Witness CCS-3
Exhibit CCS-3

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

	)	Docket No. 98-2035-04
In the Matter of the Application	)	
of PacifiCorp and ScottishPower plc	)	PRE-FILED DIRECT TESTIMONY OF
for an Order Approving the Issuance	)	PAUL CHERNICK
of PacifiCorp Common Stock	)	FOR THE
	)	COMMITTEE OF CONSUMER SERVICES

June 18, 1999

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I. Identification and Qualifications

Q: State your name, occupation and business address.

A: I am Paul L. Chernick. I am the president of Resource Insight, Inc., 347 Broadway, Cambridge, Massachusetts 02139.

Q: Summarize your professional education and experience.

A: I received an SB degree from the Massachusetts Institute of Technology in June, 1974 from the Civil Engineering Department, and an SM degree from the Massachusetts Institute of Technology in February, 1978 in technology and policy. I have been elected to membership in the civil engineering honorary society Chi Epsilon, and the engineering honor society Tau Beta Pi, and to associate membership in the research honorary society Sigma Xi.

I was a utility analyst for the Massachusetts Attorney General for more than three years, and was involved in numerous aspects of utility rate design, costing, load forecasting, and the evaluation of power supply options. Since 1981, I have been a consultant in utility regulation and planning, first as a research associate at Analysis and Inference, after 1986 as president of PLC, Inc., and in my current position at Resource Insight. In these capacities, I have advised a variety of clients on utility matters. My work has considered, among other things, power supply planning, rate design, cost allocation, and utility industry restructuring. My resume is appended to this testimony as Exhibit CCS-3.1.

Q: Have you testified previously in utility proceedings?

A: Yes. I have testified approximately one hundred and fifty times on utility issues before various regulatory, legislative, and judicial bodies, including

the Arizona Commerce Commission, Connecticut Department of Public Utility Control, District of Columbia Public Service Commission, Florida Public Service Commission, Maine Public Utilities Commission, Maryland Public Service Commission, Massachusetts Department of Public Utilities, Massachusetts Energy Facilities Siting Council, Michigan Public Service Commission, Minnesota Public Utilities Commission, New Mexico Public Service Commission, New Orleans City Council, New York Public Service Commission, North Carolina Utilities Commission, Public Utilities Commission of Ohio, Pennsylvania Public Utilities Commission, Rhode Island Public Utilities Commission, South Carolina Public Service Commission, Texas Public Utilities Commission, Vermont Public Service Board, Federal Energy Regulatory Commission, and the Atomic Safety and Licensing Board of the U.S. Nuclear Regulatory Commission. A detailed list of my previous testimony is contained in my resume.

Q: What materials did you review in preparing this testimony?

A: I have reviewed

ScottishPower's direct testimony in this proceeding, particularly that of Mr. Richardson and Mr. Moir;

the supplemental testimony of Mr. Richardson in this proceeding;

the testimony of the Oregon PUC staff in Docket No. UM 918, particularly the Thornton-Riordan, Sipler-Murray and Olson-Harris panels;

the rebuttal testimony of ScottishPower in Docket No. UM 918, particularly that of Mr. Richardson and the Moir-MacLaren-Rockney panel;

numerous discovery responses;[1] and

[1] Discovery is cited by requesting party, respondent (*S* for ScottishPower and *P* for PacifiCorp), set number, and question number. Most of the discovery is from Utah PSC Docket No. 98-2035-

publications of the UK Office of Electricity Regulation (OFFER).

In addition, I participated in an introductory conference call with ScottishPower on March 26, and by telephone in a supplementary conference on performance standards between Utah DPU staff and Alec Burden of ScottishPower on May 7.

I. Introduction

Q: What is the subject matter of your testimony?

A: I discuss the performance standards and customer guarantees that ScottishPower offers as benefits of the merger. I concentrate primarily on the network performance standards, which deal with system reliability issues, with secondary consideration of the value of the customer service standards and customer guarantees.

Q: Are these issues usually dominant in merger proceedings?

A: Not in general. Merger proceedings usually deal primarily with estimating the cost reductions resulting from the merger; allocating those savings between shareholders and ratepayers, between jurisdictions, and between classes; setting the level of rate reductions and the length of rate caps; and determining whether the merger raises problems of market power. Service improvements are usually a secondary issue.

Q: Why are service improvements a more significant issue in this proceeding than in most?

04, where the requesting parties are CCS, DPU, and UIEC. Other discovery is in response to IPUC questions in Idaho PUC Case No. PAC-E-99-1.

A: The proposed purchase of PacifiCorp by ScottishPower does not present opportunities for the usual magnitude of cost reductions, since the two companies operate in very different jurisdictions many time zones apart. ScottishPower has not offered a rate reduction or rate cap as part of the merger, and has presented service improvements as a major portion of the benefit to PacifiCorp customers.

Q: Do ScottishPower's proposed performance standards and customer guarantees represent a powerful argument for approving the merger?

A: No. As described in my testimony below, ScottishPower's proposals appear to be well-intentioned, and should move PacifiCorp in appropriate directions. However, there is no clear connection between improving PacifiCorp performance and the merger. In fact,

PacifiCorp's performance in most areas is not particularly problematic.

PacifiCorp should be able to obtain the skills necessary to improve performance in many ways, with or without the aid of ScottishPower.

The proposed improvements are generally vague and minor.

Some of the improvement targets cannot be set meaningfully until PacifiCorp has improved its data-collection system and determined the baseline from which improvements will be made.

ScottishPower has not clearly defined portions of its proposal.

ScottishPower does not appear to have thought through the cost-effectiveness of alternative levels of reliability at PacifiCorp, and may have made uneconomic investments for reliability in its UK service territories.

In summary, ScottishPower's service proposals, while superficially attractive, are not well thought through. ScottishPower has promised

improvements without knowing the baseline performance level from which the improvement will be measured, and without being clear about what it is promising.

ScottishPower's failure to resolve the ambiguities in its service proposals may, in part, reflect the differences between the loose, evolving, consultative regulatory practice in the UK and the more precise, more established, adjudicatory regulatory practice in the US.

Q: How is the rest of your testimony structured?

A: The next section discusses PacifiCorp's current level of performance, and indications that PacifiCorp's performance may be likely to improve regardless of this merger proposal. Section III discusses the strengths and weaknesses of ScottishPower's offer of improved performance at PacifiCorp. Section V goes into greater detail regarding technical problems in ScottishPower's proposal and supporting analysis. Section VI considers whether a merger with ScottishPower would be likely to produce significantly better performance at PacifiCorp than could be achieved without the merger. Section VII summarizes my recommendations to the Commission.

II. PacifiCorp's Performance

Q: For what areas of PacifiCorp's performance do you have current information?

