

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of The Application of
PacifiCorp and Scottish Power PLC

For an Order (1) Disclaiming jurisdiction or, in
The Alternative, Authorizing the Acquisition of
Control of PacifiCorp by Scottish Power and (2)
Affirming Compliance with RCW 80.08.040 for
PacifiCorp's Issuance of Stock in Connection
with the Transaction

Docket No. UE-981627

DIRECT TESTIMONY OF PAUL L. CHERNICK
ON BEHALF OF THE PUBLIC COUNSEL SECTION
OFFICE OF THE ATTORNEY GENERAL

JUNE 15, 1999

TABLE OF CONTENTS

I.	Identification and Qualifications	1
II.	Introduction.....	3
III.	PacifiCorp’s Performance	6
	A. T&D Reliability.....	6
	B. Telephone Performance	12
	C. Customer Satisfaction.....	13
IV.	Scottish Power’s Offers of Improved Performance.....	14
	A. T&D Performance Standards.....	14
	B. Telephone Performance Standard	24
	C. Customer Guarantees.....	24
V.	Measurement and Valuation Issues.....	25
	A. CPI weighting	26
	B. Other CPI Issues	28
	C. Major Events.....	29
	D. Cost-Benefit Analysis.....	30
VI.	Scottish Power’s Contribution to Improving PacifiCorp’s Performance	33
	A. The Record in the United Kingdom	35
	B. Scottish Power’s Assessment of its Proposal	36
VII.	Scottish Power’s Proposal for Low-Income Assistance	39
VIII.	Recommendations.....	42

EXHIBITS

Exhibit ___ PLC-1

Professional Qualifications of Paul Chernick

1 **I. Identification and Qualifications**

2 **Q: State your name, occupation and business address.**

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

5 **Q: Summarize your professional education and experience.**

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

12 I was a utility analyst for the Massachusetts Attorney General for more
13 than three years, and was involved in numerous aspects of utility rate design,
14 costing, load forecasting, and the evaluation of power supply options. Since
15 1981, I have been a consultant in utility regulation and planning, first as a
16 research associate at Analysis and Inference, after 1986 as president of PLC,
17 Inc., and in my current position at Resource Insight. In these capacities, I
18 have advised a variety of clients on utility matters. My work has considered,
19 among other things, power supply planning, rate design, cost allocation, and
20 utility industry restructuring. My resume is appended to this testimony as
21 Exhibit____PLC-1.

22 **Q: Have you testified previously in utility proceedings?**

1 A: Yes. I have testified approximately one hundred and fifty times on utility
2 issues before various regulatory, legislative, and judicial bodies, including the
3 Arizona Commerce Commission, Connecticut Department of Public Utility
4 Control, District of Columbia Public Service Commission, Florida Public
5 Service Commission, Maine Public Utilities Commission, Maryland Public
6 Service Commission, Massachusetts Department of Public Utilities,
7 Massachusetts Energy Facilities Siting Council, Michigan Public Service
8 Commission, Minnesota Public Utilities Commission, New Mexico Public
9 Service Commission, New Orleans City Council, New York Public Service
10 Commission, North Carolina Utilities Commission, Public Utilities
11 Commission of Ohio, Pennsylvania Public Utilities Commission, Rhode
12 Island Public Utilities Commission, South Carolina Public Service
13 Commission, Texas Public Utilities Commission, Vermont Public Service
14 Board, Federal Energy Regulatory Commission, and the Atomic Safety and
15 Licensing Board of the U.S. Nuclear Regulatory Commission. A detailed list
16 of my previous testimony is contained in my resume.

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

18 A: I have reviewed

- 19 • Scottish Power's direct testimony in this proceeding, particularly that of
- 20 Mr. Richardson and Mr. Moir;
- 21 • the supplemental testimony of Mr. Richardson in this proceeding;
- 22 • the testimony of the Oregon PUC staff in Docket No. UM 918,
- 23 particularly the Thornton-Riordan, Sipler-Murray and Olson-Harris
- 24 panels;

- 1 • the rebuttal testimony of Scottish Power in Docket No. UM 918,
2 particularly that of Mr. Richardson and the Moir-MacLaren-Rockney
3 panel;
- 4 • numerous discovery responses;¹
- 5 • publications of the UK Office of Electricity Regulation (OFFER);

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

10 **II. Introduction**

11 **Q: What is the subject matter of your testimony?**

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

¹Discovery is cited by requesting party, respondent (*S* for Scottish Power and *P* for PacifiCorp), set number, and question number. Most of the discovery is from Utah PSC Docket No. 98-20350-04, 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. Pursuant to the Stipulation between Public Counsel, PacifiCorp, and Scottish Power, much of the discovery relied upon and referenced in this testimony originates from other jurisdictions.

1 I also briefly touch on Scottish Power's commitment to low-income
2 programs.

3 **Q: Are these issues usually dominant in merger proceedings?**

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

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

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

18 **Q: Do Scottish Power's proposed performance standards and customer
19 guarantees represent a powerful argument for approving the merger?**

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

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

- 1 • PacifiCorp should be able to obtain the skills necessary to improve
2 performance in many ways, with or without the aid of Scottish Power.
- 3 • The proposed improvements are generally vague and minor.
- 4 • Some of the improvement targets cannot be set meaningfully until
5 PacifiCorp has improved its data-collection system and determined the
6 baseline from which improvements will be made.
- 7 • Scottish Power has not clearly defined portions of its proposal.
- 8 • Scottish Power does not appear to have thought through the cost-
9 effectiveness of alternative levels of reliability at PacifiCorp, and may
10 have made uneconomic investments for reliability in its UK service
11 territories.

12 In summary, Scottish Power’s service proposals, while superficially
13 attractive, are not well thought through. Scottish Power has promised
14 improvements without knowing the baseline performance level from which
15 the improvement will be measured, and without being clear about what it is
16 promising.

