

May 1, 2008

### *VIA ELECTRONIC FILING AND OVERNIGHT DELIVERY*

Ms. Carole J. Washburn Executive Secretary Washington Utilities and Transportation Commission 1300 S. Evergreen Park Drive SW Olympia, WA 98504-7250

Re: Annual Electric Reliability Report per WAC 480-100-393 and

WAC 480-100-398

Dear Ms. Washburn:

In Docket No. UE-991168 the Commission adopted WAC 480-100-393 and 480-100-398, which are rules associated with developing a reliability monitoring and reporting plan and annually reporting on reliability results for the reporting period identified in the plan. In 2001, PacifiCorp outlined its reporting plan, which identified and established the Company's reporting period from April 1 through March 31 of the following year, consistent with the Company's fiscal reporting period. The report would be filed by May 31 of each year.

In March 2006, MidAmerican Energy Holdings Company acquired PacifiCorp. During this transaction it was communicated that upon completion of the transaction the Company would transition to a calendar fiscal period, i.e. January 1 through December 31. As a result, beginning in 2007, PacifiCorp modified its annual reporting plan to be consistent with this new calendar fiscal period, with annual report filings to be completed by May 1 of each year. This is the second report to be filed on the new calendar fiscal period.

It is respectfully requested that all formal correspondence and Staff requests regarding this filing be addressed to:

By E-mail (preferred):

datarequest@pacificorp.com

By regular mail:

Data Request Response Center

**PacifiCorp** 

825 NE Multnomah, Suite 2000

Portland, OR 97232

Washington Utilities and Transportation Commission May 1, 2008 Page 2

By fax:

(503) 813-6060

Informal questions should be directed to Paul M. Wrigley, Regulatory Director, at (503) 813-6048.

Sincerely,

Andrea Kelly

Vice President, Regulation

Andrea Kelly

Enclosures



# SERVICE QUALITY

REVIEW

January 1 – December 31, 2007

**Annual Report** 



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# **EXECUTIVE SUMMARY**

During January 1 through December 31, 2007, PacifiCorp continued to deliver excellent reliable service to its Washington customers. The Customer Guarantee program continued to deliver high quality results (in fact, well above 99%) consistent with the prior year's performance. While PacifiCorp's reliability results delivered to its Washington customers during 2007 were slightly off the company's operating plan targets for the year, the service delivered across PacifiCorp's six states service territory ranks very high when compared across the industry.

The company's service reliability is impacted by uncontrollable interference events, such as car-hit-pole accidents, and by significant events that exceed the normal underlying level of interruptions but that do not reach the qualifying major event threshold for exclusion from the company's performance metrics. To provide a perspective on their impact this year, the significant events experienced during 2007 are listed in Section 3.

# 1 Service Standards Program Summary

PacifiCorp has a Service Standards Program comprised of a number of Customer Guarantees<sup>1</sup> and Performance Standards. Regular status reports regarding the program's performance are provided both internally and externally. These reports detail measures of performance that are reflective of PacifiCorp's reliability in service delivery (of both personnel and the network) to its customers. The company developed these measures after evaluating company and industry standards and practices for delivering, collecting, and reporting performance data. In certain cases, the company chose to adopt a level of performance higher than the industry norm. In other cases, PacifiCorp developed metrics and targets based upon its history of delivery of these measures. The measures are useful in evaluating historical performance and in setting future targets for performance. In its entirety, these measures comply with WAC 480-100-393 and 398 requirements for routine reliability reporting.

In UE-042131, the company applied, and received approval, to extend the core program through March 31, 2008. During the MidAmerican acquisition of PacifiCorp, in UE-051090, the program² was extended again through 2011. During Fiscal Year 2006, from April 1, 2005 through March 31, 2006 the company successfully delivered on both its outage duration and outage frequency targets consistent with the commitment made. At the close of March 31, 2008, the company also accomplished its 3-Hour Outage Restoration Target goal (PS4). Further, the company continues to target improvements to its underperforming circuits, resulting in meeting this commitment also. Upon completion of this program, the company will be proposing minor modifications to the program and will be completing a filing to formalize the status and suggested improvements going forward.

<sup>&</sup>lt;sup>1</sup> Customer Service Standards address individual customer transaction performance, while Performance Standards address system-level performance for the average PacifiCorp Washington customer.

<sup>&</sup>lt;sup>2</sup> Commitment 45 states that "MEHC and PacifiCorp commit to continue customer service guarantees and performance standards as established in each jurisdiction, provided that MEHC and PacifiCorp reserve the right to request modifications of the guarantees and standards after March 31, 2008, and the right to request termination (as well as modification) of one or more guarantees or standards after 2011. The guarantees and standards will not be eliminated or modified without Commission approval."