A: PacifiCorp has provided data on its T&D reliability, telephone service performance, and customer satisfaction. I discuss these three areas in turn.

A. T&D Reliability

Q: Is improvement in T&D reliability a major theme of the ScottishPower analysis of merger benefits?

A: Yes. Standards for T&D performance are the subject of five of the seven the proposed performance standards:

System average interruption duration index (SAIDI);

System average interruption frequency index (SAIFI);

Momentary average interruption frequency index (MAIFI);

Circuit Performance Indicator (CPI) for the five worst-performing circuits in each state; and

Supply restoration for 80 percent of customers within 3 hours

In addition, the company's Customer Guarantee 1 (a promise to restore power) also deals with T&D reliability.

Q: Is PacifiCorp's T&D performance problematic?

A: PacifiCorp's T&D reliability does not appear to be particularly troublesome compared to that of other utilities.

Q: Is the comparison of T&D performance across utilities straightforward?

A: No. Comparisons between utilities are difficult, due to differences in service territories and in data collection. Rural utilities tend to have more outages than urban utilities, since they have more line per customer, and those lines are overhead, rather than underground.[2] Some utilities are in areas that

[2]Overhead lines are much more subject to problems from wind, ice, and vehicle collisions than underground lines. On the other hand, once underground lines are damaged, locating and repairing the damage generally takes longer than for overhead lines.

suffer frequent ice storms; others face tornadoes, hurricanes, landslides or corrosion induced by salt spray. Imposed on all these inherent differences is additional dimensions of variation with respect to each utility's definitions of outages (such as how long an outage must be to count in SAIFI, or whether outages affecting only one customer count) and of excluded events (such as the definition of "extreme events"), and each utility's accuracy in reporting the number of customers disconnected.

Q: Given these limitations, how does PacifiCorp compare to other utilities?

A: PacifiCorp's performance is neither outstanding nor particularly bad. While the data on other utilities' performance provided by PacifiCorp (in CCS P9.29) is confidential, PacifiCorp appears to be better than average and better than median performance levels compared to US utilities, and better than average compared to UK utilities. The following table reproduces the data reported by the various utilities, in public documents:

	SAIDI	SAIFI	MAIFI
PacifiCorp Average 1994–98[3]			
Range across states	68–130[4]	0.69–1.65	3.9–7.7
Utah	87[4]	1.15	6.8
U.S. Data[4]			
Quartile 2	90–95[4]	1.10–1.40	5.4
Average	117–99[4]	1.26–1.49	6.6
UK Data[5]	88–97[4]	0.88–0.91	not reported

Since PacifiCorp serves a large geographical area that includes some very difficult terrain, it would be expected to have higher outage rates per customer compared to highly urbanized utilities. These utilities have less line per customer, and underground lines at that. The UK utilities as a whole are more urban, and serve a more-densely populated region, than PacifiCorp's service territory.

Population Density (People per Square Mile)

	Density
United Kingdom	
England	979[7]
Scotland	169[7]
Wales	361[7]
PacifiCorp States	

[3]CCS P2.7. ScottishPower has re-estimated some of these values; for consistency with other utility-reported data, I have used PacifiCorp's estimates.

[4]Attachment CCS S11.45: *Trial Use Guide for Electric Power Distribution Reliability Indices*, IEEE Working Group on System Design, IEEE P1366/D18, 1997. Range represents 1990 and 1995 national average reported values. Only 1995 data are reported for MAIFI.

[5]OFFER May 1999 Consultation Paper. I present the range of annual national averages, 1993/94-1997/98.

Oregon	32[7]
Washingt	85[6]
Utah	26[7]
Wyoming	5[7]
Idaho	14[7]

In Oregon and Washington, PacifiCorp does not serve the largest cities; on the other hand, many of the lowest-density areas are served by co-ops and other utilities.

A recent report to the Washington State Legislature indicates that, at least in 1997, PacifiCorp had lower SAIDI and SAIFI values than the state average, both of the other investor-owned utilities in the state,[7] and even Seattle City Light.[8]

Q: Has PacifiCorp's T&D reliability been deteriorating in recent years?

A: Not strikingly. System-wide SAIDI has been stable, while state-specific values for SAIDI, SAIFI, and MAIFI have varied significantly from year to year, without any clear trend. [9]

Q: Has ScottishPower asserted that PacifiCorp's T&D performance is worse than normal for major utilities, or that its performance has been deteriorating?

A: No. ScottishPower has not raised that argument in this proceeding.

Q: Are PacifiCorp's T&D data particularly unreliable?

A: PacifiCorp's data do not appear to be very good, but they do not seem to

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[6] For the four Washington counties PacifiCorp serves, population density varies from 3.4 to 48.6, so clearly its part of Washington is less densely settled than the state as a whole.

[7] The data for Washington Water Power are for an earlier year.

[8] "Washington Electric Utility Service Quality, Reliability, Disclosure and Cost Report" submitted to the Washington State Legislature December 1, 1998.

[9] Handout for May 7, 1999, ScottishPower presentation to DPU Staff; CCS P2.7.

be any worse than standard practice (IR CCS P11.38). ScottishPower has asserted that PacifiCorp has under-reported its outage frequency (SAIFI) by 80%, and its outage duration by 20% (SAIDI). This seems to be similar to ScottishPower's 21% under-reporting of SAIDI and SAIFI prior to installation of its new Prosper data-tracking system, which is "not widely used in the UK" (CCS S11.16).[10]

Q: Is there any reason to believe that PacifiCorp's T&D performance will change over time?

A: There is reason to expect that PacifiCorp's performance will improve over the next few years.

Since the failure of its effort to take over The Energy Group in the UK, PacifiCorp has announced a strategy of refocusing on providing excellent service in its Western US service territories:

> In October, we embarked on a significant change in our strategic direction, designed to optimize [our] strengths and to improve our financial performance. That strategy is to focus on our domestic western electricity business and sell or shut down all unrelated businesses except for Powercor, our Australian electricity distribution business…

[10] Even ScottishPower's new Prosper system does not record all faults on the secondary distribution system. "ScottishPower has stated that the number of LV [low voltage, or secondary] faults recorded by NaFIRS [National Fault and Interruption System] categories greatly underestimated the scale of the problem. They have also provided data from their own management system—Troublecall—which generates fault reports from information received from customers. This revealed a significantly higher number of supply interruptions than their Prosper system where NaFIRS data is recorded." ("Supply Interruptions Following the Boxing Day Storms, 1998," OFFER, May 1999, at 13–14)

In addition to providing good value to our shareholders, we are equally dedicated to finding new and innovative ways to enhance customer service and system reliability. We have already taken significant steps since October 1998 to improve billing and collections, power outage management, community relationships and business center performance. We are committed to providing the best among utility basics: low-cost, reliable power and exceptional customer service. (PacifiCorp 1998 Annual Report to Shareholders, March 1999)

In 1998 we made solid progress toward implementing a strategic refocus on our domestic western electricity business. We moved quickly to execute our new strategy by selling non-core businesses, implementing a cost reduction program and making changes designed to improve customer service and reliability. (ibid)

Oregon has established an annual review and setting of performance standards as part of its Alternative Form of Regulation for PacifiCorp. While that process will not directly affect service in Utah, changes in data collection, maintenance procedures, and corporate culture are likely to be transmitted between states.