17 Scottish Power’s failure to resolve the ambiguities in its service
18 proposals may, in part, reflect the differences between the loose, evolving,
19 consultative regulatory practice in the UK and the more precise, more
20 established, adjudicatory regulatory practice in the US.

21 **Q: How is the rest of your testimony structured?**

22 A: The next section discusses PacifiCorp’s current level of performance, and
23 indications that PacifiCorp’s performance may be likely to improve
24 regardless of this merger proposal. Section IV discusses the strengths and
25 weaknesses of Scottish Power’s offers of improved performance at Pacifi-

1 Corp. Section V goes into greater detail regarding technical problems in
2 Scottish Power's proposal and supporting analysis. Section VI considers
3 whether a merger with Scottish Power would be likely produce significantly
4 better performance at PacifiCorp than could be achieved without the merger.
5 Section VII reviews Scottish Power's proposal for low-income assistance.
6 Section VIII summarizes my recommendations to the Commission.

7 **III. PacifiCorp's Performance**

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

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

12 **A. T&D Reliability**

13 **Q: Is improvement in T&D reliability a major theme of the Scottish Power**
14 **analysis of merger benefits?**

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

- 17 1. System average interruption duration index (SAIDI)
- 18 2. System average interruption frequency index (SAIFI)
- 19 3. Momentary average interruption frequency index (MAIFI)
- 20 4. Circuit Performance Indicator (CPI) for the five worst-performing
21 circuits in each state
- 22 5. Supply restoration for 80% of customers within 3 hours

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

3 **Q: Is PacifiCorp’s T&D performance problematic?**

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

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

7 A: No. Comparisons between utilities are difficult, due to differences in service
8 territories and in data collection. Rural utilities tend to have more outages
9 than urban utilities, since they have more line per customer, and those lines
10 are overhead, rather than underground.² Some utilities are in areas that suffer
11 frequent ice storms; others face tornadoes, hurricanes, landslides or corrosion
12 induced by salt spray. Imposed on all these inherent differences is additional
13 dimensions of variation with respect to each utility’s definitions of outages
14 (such as how long an outage must be to count in SAIFI, or whether outages
15 affecting only one customer count) and of excluded events (such as the
16 definition of “extreme events”), and each utility’s accuracy in reporting the
17 number of customers disconnected.

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

19 A: PacifiCorp’s performance is neither outstanding nor particularly bad. While
20 the data on other utilities’ performance provided by PacifiCorp (in CCS
21 P9.29) is confidential, PacifiCorp appears to be better than average and better

²Overhead 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.

1 than median performance levels compared to US utilities, and better than
 2 average compared to UK utilities. The following table reproduces the data
 3 reported by the various utilities, in public documents:

	SAIDI	SAIFI	MAIFI
<i>PacifiCorp Average 1994–98³</i>			
Range across states	68–130 ⁴	0.69–1.65	3.9–7.7
Utah	87 ⁴	1.15	6.8
Washington	108 ⁴	0.69	3.9
<i>U.S. Data⁵</i>			
Quartile 2	90–95 ⁴	1.10–1.40	5.4
Average	117–99 ⁴	1.26–1.49	6.6
<i>UK Data⁶</i>	88–97 ⁴	0.88–0.91	not reported

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

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

⁴This value would be about 80 minutes, without the 1996 storm damage.

⁵Attachment 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.

⁶OFFER May 1999 Consultation Paper. I present the range of annual national averages, 1993/94-1997/98.

1 **Population Density (People per Square Mile)**

	<u>Density</u>
United Kingdom	
England	979
Scotland	169
Wales	361
PacifiCorp States	
Oregon	32
Washington	85 ⁷
Utah	26
Wyoming	5
Idaho	14

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

5 A recent report to the Washington State Legislature indicates that, at
6 least in 1997, PacifiCorp had lower SAIDI and SAIFI values than the state
7 average, both of the other investor-owned utilities in the state,⁸ and even
8 Seattle City Light.⁹

9 **Q: Has PacifiCorp’s T&D reliability been deteriorating in recent years?**

10 A: Not strikingly. System-wide SAIDI has been stable, while state-specific values
11 for SAIDI, SAIFI, and MAIFI have varied significantly from year to year,
12 without any clear trend. ¹⁰

⁷For 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.

⁸The data for Washington Water Power are for an earlier year.

⁹“Washington Electric Utility Service Quality, Reliability, Disclosure and Cost Report”
submitted to the Washington State Legislature December 1, 1998.

¹⁰Handout for May 7, 1999 Scottish Power presentation to DPU Staff; CCS P2.7.

1 **Q: Has Scottish Power asserted that PacifiCorp’s T&D performance is**
2 **worse than normal for major utilities, or that its performance has been**
3 **deteriorating?**

4 A: No. Scottish Power has not raised that argument in this proceeding.

5 **Q: Are PacifiCorp’s T&D data particularly unreliable?**

6 A: PacifiCorp’s data do not appear to be very good, but they do not seem to be
7 any worse than standard practice (IR CCS P11.38). Scottish Power has
8 asserted that PacifiCorp has under-reported its outage frequency (SAIFI) by
9 80%, and its outage duration by 20% (SAIDI). This seems to be similar to
10 Scottish Power’s 21% under-reporting of SAIDI and SAIFI prior to installation
11 of its new Prosper data-tracking system, which is “not widely used in the
12 UK” (CCS S11.16).¹¹

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

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

¹¹Even Scottish Power’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)

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

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

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

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

- 22 • Oregon has established an annual review and setting of performance
23 standards as part of its Alternative Form of Regulation for PacifiCorp.
24 • The Utah PSC has initiated a proceeding (Docket No. 99-2035-01) to
25 investigate quality of service for PacifiCorp.