January - December 2007

# 1.1 PacifiCorp Customer Guarantees

Customer Guarantee 1: Restoring Supply After an Outage  Customer Guarantee 2:	The company will restore supply after an outage within 24 hours of notification from the customer with certain exceptions as described in Rule 25.  The company will keep mutually agreed upon appointments which will be scheduled within a
Appointments	two-hour time window.
Customer Guarantee 3: Switching on Power	The company will switch on power within 24 hours of the customer or applicant's request, provided no construction is required, all government inspections are met and communicated to the company and required payments are made. Disconnection for nonpayment, subterfuge or theft/diversion of service are excluded.
Customer Guarantee 4: Estimates For New Supply	The company will provide an estimate for new supply to the applicant or customer within 15 working days after the initial meeting and all necessary information is provided to the company.
Customer Guarantee 5: Respond To Billing Inquiries	The company will respond to most billing inquiries at the time of the initial contact. For those that require further investigation, the company will investigate and respond to the Customer within 10 working days.
Customer Guarantee 6: Resolving Meter Problems	The company will investigate and respond to reported problems with a meter or conduct a meter test and report results to the customer within 10 working days.
Customer Guarantee 7: Notification of Planned Interruptions	The company will provide the customer with at least two days notice prior to turning off power for planned interruptions.

Note: See Rules for a complete description of terms and conditions for the Customer Guarantee Program.



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# 1.2 PacifiCorp Performance Standards

Network Performance Standard 1: Improve System Average Interruption Duration Index (SAIDI)	The company will achieve its SAIDI commitment target during the 3 year period through March 31, 2008.
Network Performance Standard 2: Improve System Average Interruption Frequency Index (SAIFI)	The company will achieve its SAIFI commitment target during the 3 year period through March 31, 2008.
Network Performance Standard 3: Improve Under Performing Circuits	The company will reduce by 20% the circuit performance indicator (CPI) for a maximum of five under performing circuits on an annual basis within five years after selection.
Network Performance Standard 4: Supply Restoration	The company will restore power outages due to loss of supply or damage to the distribution system on average to 80% of customers within three hours.
Customer Service Performance Standard 5: Telephone Service Level	The company will answer 80% of telephone calls within 30 seconds. The company will monitor customer satisfaction with the company's Customer Service Associates and quality of response received by customers through the company's eQuality monitoring system.
Customer Service Performance Standard 6: Commission Complaint Response/Resolution	The company will a) respond to at least 95% of non-disconnect Commission complaints within three working days and will b) respond to at least 95% of disconnect Commission complaints within four working hours. The company will c) resolve 95% of informal Commission complaints within 30 days.

Note: Performance Standards 1, 2 & 4 are for underlying performance days, excluding days classified as Major Events.

January - December 2007

# 1.3 Reliability Definitions and Service Territory

This section will define the various terms<sup>3</sup> used when referring to interruption types, performance metrics and the internal measures developed to meet its performance plans. A map of PacifiCorp service territory is included.

### **Interruption Types**

### Sustained Outage

A sustained outage is defined as an outage of equal to or greater than 5 minutes in duration.

#### Momentary Outage

A momentary outage is defined as an outage of less than 5 minutes in duration. PacifiCorp has historically captured this data using substation breaker fault counts.

#### Reliability Indices

#### SAIDI

SAIDI (sustained average interruption duration index) is an industry-defined term to define the average duration summed for all sustained outages a customer experiences in a given time-frame. It is calculated by summing all customer minutes lost for sustained outages (those exceeding 5 minutes) and dividing by all customers served within the study area. When not explicitly stated otherwise, this value can be assumed to be for a one-year period.

### Daily SAIDI

In order to evaluate trends during a year and to establish Major Event Thresholds, a daily SAIDI value is often used as a measure. This concept was introduced in IEEE Standard P1366-2003. This is the day's total customer minutes out of service divided by the static customer count for the year. It is the total average outage duration customers experienced for that given day. When these daily values are accumulated through the year, it yields the year's SAIDI results.

#### SAIFI

SAIFI (sustained average interruption frequency index) is an industry-defined term that attempts to identify the frequency of all sustained outages that the average customer experiences during a given time-frame. It is calculated by summing all customer interruptions for sustained outages (those exceeding 5 minutes in duration) and dividing by all customers served within the study area.

#### **CEMI**

CEMI is an acronym for Customers Experiencing Multiple (Sustained and Momentary) Interruptions. This index depicts repetition of outages across the period being reported and can be an indicator of recent portions of the system that have experienced reliability challenges. This metric is used to evaluate customer-specific reliability in Section 4. Customer Reliability Communications.

#### CPI99

CPI99 is an acronym for Circuit Performance Indicator, which uses key reliability metrics (such as SAIDI and SAIFI) to identify underperforming circuits. It excluded Major Event and Loss of Supply or Transmission outages.

#### CPI05

CPI05 is an acronym for Circuit Performance Indicator, which uses key reliability metrics (such as SAIDI and SAIFI) to identify underperforming circuits. Unlike CPI99 it includes Major Event and Loss of Supply or Transmission outages.

<sup>&</sup>lt;sup>3</sup> P1366-2003 was adopted by the IEEE Commissioners on December 23, 2003. The definitions and methodology detailed therein are now industry standards.

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### **Performance Types & Commitments**

PacifiCorp recognizes two categories of performance: underlying performance and major events. Major events represent the atypical, with extraordinary numbers and durations for outages beyond the usual. Ordinary outages are incorporated within underlying performance. These types of events are further defined below.

### Major Events

A Major Event is defined as a 24-hour period where SAIDI exceeds a statistically-derived threshold value, as detailed in IEEE Distribution Reliability Standard 1366-2003<sup>4</sup>.

