

**AGREEMENT BETWEEN PACIFICORP AND  
UTAH DIVISION OF PUBLIC UTILITIES  
ON ESTABLISHING BASELINES FOR PACIFICORP'S  
PERFORMANCE STANDARDS 1 and 2  
APRIL 2003**

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PacifiCorp (the Company) and the Utah Division of Public Utilities (Division) have entered into an agreement, as described below, concerning the 10% improvement in performance regarding Performance Standards 1 and 2, two of the performance standards that were implemented by PacifiCorp in the merger with ScottishPower, Docket No. 98-2035-04. Performance Standard 1 pertains to duration of outages, or System Average Interruption Duration Index (SAIDI). Performance Standard 2 pertains to frequency of outages, or System Average Interruption Frequency Index (SAIFI).

**1. Background**

As part of the merger between ScottishPower and PacifiCorp, performance standards were developed which included specific network performance improvements. Key to achieving these improvements was the need to better document outages as well as the need to implement a new outage management system. These two actions would ensure greater accuracy of the customer minutes lost for each outage event, as well as the frequency of outages, and would give the Company greater capabilities in targeting facility and operational improvements in delivering reliability.

Within the Joint Motion for Approval of Stipulation in Docket No. 98-2035-04, it was recognized that the planned system changes would capture outage minutes that had not been previously captured. Therefore a “baseline adjustment” process was introduced

into both witness testimony and stipulation documents (Stipulation Condition No. 30). Since the approval of the merger, substantial efforts have been undertaken to improve the accuracy of the Company's outage reporting process and better track the customer reported outages compared to the outages reported in the Company's outage reporting system. Since the merger the Company has also been working with the Division to determine the appropriate baseline adjustment and ensure establishment of a merger commitment target reflective of the planned 10% improvement over the five-year measurement period as described in Performance Standards 1 and 2. Submission by the Division of outage baselines within 18 months after approval of the merger, as outlined in Stipulation Condition 30 (b) was delayed to accommodate this work.

The Company has prepared calculations that demonstrate what it believes to be correct adjustments to earlier under-reported outage data sets. The Division does not feel that using these calculations to correct for earlier under-reporting is the best approach, since no direct measurements of the uplift can be prepared. As a result, the Company and Division have agreed upon the process discussed below that they believe will achieve at least a 10% improvement in reliability over the five-year measurement period described in Performance Standards 1 and 2.

## **2. Agreement Between PacifiCorp and Utah Division of Public Utilities**

The Company and the Division have agreed to establish a target from which to measure improvements based on a timeframe from which the Company can assure quality outage management data to prepare its target, then effect an outage management data quality audit process. The Company and the Division are submitting this agreement to the Commission for approval.

The proposal developed by the Company and the Division has as its keys components:

- 1) Development of the merger commitment target beginning point
- 2) Methodology by which exclusions from the data-set will be conducted
- 3) Identification of a methodology to assess accuracy of the data in the future.

Merger Commitment Target

In order to match to the Company’s fiscal calendar, the Company proposes that fiscal year 2005 (April 1, 2004 through March 31, 2005) be used as the period of record. The Company and the Division believe the outage management reporting discipline and customer connectivity data for fiscal year 2002 (April 1, 2001 through March 31, 2002) are of adequate quality to set fiscal year 2002 as a starting point. The pertinent performance criteria are listed below:

FY 2002 Total Performance			Major Event Performance			Normalized Performance			
Sustained Outages	SAIDI	SAIFI	Sustained Outages	SAIDI	SAIFI	Sustained Outages	SAIDI	SAIFI	
13,788	369.291	2.851	2,750	134.1	0.48	11,038	235.192	2.365	
2% Annual Reduction							221	2.2	
<b>Proposed Merger Commitment Target</b>							<b>217</b>	<b>2.2</b>	

After the merger, the Company implemented numerous process and system changes to improve performance reporting and also implemented network improvements to increase reliability. These changes create difficulty in comparing current performance to pre-merger performance. As a result, the Company and the Division have agreed to evaluate reliability improvements from a beginning base of fiscal year 2002 (April 1, 2001 through March 31, 2002), and increment accordingly. The Division and the Company agree that reducing the SAIDI and SAIFI target by 2% a year from the 2002 performance (April 1, 2001 through March 31, 2002) until 2005 (April 1, 2004 through

March 31, 2005) would be a reasonable approach. Based on this methodology, the target for 2005 (April 1, 2004 through March 31, 2005) would be 221 for SAIDI and 2.2 for SAIFI. After further negotiations between the Company and the Division, a revised SAIDI target for 2005 of 217 and SAIFI of 2.2 was agreed upon by the Company and the Division.

In addition to this reduction in the SAIDI and SAIFI target of 2% per year from 2002 until 2005, the Company's analysis shows that a significant outage reduction was achieved in fiscal 2002 compared to 2001 performance. To estimate the percentage of reduction already achieved, the Company performed an analysis to identify the improvement in reliability that occurred after a substantial investment in the heavily growing Salt Lake City area. The Company's analysis used the occurrence of outages. In fiscal 2001 (April 1, 2000 through March 31, 2001), the Company experienced 12,997 outages, and in fiscal 2002 (April 1, 2001 through March 31, 2002) only 11,038 outages, for an outage reduction of 15.1%. The Company has determined that since the introduction of its new outage reporting system there is a high correlation between outage incidents and SAIDI. Therefore the Company estimates that in fiscal 2002 (April 1, 2001 through March 31, 2002) it delivered a 15.1% improvement in performance over 2001 (April 1, 2000 through March 31, 2001).