26
27 While these processes will not directly affect service in Washington,
28 changes in data collection, maintenance procedures, and corporate culture are
29 likely to be transmitted between states.

30

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

3 ***B. Telephone Performance***

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

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

12 For the first three months of 1999, Scottish Power reports monthly
13 abandonment rates for Scottish Power and Manweb of 3.1–6.8%, compared
14 to PacifiCorp's 9.2–11.3%.

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

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

1 Focusing on the needs of our 1.5 million customers is also an integral
2 part of our strategy. We reorganized our service functions in 1998 to be
3 more responsive to our customers and to the communities we serve.

4 Our customers first point of contact with PacifiCorp is usually through
5 our business centers in Salt Lake City, Utah and Portland, Oregon. To
6 make that contact as pleasant and productive as possible, we are
7 improving service levels at our business centers through employee
8 training programs, the creation of more efficient work shifts and process
9 improvement efforts.

10 While PacifiCorp's work in improving customer service is not
11 complete, the company appears to have identified the importance of service.
12 Only eight months have elapsed since the change in PacifiCorp's strategic
13 direction was announced, and many other issues have competed for
14 management attention in that time. Once the divestitures of non-core
15 businesses and of the Montana and California service territories are
16 complete, and the Scottish Power merger is resolved, PacifiCorp's
17 commitment to improving customer service may become a reality.

18 **C. *Customer Satisfaction***

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

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

1 **IV. Scottish Power's Offers of Improved Performance**

2 **A. T&D Performance Standards**

3 **Q: Please describe Scottish Power's proposed T&D performance standards.**

4 A: The five T&D performance standard are

- 5 • Reduce underlying System Average Interruption Duration Index (SAIDI)
- 6 by 10%.
- 7 • Reduce underlying System Average Interruption Frequency Index
- 8 (SAIFI) by 10%.
- 9 • Reduce underlying Momentary Average Interruption Frequency Index
- 10 (MAIFI) by 5%.
- 11 • Reduce the Circuit Performance Indicator (CPI) for the five worst-
- 12 performing circuits in each state by 20%.
- 13 • Restoration service to 80% of customers within 3 hours, except for
- 14 major events.

15 **Q: Has Scottish Power proposed standards covering all relevant dimensions**
16 **of T&D performance?**

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

¹²The 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.

1 **Q: Are the performance improvements clearly defined?**

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

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

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

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

18 **Q: Why is Scottish Power proposing to update historical data?**

19 A: The problem Scottish Power faces is that PacifiCorp's T&D reliability data
20 (like that of most US and UK utilities) are not precise. PacifiCorp's data-
21 collection methods do not seem to be particularly deficient. Its description of
22 its data-collection (CCS P2.8, P11.26, 11.38, 11.39) certainly sounds
23 appropriate, and Scottish Power's estimate of the size of the size of Pacifi-
24 Corp's understatement of SAIDI is similar to the magnitude of the revision in
25 outage data Scottish Power reports having experienced as a result of

1 improving its own data-collection system in 1997 (DPU S17.5, CCS
2 S11.16).¹³

3 Scottish Power's inability to determine the baseline for improvements in
4 reliability is understandable, given its plans to change data-collection proced-
5 ures and revise historical data.¹⁴ However, it was Scottish Power that decided
6 to promise specific percentage improvements from those unknown baselines,
7 without incremental expenditures. Should the merger proceed, Scottish
8 Power should be held to those promises, even if new information indicates
9 that those improvements will be more difficult or expensive than the utility
10 has assumed.

11 **Q: How would Scottish Power correct PacifiCorp's historical reliability**
12 **data?**

13 A: Scottish Power's proposal is vague, but it appears that Scottish Power
14 expects to combine the following two methods:

¹³The attachment to DPU S17.5 was labeled confidential, as were a number of other documents for which Scottish Power'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.

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

- 1 • Some spot checking of manually-recorded historical data against the
2 data in the Outage Reporting System, primarily to correct the number of
3 outages.¹⁵
- 4 • Comparison of (1) the estimated number of customers disconnected in
5 an historical outage with (2) the number of customers reported as
6 disconnected in a future outage at the same piece of equipment (e.g., the
7 same breaker) by an improved reporting system, such as the Prosper
8 system that Scottish Power has installed in Scotland and is imple-
9 menting at Manweb. This exercise would be used to estimate the extent
10 to which PacifiCorp has mis-estimated the number of disconnected
11 customers.

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

15 **Q: What is Scottish Power’s schedule for correcting the historical reliability**
16 **data?**

17 A: In the May 7 meeting, Alec Burden estimated that the revisions could be
18 complete within a year, but Scottish Power would not commit itself in
19 writing to a time frame for these corrections (DPU S7.7). In Oregon, Scottish
20 Power has committed to revising the baseline after “running the new and

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

1 current reporting systems in parallel for up to two years” (Moir-MacLaren-
2 Rockney rebuttal at 8), which might mean that the revisions would be
3 completed late in 2002, depending on how fast the new reporting system
4 could be implemented.

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

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

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

19 In response to a request for clarification of this issue, Scottish
20 Power rejected the suggestion that the minimum achievement estab-
21 lishes whether the goal is met, but asserted that the CPI standard would
22 be evaluated for “each of the circuits selected individually” (CCS
23 S11.10). If individual achievement is different than the standard being
24 linked to minimum improvements, Scottish Power has not explained the
25 distinction.