The Utah PSC has initiated a proceeding (Docket No. 99-2035-01) to investigate quality of service issues for PacifiCorp.

Clearly, the company is focusing its attention on improving T&D performance.

B. Telephone Performance

Q: How does PacifiCorp's telephone performance compare to that of utilities in the United Kingdom?

A: PacifiCorp's performance in answering the telephone when its customers call is poor. PacifiCorp reports monthly average call-answering times for its two call centers that are occasionally under 20 seconds, but are usually over one minute, and sometimes over two minutes. It has been common for more than 10% of callers in a month to abandon their calls before getting a response (CCS P11.42, S11.21).

For the first three months of 1999, ScottishPower reports monthly

abandonment rates for ScottishPower and Manweb of 3.1–6.8%, compared to PacifiCorp's 9.2–11.3%.

Q: Is there any reason to hope that PacifiCorp's telephone performance will improve?

A: Yes. I previously discussed PacifiCorp's recent statements of commitment to "exceptional customer service" in its retail service territories. In connection with improving the quality of telephone service, PacifiCorp has consolidated its customer service centers to two state-of-the-art facilities (in Portland and Salt Lake City) and spent $75 million system-wide in new customer-service software.[11] The purpose of these efforts was described in PacifiCorp's 1998 Report to Shareholders:

> Focusing on the needs of our 1.5 million customers is also an integral part of our strategy. We reorganized our service functions in 1998 to be more responsive to our customers and to the communities we serve.
>
> Our customers first point of contact with PacifiCorp is usually through our business centers in Salt Lake City, Utah and Portland, Oregon. To make that contact as pleasant and productive as possible, we are improving service levels at our business centers through employee training programs, the creation of more efficient work shifts and process improvement efforts.

While PacifiCorp's work in improving customer service is not complete, the company appears to have identified the importance of service. Only eight months have elapsed since the change in PacifiCorp's strategic direction was announced, and many other issues have competed for management attention in that time. Once the divestitures of non-core businesses and of the Montana and California service territories are complete, and the ScottishPower merger is resolved, PacifiCorp's

[11] This investment is discussed in greater detail in Mr. Gimble's testimony.

commitment to improving customer service may become a reality.

C. Customer Satisfaction

Q: Are PacifiCorp customers generally satisfied with the utility's service?

A: It appears so. Residential customers seem to be fairly happy (CCS 11.43). Commercial and Industrial customers are less satisfied, but it is not clear that reliability or customer service is an important issue for them.

III. ScottishPower's Offers of Improved Performance

A. T&D Performance Standards

Q: Please describe ScottishPower's proposed T&D performance standards.

A: The five T&D performance standard are

Reduce underlying System Average Interruption Duration Index (SAIDI) by 10%.

Reduce underlying System Average Interruption Frequency Index (SAIFI) by 10%.

Reduce underlying Momentary Average Interruption Frequency Index (MAIFI) by 5%.

Reduce the Circuit Performance Indicator (CPI) for the five worst-performing circuits in each state by 20%.

Restoration service to 80% of customers within 3 hours, except for major events.

Q: Has ScottishPower proposed standards covering all relevant dimensions of T&D performance?

A: No. The standards exclude measurements of power quality, which ScottishPower agrees is very important (CCS S11.17).[12] Excluded power-quality indicators include voltage stability, short-term (e.g., 6-cycle) voltage sags, voltage spikes, frequency stability, and harmonics.

Q: Are the performance improvements clearly defined?

A: No. The performance improvements associated with ScottishPower's proposals are unclear in at least three distinct ways: baselines for percentage reductions, definition of the CPI goal, and definition of major events to be excluded from the computation of the performance indices.

Clearly, ScottishPower filed its direct testimony without having completely thought through many aspects of its proposed performance standards. As a result, the details of the proposals have emerged only piecemeal, and various company testimony, presentations, and discovery responses in various jurisdictions have differed. It is still not clear that anyone (including ScottishPower) knows what the utility has offered, let alone what it might need to do to meet its commitments.

Q: Why are the baselines for the percentage reductions unclear?

A: ScottishPower proposes that the baselines for the SAIDI, SAIFI, and MAIFI standards be 1994–98 averages, but proposes to update and revise the historical data over a two-year period following the merger (CCS S11.5, 11.6; Moir-MacLaren-Rockney Rebuttal at 8).

Q: Why is ScottishPower proposing to update historical data?

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[12] The MAIFI may be thought of as an indicator of power quality. In addition, Customer Guarantee 8 would require PacifiCorp to pay $50 to the customer, if the company failed to respond in some way within five to seven working days, depending on the type of the response. The Customer Guarantee does not require that PacifiCorp actually correct problems.

A: The problem ScottishPower faces is that PacifiCorp's T&D reliability data (like that of most US and UK utilities) are not precise. PacifiCorp's data-collection methods do not seem to be particularly deficient. Its description of its data collection (CCS P2.8, P11.26, 11.38, 11.39) certainly sounds appropriate. In addition, ScottishPower's estimate of the size of the size of PacifiCorp's understatement of SAIDI is similar to the magnitude of the revision in outage data ScottishPower reports having experienced as a result of improving its own data-collection system in 1997 (DPU S17.5, CCS S11.16).[13]

ScottishPower's inability to determine the baseline for improvements in reliability is understandable, given its plans to change data-collection procedures and revise historical data.[14] However, it was ScottishPower that decided to promise specific percentage improvements from those unknown baselines, without incremental expenditures. Should the merger proceed, ScottishPower should be held to those promises, even if new information indicates that those improvements will be more difficult or expensive than the utility has assumed.

Q: How would ScottishPower correct PacifiCorp's historical reliability data?

A: ScottishPower's proposal is vague, but it appears that ScottishPower

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[13]The attachment to DPU S17.5 was labeled confidential, as were a number of other documents for which ScottishPower's need for confidentiality is not clear. The unnecessary marking of information as confidential impedes the regulatory process and interferes with the ability of the public (and state legislatures) to follow the issues before the regulator, some of which are of great public import. One potential cost of PacifiCorp's purchase by a company whose operations are lightly regulated or unregulated is that the corporate attitude towards public access to utility information will deteriorate.

