SUMMARY

ScottishPower is proposing to introduce a set of customer service commitments to PacifiCorp's retail customers as part of their merger. These initiatives, in the form of system performance targets and customer service guarantees, were designed with the intention of being as rigorous and comprehensive as any U.S. electric utility and to offer substantial benefits to customers.

This report compares the proposed standards to the performance targets and customer service guarantees in place at other major utilities in the U.S. It also summarizes results from a recent PacifiCorp customer survey designed to gauge customer support for the idea of new service standards.
Four major findings can be drawn from the analysis documented in this report:

1) As an integrated set of customer service standards, the proposed ScottishPower performance targets and customer guarantees are the most comprehensive set of standards offered by any U.S. utility.
2) The proposed ScottishPower standards address all important aspects of customer service, when compared with customer service standards that have been recommended as part of performance based regulation (PBR) initiatives in the U.S., or compared with U.S. utilities' standards approved as part of PBR or other regulatory proceedings. The proposed network reliability standards comport with recommended IEEE distribution reliability indices.
3) The proposed customer guarantees address a more complete range of customer service attributes than any major U.S. utility's customer guarantees we have been able to identify. In several important measures, the proposed ScottishPower guarantees are the most rigorous offered by any U.S. utility.
4) The majority of customers support the idea of instituting service standards such as those proposed by ScottishPower. They perceive that they will benefit directly as a result of new service standards. .

The fourth conclusion is quite significant in the context of regulatory approval of the transaction. Customers perceive real value in the type of service standards proposed by ScottishPower.

In summary, the proposed customer service performance targets and guarantees can be held up as a leading or "best practices" set of customer service commitments. If adopted, they will provide benefits of manifest value to customers and should be recognized as a concrete and valuable benefit that customers will gain from the transaction.

SURVEY INFORMATION REGARDING SERVICE STANDARDS

ScottishPower is proposing, as part of its transaction with PacifiCorp, a comprehensive quality of service initiative. The initiative consists of a set of system performance targets and a set of customer service guarantees. The service quality initiative is believed by the companies to be a valuable benefit to customers resulting from the transaction. This document addresses how the proposed performance targets and guarantees compare with measures and practices of other U.S. utilities. The report also addresses how well the proposed initiative addresses customers' expressed desires for service quality and improvements in service.

I. Comparison to Customer Service Measures, Commitments and Recommendations

To address how well the proposed customer service commitments compare with practices at other utilities, we consulted several sources, summarized below.

IEEE - The Institute of Electrical and Electronics Engineers (IEEE) has had under development for several years recommendations and standard definitions for distribution system reliability indices. The most recent report publishes recommended definitions and summarizes surveys of U.S. utilities' use of these measures.[1] IEEE defines twelve different reliability indices. In general, these can be grouped in four different categories of indices, as shown in Table 1. The first two categories of Table 1 address the frequency and duration, respectively, of sustained outages, as averaged for the system as a whole or as averaged for only customers experiencing an outage. The other two indices measure the frequency of momentary outages or identify the incidence of customers experiencing the worst number of outages. The IEEE report also summarizes surveys of U.S. utilities in 1990 and 1995, which identified that utilities most often track one or more of four frequency and duration of outage indices – SAIDI, SAIFI, CAIDI and ASAI. Only about 25% of U.S. utilities responding to the 1995 survey track momentary outage frequency – MAIFI.

[1] See "Trial Use Guide for Electric Power Distribution Reliability Indices," IEEE P1366/D18, January 1998.

TABLE 1
IEEE Reliability Indices Summary

	Reliability Issue	System Average Indices	Per Customer or Per Event Average Indices
1.	Frequency of Sustained Outages (System Reliability)	SAIFI ASIFI	CAIFI
2.	Duration of Sustained Outages (System Availability)	SAIDI ASAI ASIDI	CAIDI CTAIDI
3.	Frequency of Momentary Outages	MAIFI $MAIFI_E$	
4.	Worst Performing Circuits or Customer Groups		$CEMI_n$ $CEMSMI_n$

NARUC PBR Report - Recommendations regarding quality of service measures were made in the context of performance-based regulation in a 1997 report of the National Association of Regulatory Utility Commissioners (NARUC}.[2] The report confirmed that various service quality issues are important to customers. It recommended that any PBR scheme should address and include measures for 1) number of complaints, 2) frequency of outages, 3) duration of outages, 4) momentary outage frequency, 5) major outage recovery, and 6) employee safety[3]. The report also concluded that rebates to individual customers for failures were preferable to general penalties.