- 1 • What happens if PacifiCorp fails to achieve the 20% CPI savings for
2 more than one year. Scottish Power has committed to including any one
3 circuit in the CPI no more than once in every five years, so a new set of
4 worst circuits will be identified each year. Scottish Power has not
5 indicated how it would propose that the Commission deal with a circuit
6 on which the CPI stays high beyond the year in which it is targeted for
7 reduction.
- 8 • Whether the improvements are required to be persistent. For example, if
9 a targeted circuit's CPI falls 20% for a year or two after the base period,
10 but then rises again in the third and fourth year, it is not clear whether
11 Scottish Power would be considered to have achieved its goal.
- 12 • For how long PacifiCorp would have to achieve the 20% improvement.
13 The CPI would be computed for a three-year base period, and Scottish
14 Power asks for "two years after investment on the circuit" to achieve the
15 20% reduction from that three-year average (CCS S11.10). The deadline
16 for improvement thus appears to depend on how fast PacifiCorp would
17 move to correct the problem.

18 Depending on whether the year that compliance was required
19 started two years from the last year in which investment was made in
20 the circuit, or ended two years from the beginning of investment,
21 Scottish Power might have anywhere from two years to five years (or
22 more) from the end of the base period to achieve its 20% reduction. In
23 addition, while Scottish Power asks for two years to improve the
24 performance of the worst circuits, the penalties would not be effective

- 1 until five years after the merger, giving Scottish Power at least five
2 years in the first round of standards.
- 3 • Whether the CPI is a one-time or continuing standard. Moir’s (Direct at
4 7) speaks of the CPI standard becoming effective “within two years of
5 implementation of the performance targets,” which I interpret to refer to
6 approval of the merger. In that case, the standard might apply only to the
7 five circuits in each state with the worst performance in 1996–68.¹⁶
 - 8 • Whether (1) circuits that are performing poorly in the baseline period
9 due to PacifiCorp’s “inability to obtain the appropriate planning
10 consents” (Exhibit BM-3 at 2) will be excluded from the five selected
11 circuits, or (2) they will be included, but no penalties will be levied if
12 the permits are not forthcoming.¹⁷
 - 13 • Whether circuits that are eliminated from the penalty scheme due to
14 PacifiCorp’s “inability to obtain the appropriate planning consents” will
15 be replaced by the next-worse circuits.

¹⁶This 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, Scottish Power has clarified that “Scottish Power 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 Scottish Power intends to apply the same approach in other jurisdictions; Scottish Power’s thinking on these issues seems to still be in flux.

¹⁷While 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.

1 **Q: What is unclear about Scottish Power's proposed definition of major**
2 **events?**

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

8 **Q: Are the proposed improvements dramatic?**

9 A: No. The 10% decreases in SAIFI and SAIDI are small, compared to reductions
10 at Manweb.¹⁸ At Manweb, Scottish Power started with a utility with worse
11 performance than PacifiCorp, with an underlying SAIDI (not including
12 storms) of about 105 minutes in 1993/94 (the last pre-merger year), and
13 brought that index down to about 55 minutes by 1997/98, a 47% reduction in
14 four years (Exhibit BM-4 at 1). Over the same four years, Manweb's SAIFI
15 fell from 0.89 to 0.57 interruptions per customer (OFFER May 1999
16 Consultation Paper at 63), a 36% reduction.

17 The 10% reduction in SAIFI and SAIDI that Scottish Power offers over
18 five years is comparable to inter-annual variation of PacifiCorp and various
19 UK utilities. In other words, these reductions would be hard to identify
20 against the noise of normal variability. The 5% improvement Scottish Power
21 offers in MAIFI is an order of magnitude lower than the annual variation in

¹⁸Not 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 Scottish Power is actually proposing any improvement over existing conditions.

1 PacifiCorp's MAIFI. Indeed, these improvements are smaller than the roughly
2 20% under-reporting rate Scottish Power estimates for PacifiCorp outages.

3 **Q: How did Scottish Power determine the improvement targets?**

4 A: The targets are based on Scottish Power's judgment regarding the feasible
5 reductions in these measures. Scottish Power does not offer any historical
6 comparison to other companies' improvements, or any cross-sectional data
7 on achievable performance for utilities with service territories comparable to
8 PacifiCorp. Scottish Power still says that it does not know the level of
9 historical performance from which PacifiCorp is starting (CCS S11.1).

10 Nor has Scottish Power used cost-effectiveness analysis, such as that
11 presented in Mr. Richardson's Exhibit AVR-7, to determine how much
12 PacifiCorp's T&D performance should be improved. Indeed, the analysis in
13 Exhibit AVR-7 suggests that Scottish Power's proposal simply skims the
14 cream from the cost-effective performance improvements. Scottish Power
15 estimates that \$31.1 million in investment and \$10.4 million in operating cost
16 over five years, or \$2.1 million annually, will fund all the performance
17 standards, including the telephone and complaint-resolution standard (DPU
18 S9.2). Exhibit AVR-7 estimates that the SAIDI and MAIFI improvements alone
19 will provide \$61.2 million in annual reliability benefits. That is an annual
20 return of

21
$$(61.2 - 2.1) \div 31.1 = 190\%$$

22 It is hard to see why, if this analysis is correct, further improvements
23 would not be cost-effective. If the annual return on the first \$31 million
24 investment is 190%, the return on the next \$30 million might be much less
25 (100%, 50%, or even 25%), and still be cost-effective. Since Scottish Power

1 has only a vague idea of the reliability level and physical situation it is
2 starting with, it is unlikely to have identified a break-point in the cost-
3 effectiveness curve.