Based on the Company's analysis, the Company and Division believe delivery of the targets above will provide reliability improvements to customers that at least meet the original merger commitment goal of 10% improvement over a five-year period.

## Exclusion Process

The Division and the Company agree that “major events” should be excluded from the outage data. A major event is defined as:

“An event which exceeds reasonable design or operational limits of the electric power system, and during which at least 10% of the customers within an operating area experience a sustained interruption during a 24-hour period.”

The Division and the Company also agree that performance results delivered will be normalized to exclude all events where the above conditions apply, and that have been approved by the Commission.

## Data Quality Indicators

Since the introduction of PacifiCorp’s CADOPS (Computer-Aided Distribution Operations System) and Prosper/US, and its integration with the Trouble Up (fault-recording) System, the Company looks to several metrics to assess the quality of the outage management system.

- 1) Evaluation of quantity of “orphan trouble calls”: when a customer calls who is not associated with a transformer an “orphan trouble call” is generated. (They may be new customers whose meters have not yet been associated to a transformer, individuals who are reporting a line down or calling the wrong utility.) These calls are unable to generate an outage incident automatically (from Trouble Up) within CADOPS. The Company monitors this data on a regular basis and ensures the proper resolution to these entries.
- 2) Evaluation of “untied customers”: when new customers are added to the Company’s delivery system, a record is created in the Customer Service System (CSS) that establishes basic account information, including a site-service record. On a regular basis CADOPS is updated with these new accounts. An association between the customer’s site service record and the upstream transformer ensures that if that device is without power the associated customer-minutes-lost will be reported. If no association exists in

CADOPS, the effect of those untied customers' outage minutes would not be included in the reliability metrics.

The Company will prepare a calculation of "unreported untied customer minutes lost." This calculation will be the result of a statistical correlation between the Trouble Up and CADOPS systems' untied and tied customer calls. A 90% confidence interval will be used to establish the error rate used to calculate the unreported untied customer minutes lost. The Company will evaluate this effect on its SAIDI and SAIFI targets routinely, and report the results on an annual basis. The Company will cooperate with the Division to audit the results of these calculations.

### **3. Summary of Agreement**

To summarize, PacifiCorp and the Division have agreed to measure the improvements in system reliability based on the establishment of a system performance baseline using fiscal year 2002 (April 1, 2001 through March 31, 2002) data. The reliability target the Company needs to deliver during fiscal year 2005 (April 1, 2004 through March 31, 2005) will be a normalized SAIDI of 217 and SAIFI of 2.2. This target delivers a greater than 2% improvement per year, over a three-year measurement period. This target builds upon the Company's estimate of the 15% improvement in performance already achieved from fiscal 2001 (April 1, 2000 through March 31, 2001) to fiscal 2002 (April 1, 2001 through March 31, 2002). The Company will exclude from performance measurements those events that meet the definition for a major event and have been approved by the Commission. The Company will also develop a data quality indicator using orphan trouble calls, untied customer percentages, and calculate an

estimate of untied unreported customer minutes lost. The Company will cooperate with the Division to audit the results of these calculations.

By using the proposed targets, exclusion processes and accuracy measures the Company and the Division believe the Company will deliver reliability improvements at least equivalent to that agreed to in Docket No. 98-2035-04 with regard to Performance Standards 1 and 2.

Signed \_\_\_\_\_ Date \_\_\_\_\_  
Heidi Caswell, Manager  
PacifiCorp

Signed \_\_\_\_\_ Date \_\_\_\_\_  
Lowell Alt Jr., Director  
Utah Division of Public Utilities

## Appendix

**SAIDI:** System Average Interruption Duration Index = Customer Minutes Lost (for the Period in Question)/Frozen Customer Count (for the Period in Question)

**SAIFI:** System Average Interruption Frequency Index = Customers Interrupted (for the Period in Question)/Frozen Customer Count (for the Period in Question)

**Customer Minutes Lost (CML):** Customer Minutes Lost is the sum of all sustained outage's outage duration for the period in question. This value is reported using the Prosper/US database.

**Frozen Customer Count:** For the period in question, the Company develops a "frozen customer count". This value is the beginning number of customers' site service locations within the area. This value is stored within the Prosper/US database.

**Sustained Outage (or sustained interruption):** an outage event that exceeds 5 minutes in duration.

**Major Event:** an event which exceeds reasonable design or operational limits of the electric power system, and during which at least 10% of the customers within an operating area experience a sustained interruption during a 24-hour period.

**Fiscal Year:** from April 1, of the year through March 31 of the following year. The fiscal year number is the calendar year number of the last 3 months of the fiscal year. For instance, April 1, 2000 through March 31, 2001 is the fiscal year 2001.

### 2001 Major Events

Date	Description	SAIDI	SAIFI	MAIFI
1) 5/2-5/5/2001	Wind Storm	23.302	0.141	0.056
2) 6/12-6/14/2001	Wind Storm	60.425	0.215	0.025
3) 11/22-11/27/2001	Snow Storm	62.751	0.221	0.128