Utah DPU Report - The November, 1996 Utah Division of Public Utilities report to the Public Service Commission [DPU 1996] summarized a survey of ten states, six of which had service quality reporting programs in place at that time.[4] The report determined that few states had yet to require collection and reporting of data on service quality, but pointed out that increasing attention was being focused on the topic. For the six states requiring some level of reporting on service reliability, between one and three indices were measured. The report also identified seven different measures of customer service

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[2] Biewald, Bruce *et.al*., Synapse Energy Economics, Inc., Performance-Based Regulation in a Restructured Electric Industry, prepared for the National Association of Regulatory Utility Commissioners, November 8, 1997.

[3] Note that employee safety is not a customer service issue, *per se*, but may in some instances relate to customer service quality. Employee safety for utilities is rigorously regulated by OSHA and national and local electrical codes.

[4] DPU 1996 – Quality of Service Standards – Survey Results of Other State Commissions, Memorandum Report to the Utah Public Utility Commission from Utah Division of Public Utilities, November 6, 1996, by R. Campbell, L. Alt and T. Peel.

in use. Amongst the six states, all required reporting on between one and three such measures, with the exception of New York, which covered all seven.

Texas PUC Report - A report prepared for the Texas PUC in April, 1998 [TPUC 1998], reviewed other state quality of service standards and reported on focus group meetings conducted with various Texas utility customers.[5] Of the 25 states discussed, ten had or were developing some type of specific service standards or formal customer service and reliability reporting requirements. The report recommended that service quality standards should be responsive to customer expectations and that customers should be compensated when they receive poor service. It further recommended that utility performance should be measured and publicly available, using benchmarks of price, customer satisfaction and reliability. A number of potential satisfaction and reliability measures were suggested.

PacifiCorp Survey - PacifiCorp gathered information on U.S. utilities' service quality commitments from two main sources. First, utilities with state regulatory requirements under performance-based regulation or other regulatory initiatives were examined to establish which requirements included consideration of customer service measures or standards. This information was compiled from service quality proposals that the Company had on file describing proposals in various states and by contacting individual state commissions to determine if such proposals were in effect. PacifiCorp also reviewed customer guarantees of the top 105 U.S. electric utilities, as published on their internet web pages[6]. The results of these surveys are tabulated in Appendix I. In total twenty-eight utilities were identified with customer service related performance targets or customer commitments or guarantees. Eight of these had both performance targets and customer guarantees.

Summary of Customer Service Standards and Guarantees - The studies and surveys described above yield a wide variety of customer service standards, indices and commitments. Table 2 displays a generalized grouping of customer service attributes that have been addressed in the service commitments analyzed. The grouping comprises 16 categories. The table shows which categories are identified as important or recommended by the NARUC, Utah DPU, and Texas PUC reports, in the columns so labeled. Another column displays a count of the number of utilities identified in PacifiCorp's survey that address that category. The final column indicates how the proposed PacifiCorp/ScottishPower service commitments address these categories.

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[5] TPUC 1998 – What Customers Demand: Quality of Service in the Electric Utility Industry in Texas, Special Project Report, the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, April 1998, by C. Coleman *et al*.

[6] With the following method: U.S. investor owned utilities were sorted by number of retail customers served in 1997. The top 105 were selected, representing 96% of retail IOU customers and 95% of retail MWh sold in that year. The RDI Powerdat database, based on utilities' FERC Forms One, was the source of this information. For each of these utilities, we searched their internet web sites for any information describing guarantees, commitments or promises to customers regarding customer service. From this search, fifteen utilities were identified. A listing of the utilities reviewed is in Appendix 2.