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

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

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

10 Scottish Power proposes penalties of \$1 per customer for each
11 reliability measure it fails. Even if PacifiCorp failed every one of the five
12 standards in every state it serves, that would result in an annual penalty of \$7
13 million, or about 11% of the customer cost PacifiCorp estimates for failing
14 just two of the standards.¹⁹

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

17
$$\$31.1 \times 15\% + 2.1 = \$6.8 \text{ million}$$

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

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

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

- 1 • The large inter-annual variations will often result in MAIFI, SAIFI, and
2 SAIDI performance that are 5% (for MAIFI) or 10% (for SAIDI and SAIFI)
3 better than the three-year historical average, at least for some states.
- 4 • Over the last five years, in the six states it reports (or a total of 30
5 observations), PacifiCorp exceeded 80% restoration within three hours
6 26 times, or 87% of the time, even before the exclusion of major events
7 (IPUC 4 supplemental).
- 8 • For CPI, we do not know whether the proposal is better than historical
9 performance. The CPI penalty would also not be enforced if PacifiCorp
10 “is delayed due to the company’s inability to obtain the appropriate
11 planning consents” (Exhibit BM-3 at 1).

12 ***B. Telephone Performance Standard***

13 **Q: What is your assessment of Scottish Power’s proposed Performance**
14 **Standard 6, for telephone service?**

15 A: PacifiCorp telephone performance is not very good, and Scottish Power’s
16 proposed standard would be a significant improvement over current practice.
17 The proposed standard is not associated with any penalty or reward.

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

20 ***C. Customer Guarantees***

21 **Q: What is your assessment of Scottish Power’s proposed Customer**
22 **Guarantees?**

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

- 1 • Customers who are treated shabbily by PacifiCorp would receive a
2 meaningful apology for their inconvenience and wasted time, in the
3 form of a check. Missed appointments and inadequate response to
4 customer inquiries are frequent and often irritating problems of dealing
5 with large organizations; the customer guarantee payments should make
6 the worst-affected customers feel better.
- 7 • The payments would make inadequate customer service very concrete
8 within PacifiCorp. While the financial effect would likely be minor,
9 judging from UK experience, the fact that a check must be cut will tend
10 to increase the responsibility of the entire organization that delivers the
11 service, from the service person who showed up late, to the dispatcher
12 who did the scheduling, to their supervisors.

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

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

19 **V. Measurement and Valuation Issues**

20 **Q: What measurement and valuation issues do you discuss?**

21 A: I discuss Scottish Power’s weighting of SAIDI, SAIFI, MAIFI, and lockouts in
22 the computation of the Circuit Performance Index (CPI); other CPI issues;
23 the definition of “major events” that would be excluded from computation of

1 the indices; and the valuation of outages in the cost-benefit analysis in
2 Exhibit AVR-7.

3 **A. CPI weighting**

4 **Q: How does Scottish Power weight the four components within its**
5 **proposed CPI?**

6 A: The CPI includes four components computed on a circuit-specific (rather
7 than state-wide or utility-wide) basis: the familiar SAIDI, SAIFI, and MAIFI
8 indices, and the number of lockouts (events that result in an entire feeder
9 being shut off, or “locked out”). The company proposes to apply two weight-
10 ing factors to the components. The following table lists the two weights, as
11 well as the product of the two weighting factors for each component index.
12 The product of the two weights determines the number of points of the CPI
13 index produced by one point of the component (one minute of SAIDI, or one
14 outage for the other indices). The table also shows how many minutes of
15 SAIDI would receive the same CPI value as one outage of each type.

	Weight 1	Weight 2	CPI Points per unit [1×2]	Units	Value of an outage in SAIDI minutes
SAIDI	0.3	0.029	0.0087	per minute	
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

1 The four values of Weighting Factor 1 are apparently selected to add to
2 1.0. Scottish Power has not provided a rationale for Weighting Factor 2.²⁰

3 **Q: Are these weights of the proper magnitude?**

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

- 7 • The CPI formula treats each SAIFI outage as being worth as much as 84
8 more minutes of SAIDI. PacifiCorp might meet its CPI requirement on
9 some circuits by reducing the number of outages, even if the length of
10 the outages increased dramatically.
- 11 • An outage that affects every customer on the circuit due to a breaker
12 lock-out at a substation is weighted 50% more than three outages that
13 each affect one third of the customers on the circuit. The lockouts may
14 be worth flagging, if they are easier to prevent and more likely to recur
15 than other problems, but it is not clear that they are really much more
16 important in determining the quality of power supply. Sectionalizing a
17 feeder may dramatically reduce the number of lockouts, without
18 reducing the number or duration of outages experienced by most
19 customers.

²⁰In 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 Scottish Power'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.

1 **B. Other CPI Issues**

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

4 A: In Section IV above, I discuss the lack of clarity in Scottish Power’s proposal
5 for the CPI standard, including issues of timing, the treatment of partial
6 success on multiple circuits, and the affect of permitting difficulties on the
7 selection of circuits and the determination of success or failure.

8 In addition, it is not possible to determine how much improvement over
9 past practice is represented by a commitment to improve the CPI index for
10 the worst circuits in 1996–98 by 2000 (for example). It appears that
11 PacifiCorp’s past practice has improved most of its worst feeders.²¹ In CCS
12 P11.33, PacifiCorp provides the Utah feeders with the highest values on its
13 CPI measures for the three-year periods end with 1992 through 1998.²² Of
14 some 14 feeders that appear in the lists once or more through 1996 (the last
15 year for which we have two years of follow-up data), only three show up on
16 the list two years after their first appearance. One of these three improved by
17 more than 20% (from a CPI of 515 to 363), even though it was still the
18 second-worst feeder in the state.²³

²¹I discuss only Utah data here, because PacifiCorp’s response to a broader request for CPI data by state was received by Public Counsel only on June 15.

²²Even 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).

²³Similarly, 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

1 **C. Major Events**

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

4 A: Scottish Power proposes to exclude major (also sometimes called “extreme”
5 or “extraordinary” events) events from the computation of the SAIFI, SAIDI,
6 MAIFI, and CPI indices, and the supply-restoration time standard.