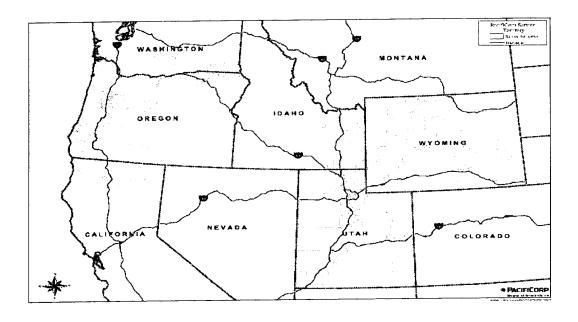
### Underlying Events

Within the industry, there has been a great need to develop methodologies to evaluate year-on-year performance. This has led to the development of methods for segregating outlier days, via the approaches described above. Those days which fall below the statistically-derived threshold represent "underlying" performance, and are valid (with some minor considerations for changes in reporting practices) for establishing and evaluating meaningful performance trends over time.

### Commitment Targets

Because of the benefits that the company and its customers and regulators experienced from the Service Standards Program, the company filed and received approval to continue the program through 3/31/2008. From a reliability perspective, the company continues to develop stretch goals that will deliver important improvements to its customers. For Washington state customers, the company committed that it would deliver outage duration (SAIDI) and outage frequency (SAIFI) results within the 3-year period that met its prior commitment targets, as filed in UE-042131.

#### Service Territory Map



<sup>&</sup>lt;sup>4</sup> During calendar 2007, the calculated threshold for a major event was 12.02 minutes; during calendar 2008, the calculated threshold is 11.69 minutes.

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# 2 CUSTOMER GUARANTEES SUMMARY

# customerguarantees

January to December 2007

Washington

		<u> </u>	2	007			2	006	
	Description	Events	Failures	%Success	Paid	Events	Failures	%Success	Paid
CG1	Restoring Supply	142,420	0	100%	\$0	125,093	0	100%	\$0
	Appointments	2.971	8	99.7%	\$400	3,087	14	99.5%	\$700
CG2	1 ''	4,614	7	99.8%	\$350	4,741	16	99.7%	\$800
CG3	Switching on Power	513	4	99.2%	\$200	533	5	99.1%	\$250
CG4	Estimates	1,734	5	99.7%	\$250	1,495	6	99.6%	\$300
CG5	Respond to Billing Inquiries	157	1	99.4%	\$50		0	100%	\$0
CG6	Respond to Meter Problems		5	99.9%	\$250		3	99.9%	\$150
CG7	Notification of Planned Interruptions	4,056		99.570	<b>\$200</b>	0,00			
		156,465	30	99.9%	\$1,500	140,369	44	99.9%	\$2,200

Overall guarantee performance remains above 99%, demonstrating Pacific Power's continued commitment to customer satisfaction.

Customer Communications: The Customer Guarantee program is highlighted throughout the year in customer communications as follows:

Program performance reports are included in all billing statements beginning in June.

Each new customer is sent a welcome aboard packet that features the program and describes how to file a claim.

Major Events are excluded from the Customer Guarantees program.

January - December 2007

# 3 PERFORMANCE STANDARDS

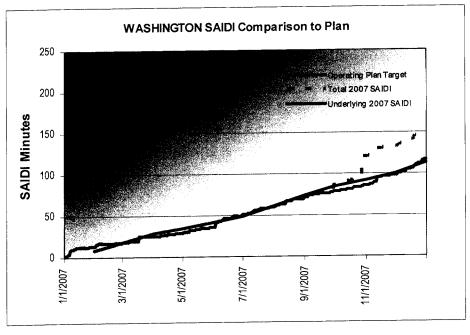
During the reporting period, the company delivered reliability results slightly higher than its targets. As seen in the following charts, events early in the year resulted in the first straying from performance targets, with the January 7 wind event and the March 17 loss of supply event. Later in the year, performance was impacted by another loss of supply event, on September 30, and a storm event on November 12. Totaling approximately 27 minutes, these four days in accounted for more than one-fifth (22%) of the state's SAIDI for 2007. Late-year weather continued to impact reliability and resulted in performance being slightly beyond plan. On October 29, an animal encroachment resulted in the single major event filed during the year. Impacts of the four significant events not reaching the major event threshold are shown in the table below.

Significant Events				
Date	Description	Impact to SAIDI		
1/7/2008	Wind	5		
	Loss of Supply - unknown initiating event	6		
	Loss of Supply - initiated by lightning	10		
11/12/2008	Storm	6		

# 3.1 System Average Interruption Duration Index (SAIDI)

During the year, the company's average outage duration for its Washington customers was close to plan, but was impacted by a few significant events and frequent winter weather events at year-end.

	January 1 through December 31, 2007		
	SAIDI Actual	SAIDI Plan Commitment Target	
Washington	122	113	



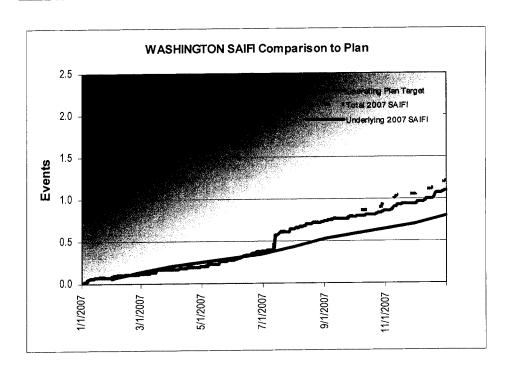
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# 3.2 System Average Interruption Frequency Index (SAIFI)

As stated previously, the company delivered reliability results slightly off plan during the year. As seen in the following chart, an up-tick in July pulled outage frequency substantially off plan. (On July 13, a loss of supply event affecting more than 22,000 customers for 12 minutes was due to lightning.) Later through the year, winter weather moved frequency further off plan.