[14]ScottishPower did not know what baseline performance it would be starting with for PacifiCorp when the merger was proposed, or when improvements were proposed, and does not know the baseline even now (CCS S11.2).

expects to combine the following two methods:

Some spot checking of manually-recorded historical data against the data in the Outage Reporting System, primarily to correct the number of outages.[15]

Comparison of (1) the estimated number of customers disconnected in an historical outage with (2) the number of customers reported as disconnected in a future outage at the same piece of equipment (e.g., the same breaker) by an improved reporting system, such as the Prosper system that ScottishPower has installed in Scotland and is implementing at Manweb. This exercise would be used to estimate the extent to which PacifiCorp has mis-estimated the number of disconnected customers.

The results of both these analyses will need to be extrapolated to the entire PacifiCorp system. ScottishPower has not described this extrapolation in any detail.

Q: What is ScottishPower's schedule for correcting the historical reliability data?

A: In the May 7 meeting, Alec Burden estimated that the revisions could be complete within a year, but ScottishPower would not commit itself in writing to a time frame for these corrections (DPU S7.7). In Oregon, ScottishPower has committed to revising the baseline after "running the new and current reporting systems in parallel for up to two years" (Moir-MacLaren-Rockney rebuttal at 8), which might mean that the revisions would be completed late in 2002, depending on how fast the new reporting system could be implemented.

[15] It is my understanding, from my telephonic participation in a meeting between Utah DPU Staff and Alec Burden of ScottishPower, that ScottishPower has used this technique to estimate PacifiCorp's under-reporting of outages. I have not seen any formal re-computation of PacifiCorp's reliability measures, so I cannot be sure exactly what ScottishPower has done.

Q: Why is the definition of the CPI goal unclear?

A: ScottishPower's proposal for implementing the CPI standard is poorly defined. Clearly, ScottishPower is promising to identify five circuits that are poor performers, and to improve a composite performance index by 20%. ScottishPower's explanations leave the following questions unresolved:

What happens if PacifiCorp achieves 20% reductions in the CPI of some of the five worst circuits, but smaller reductions in one or more of the circuits? The standard might then be interpreted in many ways: achieving the goal might require that the CPI of every one of the five circuits be reduced by at least 20% (so that the minimum achieved reduction determines whether the goal is met), or over-achievement on one circuit might be applied against under-achievement on other circuits (so that something like the average reduction determines whether the goal is met).

In response to a request for clarification of this issue, ScottishPower rejected the suggestion that the minimum achievement establishes whether the goal is met, but asserted that the CPI standard would be evaluated for "each of the circuits selected individually" (CCS S11.10). If individual achievement is different than the standard being linked to minimum improvements, ScottishPower has not explained the distinction.

What happens if PacifiCorp fails to achieve the 20% CPI savings for more than one year? ScottishPower has committed to including any one circuit in the CPI no more than once in every five years, so a new set of worst circuits will be identified each year. ScottishPower has not indicated how it would propose that the Commission deal with a circuit on which the CPI stays high beyond the year in which it is targeted for reduction.

Whether the improvements are required to be persistent. For example,

if a targeted circuit's CPI falls 20% for a year or two after the base period, but then rises again in the third and fourth year, it is not clear whether ScottishPower would be considered to have achieved its goal.

Length of time PacifiCorp would have to achieve the 20% improvement. The CPI would be computed for a three-year base period, and ScottishPower asks for "two years after investment on the circuit" to achieve the 20% reduction from that three-year average (CCS S11.10). The deadline for improvement thus appears to depend on how fast PacifiCorp would move to correct the problem.

Depending on whether the year that compliance was required started two years from the last year in which investment was made in the circuit, or ended two years from the beginning of investment, ScottishPower might have anywhere from two years to five years (or more) from the end of the base period to achieve its 20% reduction. In addition, while ScottishPower asks for two years to improve the performance of the worst circuits, the penalties would not be effective until five years after the merger, giving ScottishPower at least five years in the first round of standards.

Whether the CPI is a one-time or continuing standard. Moir's (Direct at 7) speaks of the CPI standard becoming effective "within two years of implementation of the performance targets," which I interpret to refer to approval of the merger. In that case, the standard might apply only to the five circuits in each state with the worst performance in 1996–98.[16]

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[16] This initial baseline is defined (for the first time, so far as I can determine) in the Moir-MacLaren-Rockney rebuttal at 8. In Oregon, which already has annual performance reviews, ScottishPower has clarified that "ScottishPower will nominate five underperforming circuits in Oregon to be selected annually on the basis of the Circuit Performance Indicator (CPI). Corrective measures will be taken within 2 years of nomination to reduce the CPI on each selected circuit by 20%." It is not clear whether ScottishPower intends to apply the same

Whether (1) circuits that are performing poorly in the baseline period due to PacifiCorp's "inability to obtain the appropriate planning consents" (Exhibit BM-3 at 2) will be excluded from the five selected circuits, or (2) they will be included, but no penalties will be levied if the permits are not forthcoming.[17]

Whether circuits that are eliminated from the penalty scheme due to PacifiCorp's "inability to obtain the appropriate planning consents" will be replaced by the next-worse circuits.

Q: What is unclear about ScottishPower's proposed definition of major events?

A: The definition of the types of extraordinary events, which would be excluded from the computations of compliance, are described in Section V, below. At this point, I would simply note that ScottishPower has proposed several inconsistent (and generally vague) standards, without discussing how conflicts between these standards would be resolved.

Q: Are the proposed improvements dramatic?

A: No. The 10% decreases in SAIFI and SAIDI are small, compared to reductions at Manweb.[18] At Manweb, ScottishPower started with a utility with worse performance than PacifiCorp, with an underlying SAIDI (not including storms) of about 105 minutes in 1993/94 (the last pre-merger year), and brought that index down to about 55 minutes by 1997/98, a 47%

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approach in other jurisdictions; ScottishPower's thinking on these issues seems to still be in flux.

[17] While PacifiCorp's "ability to obtain the appropriate planning consents" depends in part on PacifiCorp's actions, it does not seem fair to hold PacifiCorp strictly liable for these risks. On the other hand, there is no point in setting up a standard and then letting permitting delays on some of the most problematic lines eviscerate the standard's potential effectiveness.

[18] Not enough is known about the potential for improvements in MAIFI to allow any meaningful assessment. The CPI measure is not widely used, and it is not clear that ScottishPower is actually proposing any improvement over existing conditions.

reduction in four years (Exhibit BM-4 at 1). Over the same four years, Manweb's SAIFI fell from 0.89 to 0.57 interruptions per customer (OFFER May 1999 Consultation Paper at 63), a 36% reduction.