7 **Q: How does Scottish Power propose to define the major events that would**
8 **be excluded?**

9 A: That definition has changed. In Exhibit BM-3, Scottish Power equated
10 extreme events with “storms.” In DPU S7.8, Scottish Power admitted that it
11 did not have a working definition of major events. Scottish Power’s current
12 proposal is

13 a catastrophic event which exceeds the design of the power system or
14 imposes and extreme workload on local resources, characterized as:

- 15 • Exceeds the design limits of the electric power system
- 16 • Causes extensive damage to the electric power system
- 17 • Results in more than 10% of the customers in an operating area out
18 of service
- 19 • The total outages in an event exceed three standard deviations
20 above the daily mean (CCS S11.11)

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

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.

- 1 • Does Scottish Power mean that all four criteria must be met to create
2 an extreme event? Or, is any one criterion sufficient?
3 • What “design limits of the electric power system” means, and whether a
4 truck running into a pole “exceeds the design limits” of the pole?
5 • How large an “operating area” is used in the third criterion?²⁴
6 • Who decides what “extensive damage” means?²⁵

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

10 **Q: Which definition should the Commission adopt?**

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

16 **D. Cost-Benefit Analysis**

17 **Q: What comments do you have regarding the cost-benefit analysis in**
18 **Exhibit AVR-7?**

19 A: I have four basic comments. First, while Scottish Power presents this study as
20 estimating the value of the SAIDI and MAIFI standards, it also incorporates the

²⁴Mr. 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.

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

1 value of the SAIFI standard. Exhibit AVR-7 approximates the cost of extended
2 outages by assuming that each customer experiences one 78-minute outage,
3 and estimates the value of a 10% reduction in SAIDI as 10% of that estimated
4 cost. This is equivalent to assuming that outages will continue to be 78
5 minutes long, but that the average customer will experience annually only 0.9
6 outages, rather than 1.0 outage. In other words, Exhibit AVR-7 assumes that
7 SAIFI is reduced 10%. If SAIDI were reduced 10% with no change in SAIFI,
8 Scottish Power would need to estimate the cost of 1.0 outage of 70.2 minutes
9 for each customer. With Scottish Power's input assumptions, its 10%
10 reduction in SAIDI and SAIFI is worth \$37 million; a 10% reduction in SAIFI
11 with no change in SAIFI would be worth only \$10 million. Consequently,
12 about 70% of Scottish Power's claimed benefits from SAIDI (and about 43%
13 of the claimed total benefits) are actually due to SAIFI.

14 Second, Scottish Power's use of data from the Bonneville Power 1990
15 survey (cites extensively by Richardson at AVR-7) makes an inherently
16 uncertain exercise particularly unreliable. Scottish Power did not attempt to
17 adjust for such differences as the size of commercial and industrial customers
18 in the Bonneville study and in the PacifiCorp service territory, or the change
19 in technology over time. (For example, increasing computer use may increase
20 the costs of momentary outages for smaller businesses.) The Commission
21 should address the value of T&D reliability in an appropriate proceeding.

22 Third, Scottish Power's assumed value of momentary outages for
23 residential customers (\$3.41/outage) is very high, in the light of all the other
24 data Scottish Power has offered. This value was not estimated by Bonneville,
25 and Scottish Power extrapolated back from Bonneville's estimates for 1-, 4-,

1 and 8-hour outages.²⁶ The following information from Scottish Power
2 suggests that the company values these outages too much:

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

11 Most residential customers will lose little from a momentary
12 outage, other than needing to reset some clocks. A one-hour outage, on
13 the other hand, can impose serious problems with inability to cook
14 dinner, dry wet hair, or watch a favorite TV show. The residential
15 momentary-to-extended outage ratio should be much less than the other
16 classes, not greater.²⁷

- 17 • Scottish Power’s extrapolation method for valuing residential moment-
18 ary outages is unreliable. If applied to Bonneville’s data for sustained
19 commercial and industrial outages, the Scottish Power method would
20 produce estimated values of momentary outages for commercial and in-
21 dustrial customers several times as much as Bonneville’s survey results.

²⁶For commercial and industrial customers, Scottish Power used ratios of the values of momentary and 1-hour outages from unidentified “other studies.”

²⁷Either Scottish Power’s estimate of residential momentary costs is overstated, or its estimate of the value of longer outages to residential customers is understated.

- 1 • The EPRI study that Scottish Power provided in response to LGC S1.37
2 estimates a much smaller residential momentary cost and momentary-
3 to-extended outage ratio compared to those of Scottish Power.
- 4 • OFFER estimates a residential momentary-to-extended outage ratio
5 of about 1%. This is much less than the ratios OFFER estimates for
6 commercial and industrial customers, which appear to be similar to
7 Scottish Power’s estimates (May 1999 Consultation Paper at 109).
- 8 • Scottish Power’s proposed CPI index treats each momentary
9 outage as being worth about 20% of a sustained outage. This is
10 consistent with the Bonneville estimates for commercial and
11 industrial customers.

12 Fourth, even with the inflated value for residential momentary outages,
13 Table 2 of Exhibit AVR-7 indicates that improvements in T&D reliability
14 primarily benefit C&I customers; only 4% of the benefits are from the
15 residential class.²⁸ It is also clear that Scottish Power concentrates its efforts
16 at T&D power-quality improvement to benefit its largest customers (CCS
17 S11.18). Since the benefits of improved reliability accrue primarily to the
18 C&I classes, the costs of the improvements justified by those benefits should
19 be borne primarily by the C&I classes.

20 **VI. Scottish Power’s Contribution to Improving PacifiCorp’s Performance**

21 **Q: What would Scottish Power contribute to PacifiCorp’s performance?**

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

1 A: Mostly, Scottish Power comes into this proceeding expressing a positive
2 attitude toward customer service and improving service quality (Moir Direct;
3 CCS S11.18). In addition, Scottish Power appears to be committed to
4 improving the quality of data on PacifiCorp's performance and to
5 implementing a new outage-tracking system (CCS S11.15).