	January 1 through December 31, 2007			
	SAIFI Actual	SAIFI Plan Commitment Target		
Washington	1.12	0.80		





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# 3.3 Operating Area Metrics

During 2007, reliability continues to focus on improved system hardening and protection. This protection focus has included replacement of hydraulic reclosers, upgrades of substation breakers and/or relays and coordination of circuit protection devices, such as fuses and reclosers. The company has found substantial improvements in performance by honing in on circuits that do not appear to be well coordinated. Additionally, it has continued its circuit hardening efforts by strategic deployment of circuit inspection, pole and/or crossarm replacement and vegetation hot spotting. In addition to circuit hardening and protection efforts, it has reviewed opportunities for localized activities such as feeder ties and cable replacement activities. See Appendix A for graphical depictions of outage frequency and duration for the state, operating areas and selected circuits during the reporting period.

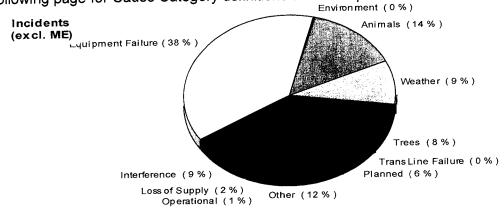
Washington Operating Area Performance for the reporting period is listed in the table below.

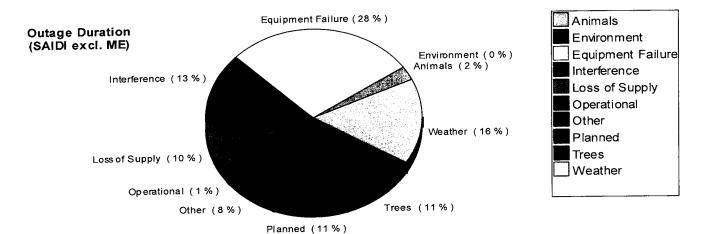
January – December 2007	Major Ever	Major Events Included		nts Excluded
Operating Area	SAIDI	SAIFI	SAIDI	SAIFI
SUNNYSIDE	241	1.05	109	0.76
WALLA WALLA	107	1.30	107	1.30
YAKIMA	129	1.14	129	1.14

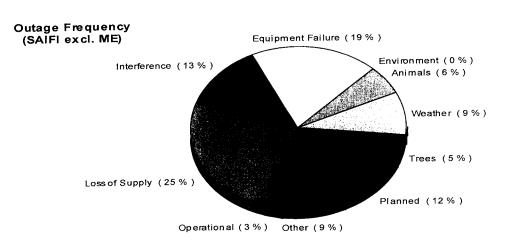
January - December 2007

# 3.4 Cause Code Analysis

The pie charts below show number of incidents, customer minutes lost, and sustained interruptions by cause category. Customer minutes lost is directly related to SAIDI (average outage duration) while sustained interruptions is directly related to SAIFI (average outage frequency). Certain types of outages typically result in a large amount of customer minutes lost, but are infrequent, such as Loss of Supply outages. Others tend to be more frequent, but result in few customer minutes lost. See the following page for Cause Category definitions and examples.







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Cause Category	Description and Examples
Environment	Contamination or Airborne Deposit (i.e., salt, trona ash, other chemical dust, sawdust, etc.); corrosive environment; flooding due to rivers, broken water main, etc.; fire/smoke related to forest, brush or building fires (not including fires due to faults or lightning).
Weather	Wind (excluding windborne material); snow, sleet or blizzard; ice; freezing fog; frost; lightning.
Equipment Failure	Structural deterioration due to age (incl. pole rot); electrical load above limits; failure for no apparent reason; conditions resulting in a pole/cross arm fire due to reduced insulation qualities; equipment affected by fault on nearby equipment (i.e. broken conductor hits another line).
Interference	Willful damage, interference or theft; such as gun shots, rock throwing, etc; customer, contractor or other utility dig-in; contact by outside utility, contractor or other third-party individual; vehicle accident, including car, truck, tractor, aircraft, manned balloon; other interfering object such as straw, shoes, string, balloon.
Animals and Birds	Any problem nest that requires removal, relocation, trimming, etc; any birds, squirrels or other animals, whether or not remains found.
Operational	Accidental Contact by PacifiCorp or PacifiCorp's Contractors (including live-line work); switching error; testing or commissioning error; relay setting error, including wrong fuse size, equipment by-passed; incorrect circuit records or identification; faulty installation or construction; operational or safety restriction.
Loss of Supply	Failure of supply from Generator or Transmission system; failure of distribution substation equipment.
Planned	Transmission requested, affects distribution sub and distribution circuits; company outage taken to make repairs after storm damage, car hit pole, etc.; construction work, regardless if notice is given; rolling blackouts.
Trees	Growing or falling trees.
Other	Cause Unknown.
Onici	Oddoo Ottationia

January - December 2007

# 3.5 Reduce CPI for Worst Performing Circuits by 20%

On a routine basis, the company reviews circuits for performance. One of the measures that it uses is called circuit performance indicator (CPI), which is a blended weighting of key reliability metrics covering a three-year time frame. The higher the number, the poorer the blended performance the circuit is delivering. As part of the company's Performance Standards Program, it annually selects a set of Worst Performing Circuits for target improvement. The improvements are to be completed within two years of selection. Within five years of selection, the average performance must improve by at least 20% (as measured by comparing current performance against baseline performance). Circuit selections for Program Years 1 through 5 have previously met their targets (as filed and approved) and are thus removed from the tracking table below.