The 10% reduction in SAIFI and SAIDI that ScottishPower offers over five years is comparable to inter-annual variation of PacifiCorp and various UK utilities. In other words, these reductions would be hard to identify against the noise of normal variability. The 5% improvement ScottishPower offers in MAIFI is an order of magnitude lower than the annual variation in PacifiCorp's MAIFI. Indeed, these improvements are smaller than the roughly 20% under-reporting rate ScottishPower estimates for PacifiCorp outages.

Q: How did ScottishPower determine the improvement targets?

A: The targets are based on ScottishPower's judgment regarding the feasible reductions in these measures. ScottishPower does not offer any historical comparison to other companies' improvements, or any cross-sectional data on achievable performance for utilities with service territories comparable to PacifiCorp. ScottishPower still says that it does not know the level of historical performance from which PacifiCorp is starting (CCS S11.2).

Nor has ScottishPower used cost-effectiveness analysis, such as that presented in Mr. Richardson's Exhibit AVR-2, to determine how much PacifiCorp's T&D performance should be improved. Indeed, the analysis in Exhibit AVR-2 suggests that ScottishPower's proposal simply skims the cream from the cost-effective performance improvements. ScottishPower estimates that $31.1 million in investment and $10.4 million in operating cost over five years, or $2.1 million annually, will fund all the performance

standards, including the telephone and complaint-resolution standards (DPU S9.2). Exhibit AVR-2 estimates that the SAIDI and MAIFI improvements alone will provide $61.2 million in annual reliability benefits. That is an annual return of

$$(61.2 - 2.1) \div 31.1 = 190\%$$

It is hard to see why, if Mr. Richardson's analysis is correct, further improvements would not be cost-effective. If the annual return on the first $31 million investment is 190%, the return on the next $30 million might be much less (100%, 50%, or even 25%), and still be cost-effective. Since ScottishPower has only a vague idea of the reliability level and physical situation it is starting with, it is unlikely to have identified a break-point in the cost-effectiveness curve.

The problems in the definition of the CPI (and hence with measuring improvement) are discussed in Section IV.

Q: Are the proposed penalties for non-compliance significant?

A: No. The penalties are small compared to ScottishPower's estimate of the cost to customers of poor performance, and are comparable to the costs of achieving the improvements.

ScottishPower proposes penalties of $1 per customer for each reliability measure it fails. Even if

PacifiCorp failed every one of the five standards in every state it serves, that would result in an annual penalty of $7 million, or about 11% of the customer cost PacifiCorp estimates for failing just two of the standards.[19]

The $7-million penalty is roughly equal to ScottishPower's estimates of the annualized cost of the improvements, at a 15% annual fixed-charge rate:

$$\$31.1 \times 15\% + 2.1 = \$6.8 \text{ million}$$

Therefore, if PacifiCorp were not planning to file a rate case, and decided to retain the funds it would otherwise have spent on improving service, the maximum penalty would be roughly balanced by the cost saving.

Small as the maximum penalty is, PacifiCorp is not likely to pay the maximum, even if it does nothing to improve service.

The large inter-annual variations will often result in MAIFI, SAIFI, and SAIDI performance that are 5% (for MAIFI) or 10% (for SAIDI and SAIFI) better than the three-year historical average, at least for some states.

Over the last five years, in the six states it reports (or a total of 30 observations), PacifiCorp exceeded 80% restoration within three hours 26 times, or 87%

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[19] The maximum possible penalty is about 5% of PacifiCorp's 1998 US electric earnings, or roughly 0.5% return on equity.

of the time, even before the exclusion of major events (IPUC 4 supplemental).

For CPI, we do not know whether the proposal is better than historical performance. The CPI penalty would also not be enforced if PacifiCorp "is delayed due to the company's inability to obtain the appropriate planning consents" (Exhibit BM-3 at 1).

B. Telephone Performance Standard

Q: What is your assessment of ScottishPower's proposed Performance Standard 6 for telephone service?

A: PacifiCorp's telephone performance is not very good, and ScottishPower's proposed standard would be a significant improvement over current practice. The proposed standard is not associated with any penalty or reward.

The Commission should order PacifiCorp to implement Performance Standard 6 (or something similar), regardless of the outcome of this case.

C. Customer Guarantees

Q: What is your assessment of ScottishPower's proposed Customer Guarantees?

A: These guarantees may be valuable in the following two ways:

Customers who are treated shabbily by PacifiCorp would receive a meaningful apology for their inconvenience and wasted time, in the form of a check. Missed appointments and inadequate response to customer inquiries are frequent and often irritating problems of dealing with large organizations; the customer guarantee payments should make the worst-affected customers feel better.

The payments would make inadequate customer service very concrete within PacifiCorp. While the financial effect would likely be minor, judging from UK experience, the fact that a check must be cut will tend to increase the responsibility of the entire organization that delivers the service, from the service person who showed up late, to the dispatcher who did the scheduling, to their supervisors.

While the Customer Guarantees, by themselves, are unlikely to transform PacifiCorp's corporate culture, the decline in payments over time in the UK (Attachment UIEC 7.8a) suggests that there is some incentive effect from these modest penalties.

The Commission should order PacifiCorp to implement the Customer Guarantees (or something similar), regardless of the outcome of this case.

IV. Measurement and Valuation Issues

Q: What measurement and valuation issues do you discuss?

A: I discuss ScottishPower's weighting of SAIDI, SAIFI, MAIFI, and lockouts in the computation of the Circuit Performance Index (CPI); other CPI issues; the definition of "major events" that would be excluded from computation of the indices; and the valuation of outages in the cost-benefit analysis in Exhibit AVR-2.

A. CPI weighting

Q: How does ScottishPower weight the four components within its proposed CPI?

A: The CPI includes four components computed on a circuit-specific (rather than state-wide or utility-wide) basis: the familiar SAIDI, SAIFI, and MAIFI indices, and the number of lockouts (events that result in an entire feeder being shut off, or "locked out"). The company proposes to apply two weighting factors to the components. The following table lists the two weights, as well as the product of the two weighting factors for each component index. The product of the two weights determines the number of points of the CPI index produced by one point of the component (one minute of SAIDI, or one outage for the other

indices). The table also shows how many minutes of SAIDI would receive the same CPI value as one outage of each type.

	Weight 1	Weight 2	CPI Points [1×2]	Units	Value of an outage in SAIDI minutes
SAIDI	0.3	0.029	0.0087	per minute	1
SAIFI	0.3	2.439	0.7317	per outage	84
MAIFI	0.2	0.700	0.1400	per outage	16
Lockouts	0.2	2.000	0.4000	per outage	46

The four values of Weighting Factor 1 are apparently selected to add to 1.0. ScottishPower has not provided a rationale for Weighting Factor 2.[20]

Q: Are these weights of the proper magnitude?