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

9 **Q: Has Scottish Power demonstrated that the merger would provide**
10 **service- or reliability-related resources to PacifiCorp that PacifiCorp**
11 **could not obtain elsewhere?**

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

18 PacifiCorp may need to bring in some new, customer-oriented (or
19 results-oriented) managers from other companies or other industries, to shake
20 up aspects the corporate culture.²⁹ If so, some of the Scottish Power
21 managers who are prepared to relocate to PacifiCorp's service territory may
22 be good candidates for those jobs. But it is far from clear that PacifiCorp

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

1 lacks much of technical and managerial resources needed to achieve the goals
2 Scottish Power has proposed, and in much the same time frame.

3 **A. *The Record in the United Kingdom***

4 **Q: Has Scottish Power’s performance in its UK electric utilities been**
5 **outstanding?**

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

11 Scottish Power itself shows no consistent improvement in SAIDI or SAIFI
12 in the OFFER data (ibid.). Exhibit BM-4 reports improvement in SAIDI from
13 93/94 to 97/98, but this display depends on the accuracy of the exclusion of
14 major events (which SP apparently started in 1995) and on the retrospective
15 upward adjustment to pre-1995 data for consistency with Scottish Power’s
16 new data system.

³⁰Assessing Scottish Power’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, Scottish Power reported its performance with and without major events; in 1997/98, without any major storms, Scottish Power 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, Scottish Power).

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

7 According to OFFER, Scottish Power’s historical and projected
8 expenditures on improved reliability, and Manweb’s projected expenditures,
9 are not cost-effective in reducing outages. (May 1999 Consultation Paper at
10 70, 77).³¹

11 ***B. Scottish Power’s Assessment of its Proposal***

12 **Q: What is Scottish Power’s assessment of its proposal for performance**
13 **standards and customer guarantees?**

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

18 **Q: How substantial is Scottish Power’s basis for its glowing assessment of its**
19 **offer?**

20 A: I have previously discussed some of the problems with the cost-benefit
21 analysis in Mr. Richardson’s supplemental testimony: the valuation of

³¹The historical results may have been influenced by the changes in Scottish Power’s data-collection system; the projected cost-benefit ratios will not be.

1 momentary residential interruptions appears overstated; the computation
2 represents the benefits of all three major standards (SAIDI, MAIFI, and SAIFI),
3 not just SAIDI and MAIFI; and if the assumptions in the analysis are even to be
4 believed, much larger reliability improvements than those proposed by
5 Scottish Power are likely to be cost-effective.

6 Scottish Power provides comparisons to other utilities' performance
7 standards and customer guarantees in Moir's Exhibit BM-1, and in the report
8 "Customer Service Standards and Guarantees: a Nationwide Survey and
9 Comparison to the ScottishPower/PacifiCorp offer," prepared for Scottish
10 Power by Gayatri Schilberg of JBS Energy, Inc.³² As I have noted above,
11 Scottish Power's promises regarding its performance standards are not very
12 meaningful, given the uncertainty in the baseline value, the long time frame
13 for compliance, and the many uncertainties in the definitions of the
14 standards.

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

17 A: No. Ms. Schilberg (at 1–2) lists eleven "elements that differentiate the
18 [Scottish Power] proposal." Of those eleven elements, none mentions the
19 principal reliability standards, SAIFI, SAIDI, or MAIFI. Five elements concern
20 only the customer guarantees, which as I note above are not related to the
21 merger. Two are essentially procedural, having to do with whether Scottish

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

1 Power sought Commission approval or asked for rewards.³³ Two more
2 “differentiating elements” concern the telephone goals and the goal for
3 response time to Commission complaints, neither of which is associated with
4 any consequence for the utility.³⁴

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

12 Indeed, the study is interesting to read for what it does not say about
13 particular standards, but what is implied by Ms. Schilberg’s selective silences
14 and her observations about other standards. She does not comment on the

³³The 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.

³⁴Elsewhere, 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 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, Scottish Power has not even proposed a time frame.

³⁵Interestingly, 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 Scottish Power.

1 absence of consequences for five years, the lack of consequences for two of
2 the standards, the weighting and delay in the CPI standard, the magnitude of
3 the penalties, or the appropriateness of the reduction targets. The praise in the
4 Schilberg report must be read as faint in many areas, if not outright damning.

5 **VII. Scottish Power’s Proposal for Low-Income Assistance**

6 **Q: What is Scottish Power’s proposal regarding low-income assistance?**

7 A: Scottish Power (Kelly Direct at 11–12) proposes to

- 8 • Expand its contribution to heat-assistance funding by “reintroducing...
9 PacifiCorp matching [of] customer donations.... Scottish Power pro-
10 poses to double the number of customers it will assist.”
- 11 • Introduce debt counseling.
- 12 • “Expand the commitment to educate customers regarding energy
13 efficiency in order to help customers with payment difficulties.”
- 14 • Promote electrical safety to all customers.³⁶

15 **Q: How much does Scottish Power propose that PacifiCorp would spend on**
16 **these programs?**

17 A: Scottish Power estimates “that the financial commitment necessary to
18 develop and operate these programs would be approximately \$1.5 million per
19 year” (Kelly direct at 12).

³⁶It is not clear why Scottish Power lists electrical safety education for “all PacifiCorp customers” as a low-income initiative.

1 **Q: How would Scottish Power allocate the \$1.5 million between the four**
2 **programs?**

3 A: Scottish Power is silent on this issue. It is not even clear whether Scottish
4 Power would actually spend more money on heat assistance, or simply
5 structure its contribution as matching grants, to encourage additional
6 contribution from customers.