WASHINGTON WORST PERFORMING CIRCUITS	BASELINE	Performance 12/31/07
Circuit Performance Indi	cator 2005 (CPI	05)
PROGRAM YEAR 9:		
Garden	109	
Hay	166	
Rivard	81	
Franklin	82	
Boulevard	41	
TARGET SCORE = 77	96	
PROGRAM YEAR 8:		
Zillah	114	177
Gurley	87	96
Stone Creek	135	143
Nile	760	617
Highland	247	212
TARGET SCORE = 215	269	249
PROGRAM YEAR 7:	ur -	
West	210	95
Granger	116	216
Russell Creek	149	82
Tampico	140	166
Gore	56	82
TARGET SCORE = 107	134	128
PROGRAM YEAR 6:		
Nile	383	617
Forney	246	118
Harrah	220	115
Windward	233	168
Ferndale	227	108
TARGET SCORE = 210	262	225



January - December 2007

# 3.6 Restore Service to 80% of Customers within 3 Hours (across 3 years)

W	WASHINGTON RESTORATIONS WITHIN 3 HOURS					
	3-Year Program to Date = 85%					
	January 1 through December 31, 2007 = 85%					
January	February	March	April	May	June	
72%	98%	97%	86%	91%	82%	
July	August	September	October	November	December	
94%	84%	78%	91%	83%	70%	

# 3.7 Telephone Service and Response to Commission Complaints

COMMITMENT	GOAL	PERFORMANCE
PS5-Answer calls within 30 seconds	80%	83%
PS6a) Respond to commission complaints within 3 days	95%	100%
PS6b) Respond to commission complaints regarding service disconnects within 4 hours	95%	100%
PS6c) Resolve commission complaints within 30 days	95%	100%

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# 4 CUSTOMER RELIABILITY COMMUNICATIONS

# 4.1 Reliability Complaint Process Overview

The company's process for managing customers' concerns about reliability are to provide opportunities to hear customer concerns, respond to those concerns, and where necessary, provide customers an opportunity to elevate those concerns.

#### **Customer Reliability Communications** Customer service representative Employee creates Outage Power Quality Has the matter beer Outage coordinator reviews Customer calls about reliability attempts to address customer's concern (i.e. review OPQ history resolved? outage history and attempts to resolve customer's concern Inquiry transaction or outage event history) Investment delivery or field operations employee reviews inquiry and relevant outage history, scheduled projects and other pertinent data Has the matter been **Outage Power Quality Inquiry** Document details of the call & resolution -Yes-Document details of the Employee Customer calls to file Employee records pertinent Has the matter been investigates further data; researches situation to resolve matter; responds to Document resolution Yes Has the matter been Document resolution Employee records pertinent data and responds to customer 1-800 Complaint Employee records pertinent data; Commission staff Employee Has the matter been commission to file communicates complaint about researches situation to customer complaint details esolve matter; responds to appropriate party Document resolution Has the matter been Employee records pertinent data and responds to Document resolution **Commission Complaint** appropriate party



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# 4.2 Customer Complaint Tracking

Listed below are the various avenues available to a customer to resolve concerns about reliability performance.

### Customer Reliability Inquiry

The company records customer inquiries about reliability as Outage Power Quality transactions in its customer service system, referred to as "OPQ" transactions.

### • Customer Complaint

If a customer's reliability concerns are not met through the process associated with the OPQ transaction, a customer can register a 1-800 complaint with the company. This is recorded in a complaint repository from which regular reports are prepared and circulated for resolution.

### Commission Complaint

If a customer's reliability concerns are not met through the process associated with a 1-800 complaint, a customer can register a complaint with the Commission. This is recorded by the Commission staff and also by the company in a complaint repository. Regular reports are prepared and circulated for resolution of these items.

# 4.3 Customer Complaints Recorded During the Period

Listed below are the complaints recorded during the year, by the receipt point.

# • Informal Complaints (1-800 or Customer Assistance Line (CAL))

Received S	itate Operating Are	ea Complaint Type	Circuit Number	Commission	Site ID	Customer Account Number Number		Summary
1/8/2007 V	VA Yakima Distrib	oution Outage	5Y631	Private	121316119	49627621	1 Beddoe, Lewis A.	Customer contacted CAL regarding tree arcing in line.

#### Commission Complaints

Received State	Operating Area	Complaint Type	Circuit Number	Commission	Site ID	Customer Accoun Number Number	Customer Name	Summary
10/26/2007 WA	Walla Walla Distribution	Outage	5W4	Private	999033523	42717011		Customer contacted WUTC with questions regarding outage restoration.