A: I doubt it. The following two aspects of the weighting raise the possibility that PacifiCorp might reduce the CPI index for high-CPI feeders, without necessarily improving service on the line.

The CPI formula treats each SAIFI outage as being worth as much as 84 more minutes of SAIDI. PacifiCorp might meet its CPI requirement on some circuits by reducing the number of outages, even if the length of the outages increased dramatically.

An outage that affects every customer on the

[20] In PacifiCorp's version of CPI, the second sets of weights totaled the reciprocal of the worst performance by any circuit on this measure. Consequently, the maximum contribution to CPI for each component was the same (CCS P11.32). That cannot be the origin of ScottishPower's weights, since the inverses of the proposed weights are 34.5, 0.4, 1.4, and 0.5 for the four measures, which is better than average performance for the first three criteria. In any case, the PacifiCorp approach would have resulted in constantly changing weights, meaning that CPI comparisons over time would be meaningless.

circuit due to a breaker lock-out at a substation is weighted 50% more than three outages that each affect one third of the customers on the circuit. The lockouts may be worth flagging, if they are easier to prevent and more likely to recur than other problems, but it is not clear that they are really much more important in determining the quality of power supply. Sectionalizing a feeder may dramatically reduce the number of lockouts, without reducing the number or duration of outages experienced by most customers.

B. Other CPI Issues

Q: What other issues have you identified with respect to the proposed CPI standard?

A: In Section III above, I discuss the lack of clarity in ScottishPower's proposal for the CPI standard, including issues of timing, the treatment of partial success on multiple circuits, and the effect of permitting difficulties on the selection of circuits and the determination of success or failure.

In addition, it is not possible to determine how much improvement over past practice is represented by a commitment to improve the CPI index for the worst circuits in 1996–98 by 2000 (for example). It appears that PacifiCorp's past practice has improved

most of its worst feeders.[21] In CCS P11.33, PacifiCorp provides the Utah feeders with the highest values on its CPI measures for the three-year periods end with 1992 through 1998.[22] Of some 14 feeders that appear in the lists once or more through 1996 (the last year for which we have two years of follow-up data), only three show up on the list two years after their first appearance. One of these three improved by more than 20% (from a CPI of 515 to 363), even though it was still the second-worst feeder in the state. [23]

C. *Major Events*

Q: What is the role of major events in the computation of the performance indices?

A: ScottishPower proposes to exclude major events (also sometimes called “extreme” or “extraordinary”

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[21] I discuss only Utah data here, because PacifiCorp has not yet responded to a broader request for CPI data by state.

[22] Even though PacifiCorp provided these data for seven years, it claimed in other discovery to have determined the worst-performing Utah feeders only once, for calendar year 1997 (CCS P11.41).

[23] Similarly, many of the “worst-performing feeders” in 1997 identified in Appendix A to Attachment UPSC P2.1 were performing much better by the third quarter of 1998 (CCS 11.40(a)), due to equipment additions or replacements. One circuit (Wallsburg 12) was already performing above average. The problems on this line were caused by mudslides and highway construction; in 1998, the line was relocated away from the mudslide area. Highway construction may often contribute to poor performance of feeders in the construction area. If so, the problems would routinely clear up once the lines are relocated onto new permanent poles.

events) from the computation of the SAIFI, SAIDI, MAIFI, and CPI indices, and the supply-restoration time standard.

Q: How does ScottishPower propose to define the major events that would be excluded?

A: That definition has changed. In Exhibit BM-3, ScottishPower equated extreme events with "storms." In DPU S7.8, ScottishPower admitted that it did not have a working definition of major events. ScottishPower's current proposal is

> a catastrophic event which exceeds the design of the power system or imposes an extreme workload on local resources, characterized as:
>
> Exceeds the design limits of the electric power system;
>
> Causes extensive damage to the electric power system;
>
> Results in more than 10% of the customers in an operating area out of service; and
>
> The total outages in an event exceed three standard deviations above the daily mean. (CCS S11.11)

This four-fold definition raises a number of questions. For instance,

Does ScottishPower mean that all four criteria must be met to create an extreme event? Or, is any one criterion sufficient?

What "design limits of the electric power system" means, and whether a truck running into a pole "exceeds the design limits" of the pole?

How large an "operating area" is used in the third criterion?[24] Who decides what "extensive damage" means?[25]

In the May 7 meeting, Mr. Burden agreed that the first criterion was too vague, and that it at least needed to be clarified to refer to "electrical design limits."

Q: Which definition should the Commission adopt?

A: I believe that either the third or fourth criterion, suitably clarified, could be a reasonable definition of excluded events. In any case, the definition should be clear and objective. The Commission has ample time to consider this issue, since the standards will not mean much for some years, until the new reporting system is in place and a new baseline established.

D. Cost-Benefit Analysis

Q: What comments do you have regarding the cost-benefit analysis In Exhibit AVR-2?

A: I have four basic comments. First, while ScottishPower presents this study as estimating the value of the SAIDI and MAIFI standards, it also incorporates the value of the SAIFI standard. Exhibit AVR-2 approximates the cost of extended outages by assuming that each customer experiences one 78-

[24] Mr. Burden indicated in the May 7 meeting that the "operating area" used here refers to "districts," of which there are about 20 in Utah. The concept is still open to dispute.

[25] This issue is explored in DPU S17.3 and S17.4.

minute outage, and estimates the value of a 10% reduction in SAIDI as 10% of that estimated cost. This is equivalent to assuming that outages will continue to be 78 minutes long, but that the average customer will experience annually only 0.9 outages, rather than 1.0 outage. In other words, Exhibit AVR-2 assumes that SAIFI is reduced 10%. If SAIDI were reduced 10% with no change in SAIFI, ScottishPower would need to estimate the cost of 1.0 outage of 70.2 minutes for each customer. With ScottishPower's input assumptions, its 10% reduction in SAIDI and SAIFI is worth $37 million; a 10% reduction in SAIFI with no change in SAIFI would be worth only $10 million. Consequently, about 70% of ScottishPower's claimed benefits from SAIDI (and about 43% of the claimed total benefits) are actually due to SAIFI.

Second, ScottishPower's use of data from the Bonneville Power 1990 survey (cited extensively by Richardson at AVR-2) makes an inherently uncertain exercise particularly unreliable. ScottishPower did not attempt to adjust for such differences as the size of commercial and industrial customers in the Bonneville study and in the PacifiCorp service territory, or the change in technology over time. (For example, increasing computer use may increase the costs of momentary outages for smaller businesses.)

