receivable or payable in currencies other than the functional currency

“*Translation adjustments* are an inherent result of the process of translating a foreign entity's financial statements from the functional currency to U.S. dollars. Translation adjustments are *not* included in determining net income for the period but are disclosed and accumulated in a separate component of consolidated equity until sale or until complete or substantially complete liquidation of the net investment in the foreign entity takes place.

“*Transaction gains and losses* are a result of the effect of exchange rate changes on transactions denominated in currencies other than the functional currency (for example, a U.S. company may borrow Swiss francs or a French subsidiary may have a receivable denominated in kroner from a Danish customer). Gains and losses on those foreign currency transactions are generally included in determining net income for the period in which exchange rates change unless the transaction hedges a foreign currency commitment or a net investment in a foreign entity. Intercompany transactions of a long-term investment nature are considered part of a parent's net investment and hence do not give rise to gains or losses."

DPU EXHIBIT NUMBER DPU 4.3:

STOCK PRICES FOR SCOTTISHPOWER AND PACIFICORP

Figure 1

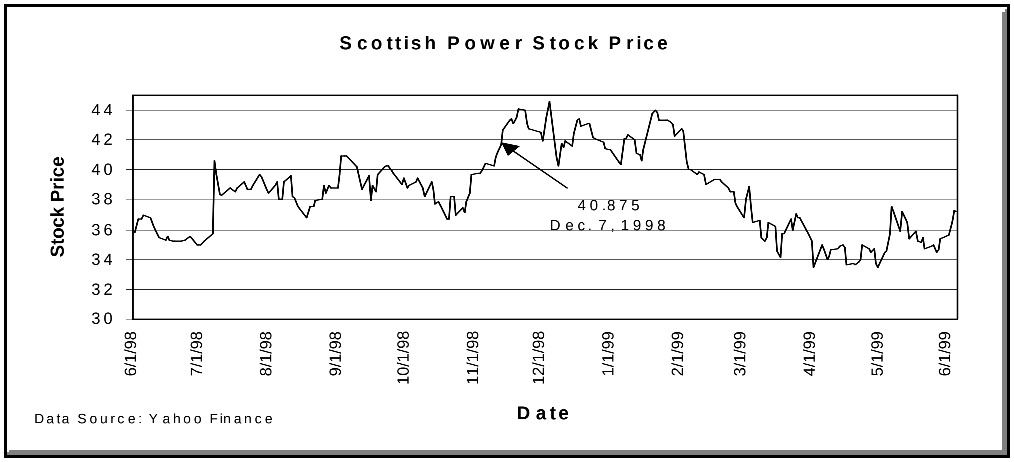
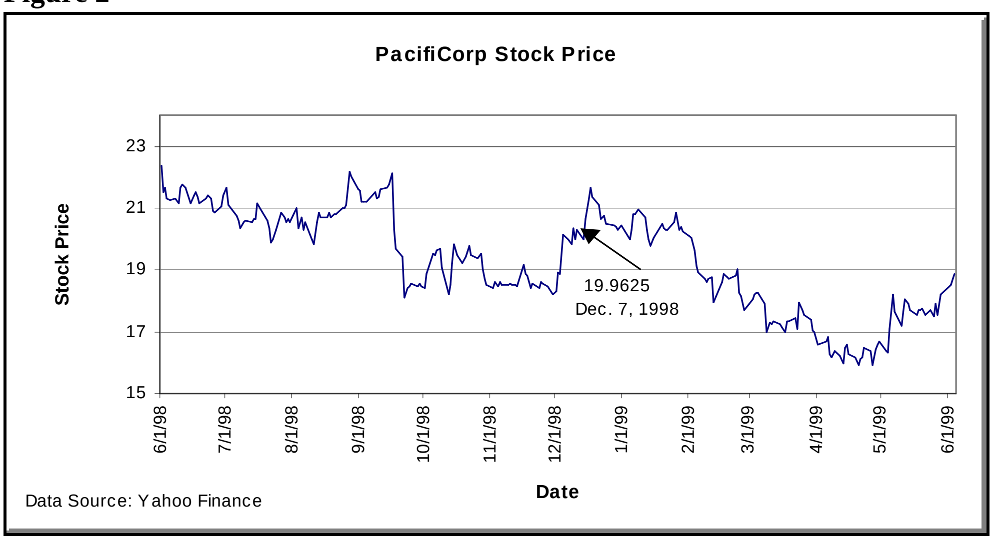


Figure 2



Immediately after the merger announcement both share prices briefly increased, but then began to fall within a matter of weeks. This trend continued until around the first of May when both share prices began to increase. Since the announcement the prices of the two stocks have been closely tracking one another. Over the five month period prior to the merger announcement the correlation coefficient for the two stock's prices was -0.44, after the announcement the correlation increased to 0.95.

DPU EXHIBIT NUMBER DPU 4. 4:

VITA WILLIAM A. POWELL, PH.D.