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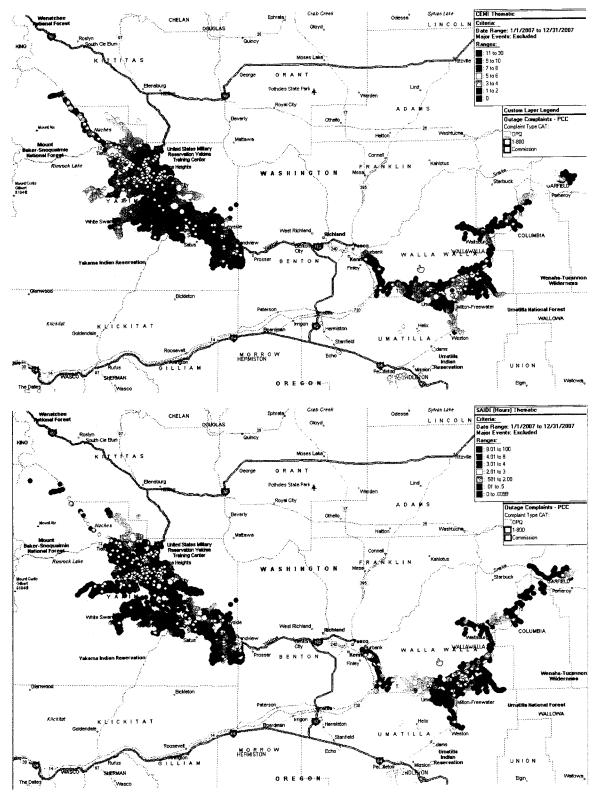
# 5 WASHINGTON RELIABILITY RESULTS DURING 2007

To geospatially display reliability results, the Company has developed its GREAT tool which blends circuit topology with outage history and uses a variety of industry metrics (differentiated by color) to indicate areas where reliability analysis should be targeted. In the subsequent plots, two important reliability indicators are depicted. First, plots with customers experiencing multiple interruptions (CEMI) are shown. This measure shows how many sustained and momentary outages a given service transformer has experienced. The greater the color intensity, with red as the most severe, the more interruptions the transformer has had. Second, service transformer-level SAIDI is shown. While technically SAIDI is a "system-level" metric, the local application of this metric can be revealing in determining service transformers that have had long cumulative durations of outages during the period. As explained previously, the greater the color intensity, the longer the outage duration during the period. (Major events, customer requested and prearranged outages are excluded from underlying results.)

Finally, these graphics superimpose customer reliability inquiries and complaints. When this data is graphically overlaid with transformer performance data, trends can be surfaced that warrant prompt action.

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# 5.1 State Reliability

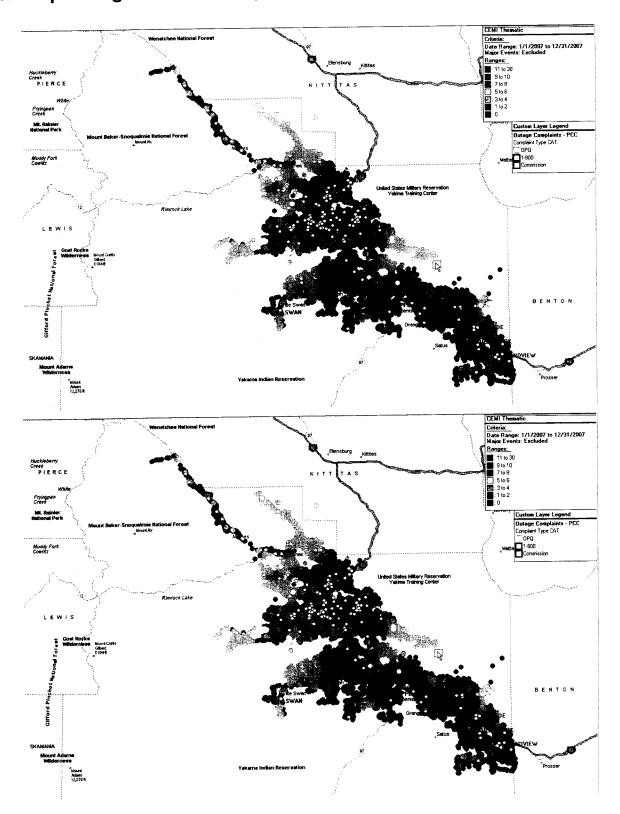


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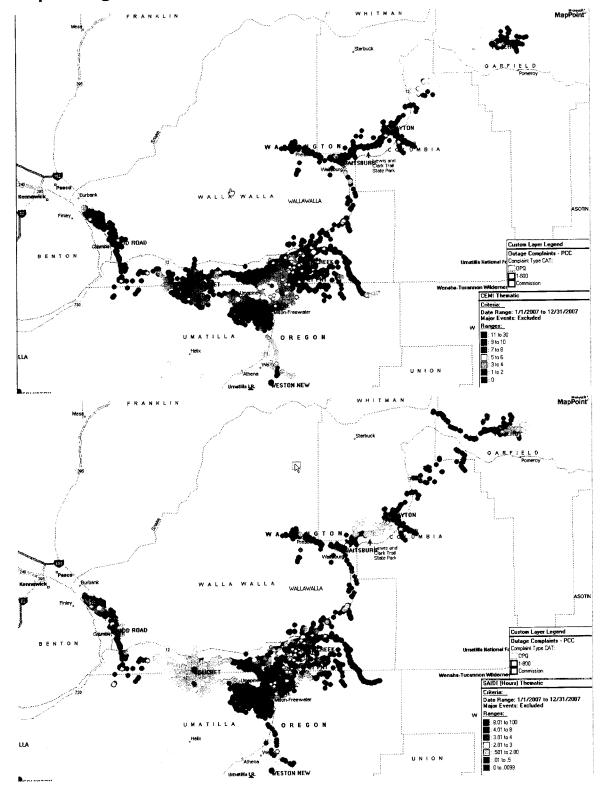
# 5.2 Operating Area Reliability-Sunnyside and Yakima