TABLE 2
CUSTOMER SERVICE QUALITY PROGRAM ATTRIBUTES

		NARUC	UDPU	TPUC	Utility Survey	Proposed
Performance Standards						
1	Availability (duration)	X	X	X	14	PS
2	Reliability (frequency)	X	X		12	PS
3	Power Quality (momentary)	X	X		3	PS
4	Worst Performing			X	2	PS
5	Telephone Response		X	X	5	PS
6	System Outage Restoration	X		X	1	PS
7	Complaint Response				1	PS
Customer Guarantees						
8	Supply Restoration				3	CGP
9	Estimates for New Supply				0	CGP
10	Appointment		X	X	13	CGP
11	Switching on Power		X	X	11	CGP
12	Planned Interruption Notice				5	CGP
13	Billing Issues		X		6	
	Inquiry Response					CGP
	Adjustment Count					
14	Meter Issues		X	X	4	
	Inquiry Response					CGP
	Estimated Count					
15	Satisfaction Level		X		4	
	General Population			X		
	Transaction Related					
16	Disconnections				2	
	Number/Ratio					
	In Error					
17	Power Quality				0	
	Complaint Response					CGP
18	Other Miscelaneous				5	
	CGP-Customer Guarantee Payment		PS-Performance Standard			

Table 3

Comparison of Utility Customer Guarantees

	Proposed	(1) APS	(2) CMaineP	(3) CSW	(4) ComEd	(5) ComElec	(6) ConEd	(7) DQE	(8) KCP&L	(9) MontP	(10) NYSEG	(11) MI,O	(12) O&R	(13) PennP&L	(14) PSE&G*	(15) Puget	(16) RGE	(17) SCE	Total
Credit $ Range		$0	$25	$0	$25	$25		$25	$25	$25-50	$25	$25	$25	$25	$25-100		$20	$50	
					trial	pilot													
Outage Restoration																			3
Respond															X			X	
Restore	X	X																X	
Planned Interruption Notice	X	X		X	X				X								X		5
Appointment	X	X	X	X		X	X	X	X	X			X	X	X	X	X		13
Service Activation	X																		13
Existing hook-up				X			X	X			X			X	X				
New construction					X	X					X	X		X					
Meet commitment		X	X						X	X		X			X				
Estimates for Providing New Supply	X																		0
Billing Inquiry																			6
Response Time	X					X											X		
Accuracy			X					X	X						X				
Meter Inquiry																			4
Response Time	X								X										
Accuracy						X		X					X						
Power Quality																			0
Complaint Response	X																		
Total	8	4	3	3	2	4	2	4	5	2	2	2	2	3	5	1	3	2	2.9
																			Average
														* NOT ON WEB SITE					

TABLE 4

Comparison of Utility Performance Standards for Network Reliability

Utilities with Standards: ---------- Proposed ScottishPower Reliability Standards	CMP	ConEd	Maine PSCo	NiMo	O&R	PG&E	Penn P&L	PSCo	Puget	RG&E	SDG&E	SCE
Frequency of Sustained Outages (SAIFI)	X	X	X	X	X	X	X		X	X	X	X
Duration of Sustained Outages (SAIDI)	X	X	X	X	X	X	X	X	X	X	X	X
Frequency of Momentary Outages (MAIFI)				X			X				X	
Worst Performing Circuits or Customer Groups (CPI)												
Supply Restoration												X[1]

Source: Telephone interviews and source documents noted in Appendix 1

Table 2 indicates that the proposed ScottishPower initiative covers virtually all categories of service quality issues that were identified in this analysis. It also gives an indication that the proposed standards and guarantees are amongst the most comprehensive offered by U.S. utilities. This conclusion is further substantiated in Table 3, which compares the proposed ScottishPower customer guarantees with other utilities' guarantees, as identified in the PacifiCorp survey.