The Commission should address the value of T&D reliability in an appropriate proceeding.

Third, ScottishPower's assumed value of momentary outages for residential customers ($3.41/outage) is very high, in the light of all the other data ScottishPower has offered. This value was not estimated by Bonneville, and ScottishPower extrapolated back from Bonneville's estimates for 1-, 4-, and 8-hour outages.[26] The following information from ScottishPower suggests that the company values these outages too much:

ScottishPower estimates that the value to residential customers of a momentary outage is 80% of value of the 78-minute typical extended outage. ScottishPower assumed that the corresponding ratios of momentary-to-extended outage values for commercial and industrial customers are 10% and 31%, respectively. This pattern makes no sense, since residential customers lose much less from momentary outages than do commercial or industrial customers dependent on computers and delicate electronics and machinery.

Most residential customers will lose little from a momentary outage, other than needing to reset some

[26] For commercial and industrial customers, ScottishPower used ratios of the values of momentary and 1-hour outages from unidentified "other studies."

clocks. A one-hour outage, on the other hand, can impose problems and inconveniences such as inability to cook dinner, utilize a home computer, or do laundry. The residential momentary-to-extended outage ratio should be much less than the other classes, not greater.[27]

ScottishPower's extrapolation method for valuing residential momentary outages is unreliable. If applied to Bonneville's data for sustained commercial and industrial outages, the ScottishPower method would produce estimated values of momentary outages for commercial and industrial customers several times as much as Bonneville's survey results.

The EPRI study that ScottishPower provided in response to LGC S1.37 estimates a much smaller residential momentary cost and momentary-to-extended outage ratio compared to those of ScottishPower.

OFFER estimates a residential momentary-to-extended outage ratio of about 1%. This is much less than the ratios OFFER estimates for commercial and industrial customers, which appear to be similar to ScottishPower's estimates (May 1999 Consultation Paper at 109).

ScottishPower's proposed CPI index treats each momentary outage as being worth about

[27] Either ScottishPower's estimate of residential momentary costs is overstated, or its estimate of the value of longer outages to residential customers is understated.

20% of a sustained outage. This is consistent with the Bonneville estimates for commercial and industrial customers.

Fourth, even with the inflated value for residential momentary outages, Table 2 of Exhibit AVR-2 indicates that improvements in T&D reliability primarily benefit C&I customers; only 4% of the benefits are from the residential class.[28] It is also clear that ScottishPower concentrates its efforts at T&D power-quality improvement to benefit its largest customers (CCS S11.18). Since the benefits of improved reliability accrue primarily to the C&I classes, the costs of the improvements justified by those benefits should be borne primarily by the C&I classes.

V. ScottishPower's Contribution to Improving PacifiCorp's Performance

Q: What would ScottishPower contribute to PacifiCorp's performance?

A: Mostly, ScottishPower comes into this proceeding expressing a positive attitude toward customer service and improving service quality (Moir Direct;

[28] If momentary outages are valued at $1 per customer, which seems plausible, the residential share of benefits falls to 2%.

CCS S11.18). In addition, ScottishPower appears to be committed to improving the quality of data on PacifiCorp's performance and to implementing a new outage-tracking system (CCS S11.15).

As noted above, PacifiCorp has been expressing similarly positive attitudes toward customer service and service quality since well before the merger proposal from ScottishPower.

Q: Has ScottishPower demonstrated that the merger would provide service- or reliability-related resources to PacifiCorp that PacifiCorp could not obtain elsewhere?

A: No. In some cases, the resource that ScottishPower would bring to the merger seems to be little more than familiarity with available commercial products, such as improved databases for collecting and processing reliability data. In other cases, ScottishPower is offering little more than a can-do attitude and a determination to improve the operation of systems (such as distribution line maintenance) that PacifiCorp already understands well.

PacifiCorp may need to bring in some new, customer-oriented (or results-oriented) managers from other companies or other industries, to shake up

aspects of the corporate culture.[29] If so, some of the ScottishPower managers who are prepared to relocate to PacifiCorp's service territory may be good candidates for those jobs. But it is far from clear that PacifiCorp lacks much of the technical and managerial resources needed to achieve the goals ScottishPower has proposed, and in much the same time frame.

A. The Record in the United Kingdom

Q: Has ScottishPower's performance in its UK electric utilities been outstanding?

A: ScottishPower's record has been good, but not outstanding.[30] Post-privatization performance has improved at most UK utilities (Attachment UIEC 7.8b, Figures 3 and 6). Manweb's improvements, for which ScottishPower takes credit, may have occurred later than several other utilities' improvements, but are not extraordinary.

ScottishPower itself shows no consistent

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[29] Answering phones for a utility should not be very different than answering phones in many other consumer-oriented industries.

[30] Assessing ScottishPower's performance is complicated by inconsistencies in its reporting. Various company presentations show historical data with and without retroactive adjustments for the changes in the data system, and with and without adjustments for major events. For example, in 1996/97, a year with major storms, ScottishPower reported its performance with and without major events; in 1997/98, without any major storms, ScottishPower dropped the storm adjustment, which would have shown its SAIDI rising from 62 minutes to 77 minutes ("Distribution System Performance," PES License Condition 7, 1996/97 and 1997/98, ScottishPower).

improvement in SAIDI or SAIFI in the OFFER data (ibid.). Exhibit BM-4 reports improvement in SAIDI from 93/94 to 97/98, but this display depends on the accuracy of the exclusion of major events (which SP apparently started in 1995) and on the retrospective upward adjustment to pre-1995 data for consistency with ScottishPower's new data system.

OFFER indicates that Manweb and ScottishPower both have low SAIFI, given the density of their systems, but that Manweb SAIDI is well above the norm (May 1999 Consultation Paper at 66). OFFER also states (at 65), "on present indications, ScottishPower is unlikely to achieve its own 1999/2000 targets for improvements in numbers of interruptions and duration of interruptions."

According to OFFER, ScottishPower's historical and projected expenditures on improved reliability are not cost-effective in reducing outages. (May 1999 Consultation Paper at 76, 77).[31]

B. ScottishPower's Assessment of its Proposal

Q: What is ScottishPower's assessment of its proposal for performance standards and customer guarantees?

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[31] The historical results may have been influenced by the changes in ScottishPower's data-collection system; the projected cost-benefit ratios will not be.

A: ScottishPower asserts that it is offering a superior package of standards and guarantees, which would provide significant value to PacifiCorp customers (Moir Direct at 1–2, Richardson Supplemental at 1–6, Moir-MacLaren-Rockney panel at 2–3).

Q: How substantial is ScottishPower's basis for its glowing assessment of its offer?