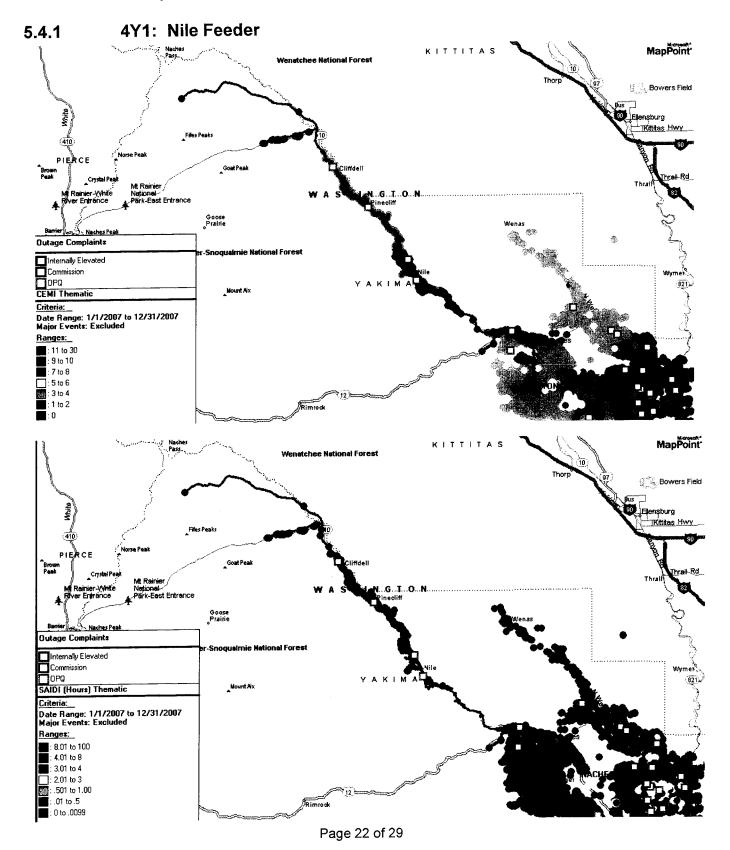
# January - December 2007

# 5.3 Operating Area Reliability-Walla Walla

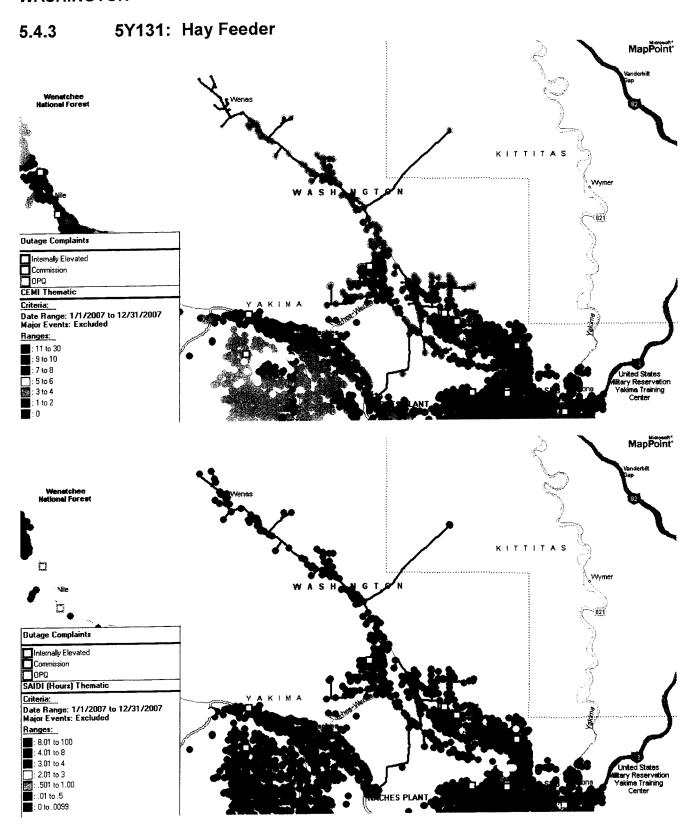


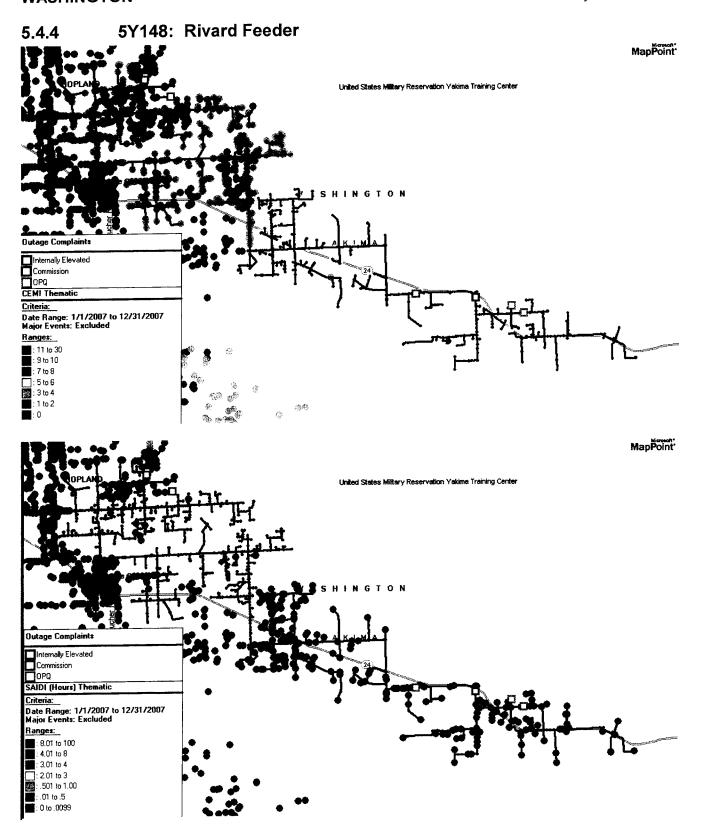
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