From this search, seventeen utilities were identified offering some type of service guarantees to customers. Two of the seventeen did not include monetary compensations as part of their guarantees, and two were described as trial or pilot programs. The types of guarantees offered and tabulated in Table 3 using a subset of the groupings used in Table 2. The number of service categories guaranteed by these utilities ranged between two and five. The average was 3. The most common type of commitment was to keep appointments, with 13 utilities offering a guarantee, ten of which were backed by a payment[7]. A similar number of utilities offered a guarantee regarding new service, either guaranteeing to connect new customers within a specified number of days or guaranteeing to meet a committed day quoted to the customer. Only two utilities offer a payment to customers in the event an outage is not restored within a guaranteed time limit. No other utility offers any specific guarantee regarding response time to address a power quality complaint or estimates for providing a new supply.

A comparison of utilities' network reliability standards, summarized in Table 4, also supports the conclusion that the proposed ScottishPower service quality initiative is the most comprehensive of all utility programs identified in this survey. Of the eleven companies identified with specific performance targets, no other utility's standards addressed all four reliability issues highlighted in Table 1. Only one had a system standard for supply restoration.

Conclusions of Comparison - The proposed ScottishPower customer commitments are clearly among the best customer service commitments offered by U.S. utilities. In fact, the proposal is arguably the most comprehensive set identified. No other U.S. utility's customer service commitments addressed as complete a range of customer concerns or issues as the proposed set. The importance of comprehensiveness lies in the inherent trade-off between various customer service operations and issues.[8] By including both a SAIFI standard and a customer supply restoration standard, the proposed standards focus the company on a balanced approach to maintaining the overall system and responding quickly to outages. Similarly, by including a wide range of customer responsiveness guarantees as well as system performance targets, the company maintains incentives and measurability across the full range of customer service concerns.

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[7] In some cases the commitment was to notify customer in advance if an appointment would not be kept.

[8] For example, the PACE Distribution '97 benchmarking study pointed out that "reliability goals will also drive your maintenance strategies. Companies driven by SAIFI tend to focus on preventive maintenance activities, where companies driven by CAIDI will focus on trouble call performance."

The proposed commitments uniquely address several critical customer issues, including the supply restoration standard of 80% of customer outages within 3 hours and responsiveness to power quality complaints. These two concerns are among the most important service issues identified by residential and C&I customers, respectively, as described in the next section.

II. Customer Survey on Service Standards

In 1999, PacifiCorp conducted a survey of Pacific Power and Utah Power customers to gauge the extent to which customers support the idea of service standards such as those proposed by ScottishPower. This survey found that:

- 69% of customer support the idea of instituting service standards
- 80% of customers believe that they would receive better overall service as a result of the type of service standards being proposed by ScottishPower
- 80% of customers would prefer to be compensated through a credit to their account in the event that PacifiCorp did not meet the service standards

The results of this survey demonstrate that a majority of customers perceive value in service standards such as those proposed by ScottishPower.

III. CONCLUSIONS

The proposed customer service initiative has been compared to recommended customer service performance targets, to other utilities' performance targets and customer guarantees, and to customers' expressions of service quality priorities. In each case, the proposed performance targets and guarantees compare very favorably.

The proposed performance targets and customer service guarantees address all important aspects of customer service, when compared with customer service standards that have been recommended as part of performance based regulation (PBR) initiatives in the U.S., or compared with U.S. utilities' standards approved as part of PBR or other regulatory proceedings. The proposed network reliability standards conform with recommended IEEE distribution reliability indices, and are the only set of standards that address all four reliability areas covered by IEEE P1366.

The proposed customer guarantees address a more complete range of customer service attributes than any major U.S. utility's customer guarantees we have been able to identify. In several important measures, the proposed ScottishPower guarantees are the most rigorous offered by any U.S. utility.

Customer research indicates that the majority of customers perceive value in service standards such as those proposed by ScottishPower. The proposed customer service initiative clearly addresses issues that matter to customers, accounting for millions of customer interactions annuallyThe proposed customer service performance targets and guarantees can be held up as a leading or “best practices” set of customer service commitments. If adopted, they will provide benefits of manifest value to customers and should be recognized as a concrete and valuable benefit that customers will gain from the transaction.

EXHIBIT ___ (BM-1)

SURVEY INFORMATION REGARDING SERVICE STANDARDS

Appendix 1

Appendix 2

[1.] SCE offers a guarantee to customers that it will respond to calls reporting disruption within four hours and it will restore supply within 24 hours, but not a system performance standard.