CURRENT POSITION **Utility Economist**

Division of Public Utilities

Department of Commerce, State of Utah

Salt Lake City, Utah 84114;

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EDUCATION

Doctorate of Philosophy (Economics) **1993**

Texas A&M University, College Station, Texas

Thesis: *Reduced Form Estimation in Partially Specified Simultaneous Equations Models*

Major: Econometrics

Minor: Public Finance and Risk and Uncertainty

Bachelor of Science **1985**

Weber State University, Ogden, Utah

Major: Economics

Minor: Business and Psychology

PROFESSIONAL TRAINING

NARUC Annual Regulatory Studies Program **1996**

Michigan State University

Two course in regulatory theory, procedures, and practices.

Professional Conferences

I have attended several professional conferences covering a wide variety of regulatory topics.

EXPERIENCE

Utility Economist **1996 - Present**

Utah State Division of Public Utilities

Responsibilities

- Negotiate settlements with utilities and interveners.
- Propose, evaluate and advance new regulatory theories and procedures.
- Conduct, economic research and analysis to assist in the development of policy for utility regulatory issues.
- Prepare recommendations, present written and oral testimony, and assist counsel in cross examination of other witnesses.
- Conduct independent studies related to regulatory issues including, economic analysis, rate design, cost of service, quality control, etc.

Adjunct Professor of Economics **1996-Present**

Weber State University, Ogden, Utah

Teaching Responsibilities

- Survey of Economics
- Principles of Micro and Macro Economics
- Quantitative Methods for Business and Economic

Assistant Professor of Economics **1989-1995**

University of Mississippi, Oxford, Mississippi

Teaching Responsibilities

- Graduate Courses:

  Applied Microeconomics, Applied Statistics and Regression Analysis, Econometrics, and Mathematical Statistics

- Undergraduate Courses:

  Principles of Economics, Microeconomics, and Statistics

- Course Coordinator for Undergraduate Statistics Courses

Committee Assignments

- Qualifying Theory Exams
- MBA Program Review
- Econometrics Field Exam
- Undergraduate Program and Effectiveness Assessment

Graduate Research/Teaching Assistant **1985-1990**

Texas A&M University, College Station, Texas

Responsibilities

- Teaching undergraduate economics courses
- Helping conduct and evaluate research for Dr. Robert Basmann and Dr. Raymond Battalio

PROFESSIONAL ACTIVITIES

- Text Book Reviewer
- Referee (past), Journal of Economic Education
- Discussant, Southern Economic Association Meetings
- Member of the American and Southern Economic Associations
- Invited Questioner, Educational Testing Service, GRE Economics Subject Exam

RESEARCH

- "Detecting Abnormal Returns Using the Market Model with Pretested Data," with Steven Graham and Wendy Pirie, *Journal of Financial Research*, Spring 1996, pp. 21-40.
- "Do Students Go to Class? Should They? Comment," with William F. Shughart, *Journal of Economic Perspectives,* Summer 1994, pp. 208-210.
- "A Decision Support System for In-Sample Simultaneous Equations Systems Forecasting Using Artificial Neural Networks," with Lou Caporaletti, Bob Dorsey, and John Johnson, *Decision Support Systems*, 11 (1994), pp. 481-495.
- "An Economic Interpretation of Stranded Costs in a Restructured Electric Utility Industry."
- "Information Versus Market Power: The Effect of Advertising on market Share Instability."
- Information and Competition: Their Role in a Restructured Electric Utility Industry."
- "An Empirical Comment on the Regional Distribution of Bank Closings in the United States From 1982 to 1988."

PRESENTATIONS

- "Stranded Costs," Electric Deregulation and Customer Choice Task Force, Utah State Legislature, Spring/Summer 1997

- "Retail Access Electric Pilot Programs," Utah Public Service Commission, Fall 1996.
- "Free Enterprise and the Entrepreneur," Gatlin Center for Free Enterprise, University of Mississippi, Fall 1995.
- "Simultaneous Equations Systems Forecasting with Neural Networks," with Lou Caporaletti, Bob Dorsey, and John Johnson, Combined Meetings of Operations research Society of America and The Information and Management Systems Society, May 1991.
- "Adaptive Behavior and Coordination Failure," with John VanHuyck, Joseph Cook, and Raymond Battalio, Economic Science Association Meetings, October 1990 and 1991.

CIVIC ACTIVITIES

- Participant, Utah Economic Forum
- Member, Huntsville Town Boosters Club
- Member, Huntsville Town Parks Committee
- Little League Baseball Coach, Weber County
- Trustee, Ogden Valley TV Translator District

HONORS

- Outstanding teacher of the Year, Nominee (by student vote), School of business Administration, University of Mississippi, 1994-1995
- Outstanding Graduate Teaching Award, Department of Economics, Texas A&M University, 1988-1989
- Senate Banking Committee Summer Intern, 1982