A: I have previously discussed some of the problems with the cost-benefit analysis in Mr. Richardson's supplemental testimony: the valuation of momentary residential interruptions appears overstated; the computation represents the benefits of all three major standards (SAIDI, MAIFI, and SAIFI), not just SAIDI and MAIFI; and if the assumptions in the analysis are even to be believed, much larger reliability improvements than those proposed by ScottishPower are likely to be cost-effective.

ScottishPower provides comparisons to other utilities' performance standards and customer guarantees in Moir's Exhibit BM-1, and in the report "Customer Service Standards and Guarantees: a Nationwide Survey and Comparison to the ScottishPower/PacifiCorp offer," prepared for ScottishPower by Gayatri Schilberg of JBS Energy,

Inc.[32] As I have noted above, ScottishPower's promises regarding its performance standards are not very meaningful, given the uncertainty in the baseline value, the long time frame for compliance, and the many uncertainties in the definitions of the standards.

Q: Does the Schilberg report contradict your assessment of the performance standards?

A: No. Ms. Schilberg (at 1–2) lists eleven "elements that differentiate the [ScottishPower] proposal." Of those eleven elements, none mentions the principal reliability standards, SAIFI, SAIDI, or MAIFI. Five elements concern only the customer guarantees, which as I note above are not related to the merger. Two are essentially procedural, having to do with whether ScottishPower sought Commission approval or asked for rewards.[33] Two more "differentiating elements" concern the telephone goals and the goal for response time to Commission complaints, neither of which is associated with any consequence for the utility.[34]

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[32] Ms. Schilberg's report was filed as an attachment to ScottishPower's June 2 rebuttal testimony in Oregon, and has therefore not been subject to any intensive scrutiny.

[33] The distinction between a reward and the absence of a penalty may be largely semantic. A regulator may grant higher rates, assuming good performance, and impose penalties for anything less, or grant lower rates and allow the utility to increase its revenues with rewards. The two schemes could yield exactly the same earnings for the utility, for any given performance level.

[34] Elsewhere, Ms. Schilberg correctly notes the importance of financial consequences for utility performance, as in her second "element." It appears that Ms. Schilberg would agree that the

All that is left of Schilberg's eleven differentiating elements are the standard of 80% restoration within three hours and the poorly-defined CPI standard. As noted above, it is not clear how much better these standards are than PacifiCorp's current performance. While Ms. Schilberg is pleased with the financial consequences in the CPI standard, she does not comment on the five-year period ScottishPower would give itself to correct performance problems, or on the peculiar weighting of factors within the CPI.[35]

Indeed, the study is interesting to read for what it does not say about particular standards, but what is implied by Ms. Schilberg's selective silences and her observations about other standards. She does not comment of the absence of consequences for five years, the lack of consequences for two of the standards, the weighting and delay in the CPI standard, the magnitude of the penalties, or the appropriateness of the reduction targets. The praise in the Schilberg report must be read as faint in many areas, if not outright damning.

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telephone and complaint standards, without penalties, are less meaningful than standards with financial penalties. While the telephone standards are aggressive, they are not binding; for the long-term goal, ScottishPower has not even proposed a time frame.

[35] Interestingly, Ms. Schilberg notes that the Texas standard calls for no feeder to be in the worst category two years in a row, a considerably more stringent requirement than the five-year cycle proposed by ScottishPower.

VI. Recommendations

Q: What are your recommendations to the Commission in this proceeding?

A: My most important recommendation with regard to the application in this proceeding is that nothing that ScottishPower has offered with respect to the performance standards and customer guarantees demonstrates any significant benefit from the merger. ScottishPower can probably improve PacifiCorp's performance in at least some of these areas; PacifiCorp can probably achieve much the same results without the merger.[36] Neither improved attitude, nor better data-management technology, nor better phone-center operation requires the merger.[37]

Q: What should the Commission do with respect to

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[36] If certain of the risks identified in the testimony of other CCS witnesses come to pass, ScottishPower may be in a worse situation to make good on its promises than a free-standing PacifiCorp would be. ScottishPower's analyses, promises, and thinking about regulatory goals and regulatory accountability in this docket have been vague. ScottishPower appears to be honestly confused about the nature and benefits of what it is offering. This confusion courts future disputes, if parties interpret the commitments differently, and as parties seek to clarify the nature and extent of the commitments, in the future. Despite the best of intentions, ScottishPower may not be as well prepared as it thinks for dealing with US utility regulation, or for solving PacifiCorp's problems. If ScottishPower has made a mistake, and the merger goes through, future disputes over unclear promises, and conflicting expectations, may result in high costs for both ScottishPower and PacifiCorp customers. If ScottishPower finds that it cannot do what it promised customers and regulators, as well as shareholders, unforeseen consequences could result.

[37] Metaphorically, the merger is the equivalent of a heart transplant to solve a problem that can be treated with diet and exercise.

the reliability and customer-service issues ScottishPower raised in this proceeding?

A: If the Commission has the authority, it should simply impose the proposed customer guarantees as part of the order in this docket, regardless of the outcome. Otherwise, the Commission should incorporate the guarantees into PacifiCorp's terms and conditions in its next rate proceeding. PacifiCorp has accepted the customer guarantees in this proceeding, and would be hard-pressed to oppose their imposition.[38]

The Commission should also instruct PacifiCorp to

improve the quality of the data it collects on outages, and report semi-annually to the Commission on its plans and progress;

improve its telephone service to customers, including reducing time for answering the phone.

In addition, the Commission should conduct a full review of reliability and service issues, including

Determining the value of improvements in reliability, including a refinement of ScottishPower's finding that the bulk of the benefits of improved reliability are received by commercial and

[38] In CCS P11.27, PacifiCorp says that it can achieve the goals set by ScottishPower, but asserts that the process of improving service would be faster with ScottishPower. PacifiCorp offers no basis for that assertion.

industrial customers;

Establishing rules and procedures for improved measurement of momentary and sustained outages, including auditing procedures;

Determining the feasible and cost-effective improvements in reliability, and setting up standards requiring those improvements;[39]

Establish clear standards for eliminating major events from performance data, historical and future;

If composite indices are found to be valuable, determine the appropriate weighting of their components; and

Determine the level of penalties necessary to provide adequate incentives for improved performance, and establish penalties that vary with the severity of the failure to meet standards.

These reliability and customer service issues could be fully examined in a separate proceeding focusing on those issues, or (depending on timing and resource limitations) as part of PacifiCorp's next general rate case. The open reliability proceeding (Utah PSC Docket No. 99-2035-01) could be expanded to include the reliability and customer service issues raised in the current docket.

[39] PacifiCorp believes the standards ScottishPower proposed in this proceeding are feasible and cost-effective (CCS P11.24 and P11.25).

Q: Does this conclude your testimony?

A: Yes.