7 **Q: How would Scottish Power allocate the \$1.5 million between**
8 **jurisdictions?**

9 A: Scottish Power has not been willing to commit itself on jurisdictional
10 allocation for these funds.

11 **Q: Has Scottish Power demonstrated that its proposal to double the number**
12 **of low-income customers assisted is adequate to meet the needs of those**
13 **customers in Washington?**

14 A: No. under Scottish Power's proposal,
15 • PacifiCorp may not actually spend more money on reducing low-
16 income electric bills.
17 • Even if funding increases, as PacifiCorp changes its existing heat-
18 assistance program to a matching-grant program, those funds may be
19 shifted between states, and Washington may not receive any additional
20 funding.
21 • Doubling the number of customers assisted may simply result in smaller
22 amounts of assistance to individual customers.
23 • It is not clear that the applicants have made an assessment of the needs
24 of low-income consumers in Washington. Simply doubling program
25 expenditures may not come close to meeting needs.

1 **Q: Does the Scottish Power proposal represent an appropriate relative**
2 **emphasis on heating-assistance and energy-efficiency programs?**

3 A: No. Customers who lack the money to pay their current electric bill are
4 unlikely to invest in energy efficiency as a result of a PacifiCorp education
5 program. No education program is likely to teach low-income customers to
6 raise the funds necessary for significant efficiency retrofits.

7 This misplacement of priorities is particularly regrettable, since each
8 dollar spent on cost-effective efficiency will avoid many dollars of future
9 energy bills. The Scottish Power proposal provides no mechanisms to reduce
10 the gap between customer bills and available financial resources in the longer
11 term.

12 The UK utilities have not been leaders in increasing energy efficiency.
13 Introducing UK attitudes towards energy efficiency (including the belief that
14 educating low-income customers is an effective energy-efficiency program)
15 into the US Northwest could be a major step in the wrong direction.

16 **Q: What should PacifiCorp do to correct the deficiencies in Scottish**
17 **Power's low-income proposal?**

18 A: PacifiCorp should evaluate the specific needs of its low-income customer
19 base in Washington and work with customers, community-based agencies
20 that serve those populations, and other stakeholders to develop and deliver
21 adequate resources. For example, PacifiCorp could commit to increasing the
22 resources it makes available to the community-based agencies that deliver
23 federal low-income energy assistance and weatherization services.

1 **VIII. Recommendations**

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

3 A: My most important recommendation with regard to the application in this
4 proceeding is that nothing that Scottish Power has offered with respect to the
5 performance standards and customer guarantees demonstrates any significant
6 benefit from the merger. Scottish Power can probably improve PacifiCorp's
7 performance in at least some of these areas; PacifiCorp can probably achieve
8 much the same results without the merger.³⁷ Neither improved attitude, nor
9 better data-management technology, nor better phone-center operation
10 requires the merger.³⁸

11 **Q: What should the Commission do with respect to the reliability and**
12 **customer-service issues Scottish Power raised in this proceeding?**

³⁷If certain of the risks identified in the testimony of other Public Counsel witnesses come to pass, Scottish Power may be in a worse situation to make good on its promises than a free-standing PacifiCorp would be. Scottish Power's analyses, promises, and thinking about regulatory goals and regulatory accountability in this docket have been vague. Scottish Power 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, Scottish Power may not be as well prepared as it thinks for dealing with US utility regulation, or for solving PacifiCorp's problems. If Scottish Power has made a mistake, and the merger goes through, future disputes over unclear promises, and conflicting expectations, may result in high costs for both Scottish Power and PacifiCorp customers. If Scottish Power finds that it cannot do what it promised customers and regulators, as well as shareholders, unforeseen consequences could result.

³⁸Metaphorically, the merger is the equivalent of a heart transplant to solve a problem that can be treated with diet and exercise.

1 A: If the Commission has the authority, it should simply impose the proposed
2 customer guarantees as part of the order in this docket, regardless of the
3 outcome. Otherwise, the Commission should incorporate the guarantees into
4 PacifiCorp's terms and conditions in its next rate proceeding. PacifiCorp has
5 accepted the customer guarantees in this proceeding, and would be hard-
6 pressed to oppose their imposition.³⁹

7 The Commission should also instruct PacifiCorp to

- 8 • improve the quality of the data it collects on outages, and report semi-
9 annually to the Commission on its plans and progress;
- 10 • improve its telephone service to customers, including reducing time for
11 answering the phone.

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

- 14 • Determining the value of improvements in reliability, including a
15 refinement of Scottish Power's finding that the bulk of the benefits of
16 improved reliability are received by commercial and industrial
17 customers.
- 18 • Establishing rules and procedures for improved measurement of
19 momentary and sustained outages, including auditing procedures.

³⁹In CCS P11.27, PacifiCorp says that it can achieve the goals set by Scottish Power, but asserts that the process of improving service would be faster with Scottish Power. PacifiCorp offers no basis for that assertion.

- 1 • Determining the feasible and cost-effective improvements in reliability,
2 and setting up standards requiring those improvements.⁴⁰
3 • Establish clear standards for eliminating major events from performance
4 data, historical and future.
5 • If composite indices are found to be valuable, determine the appropriate
6 weighting of their components.
7 • Determine the level of penalties necessary to provide adequate
8 incentives for improved performance, and establish penalties that vary
9 with the severity of the failure to meet standards.

10 These reliability and customer service issues could be fully examined in
11 a separate proceeding focusing on those issues, or (depending on timing and
12 resource limitations) as part of PacifiCorp's next general rate case.

13 **Q: Does this conclude your testimony?**

14 A: Yes.

⁴⁰PacifiCorp believes the standards Scottish Power proposed in this proceeding are feasible and cost-effective (CCS P11.24 and P11.25).