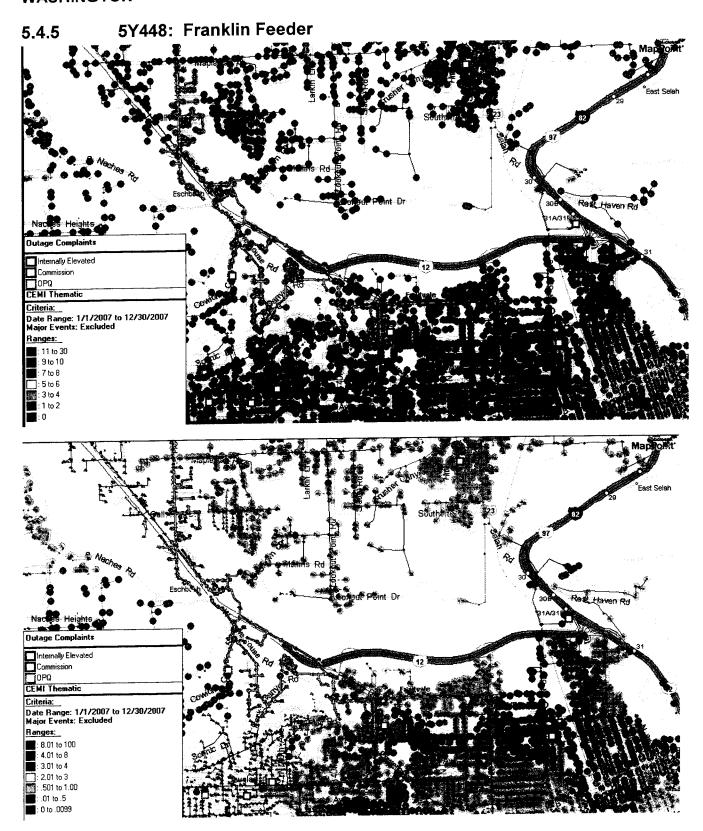
# 5.4 Reliability Areas of Greatest Concern

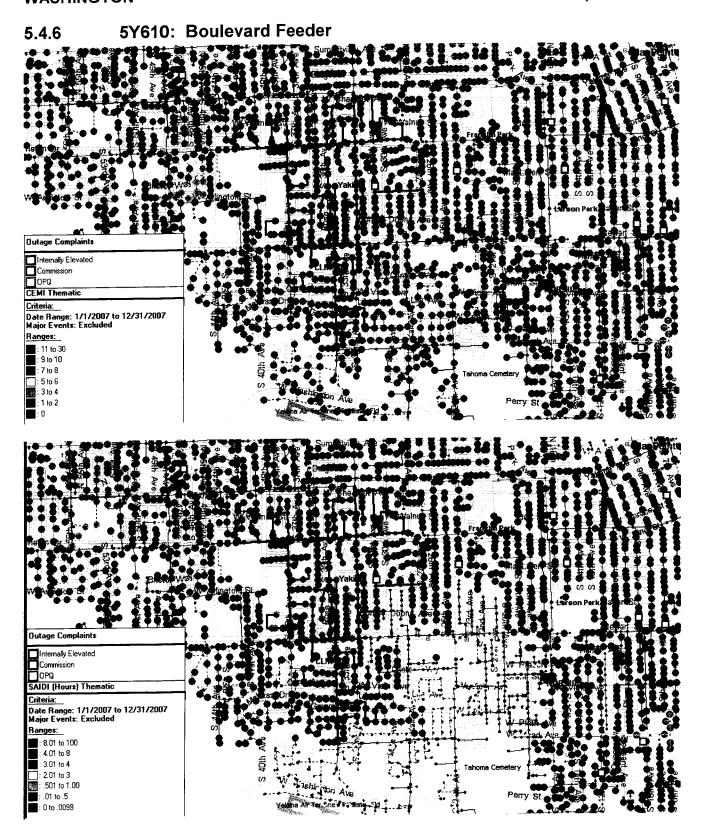












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### 5.4.7 5Y690: Pahtoe Feeder



