

Reporting Practices Task Force Meeting

June 20th, 2006 Montreal, Canada

Rodney Robinson TF Co-Chair

Val Werner TF Co-Chair

Reporting Practices Task Force

✦ Meeting AGENDA

- ◆ Introductions
- ◆ Task Force Draft PAR
- ◆ Presentation of the 2nd task force white paper
 - “Customer Interruption Data Collection within the Electric Power Distribution Industry”
- ◆ Overview of 3rd task force white paper
 - ‘Data Usages and Practices’
 - Outline development team:
 - Val Werner Rodney Robinson Bob Saint
 - Heide Caswell Keith Frost Jim Burke
 - Cheri Warren John McDaniel Jim Bouford
 - Present draft Outline
 - Future direction of the Task Force activities
 - Examples of utility Data Usages

Reporting Practices Task Force

DRAFT

Scope


- The trial use guide provides information regarding the collection, categorization and utilization of information related to electric power distribution interruption events for the purpose of system reliability comparisons.

Purpose

- To foster data collection consistency among utilities to enable meaningful reliability performance assessment, trending and benchmarking practices related to electric power distribution system reliability.

Reason

- Over the years, utilities have each developed unique reliability data collection and reporting methods. The variability of data formats, accuracy and level of system reported does not allow reasonable comparisons between companies. This guide will allow the industry to make valid comparisons.



Presentation of the
2nd TF white paper on
Data Collection

Reporting Practices – 3rd White Paper

DATA USAGE & PRACTICES

1. Introduction

2. Performance Assessment & Trending

- a) By Location –
Substation, circuit, line segment, device, geographic location, or legislative district
- b) Urban, suburban or rural
- c) By Outage Cause
- d) By Time – date, time-of-day or season
- e) By Failed Equipment Type
- f) By System – OH or UG, Voltage class, T D or Sub
- g) Tracking or assessment measures – SAIDI, SAIFI, CAIDI, CEMI, CMI, CI, MAIFI, etc.

Reporting Practices – 3rd White Paper

DATA USAGE & PRACTICES

2. Performance Assessment & Trending

- h) Results of Reliability Initiative – Lightning normalization, new OMS, WPF program, CAIDI Olympics, etc.

3. Identification and prioritization of system reliability improvement activities

- a) Identify reliability problems or concerns
- b) Identify remediation opportunities
 - i. Identify process improvements for reliability - Streamline restoration processes, systems/equipment for faster fault locating and sectionalizing and right size staffing
 - ii. Identify program improvements for reliability - Worst performing feeders and assessing protective coordination standard practices

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DATA USAGE & PRACTICES

3. Identification and prioritization of system reliability improvement activities

- b) Identify remediation opportunities
(continued)
 - iii. Inspection and maintenance practices
- c) Cost/benefit analysis for reliability improvement activities

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DATA USAGE & PRACTICES

4. Standard design, construction and operating practices

- a) Evaluating performance variations based on construction standards - Raptor protection, lightning protection, OH & UG construction
- b) Installation practices vs. construction standards - Direct buried, in conduit, construction not per standards and poor workmanship
- c) Operating practices - Fault indicator, staffing levels, having proper spares available and use of contract crews

Reporting Practices – 3rd White Paper

DATA USAGE & PRACTICES

5. Benchmarking

- a) Establishing company internal goals
- b) Establish performance management targets/goals
- c) Company to company comparisons – By region, by mix of urban/rural, size of utility, etc.

6. Stakeholder Usages

- a) Regulatory
- b) Public & Governmental Officials
- c) Economic development groups
- d) Customers
- e) Shareholder
- f) Annual Report

Reporting Practices – 3rd White Paper

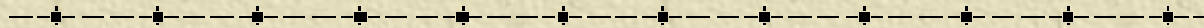
DATA USAGE & PRACTICES

7. Real-time and near real-time usages of data

- i. Locations and quantity of current customer interruptions or device outages
- ii. Daily trending compared to weekly or monthly targets and annual goals
- iii. Etc.

8. Conclusions

EXAMPLES OF USAGE OF THE INTERRUPTION DATA BY VARIOUS UTILITIES

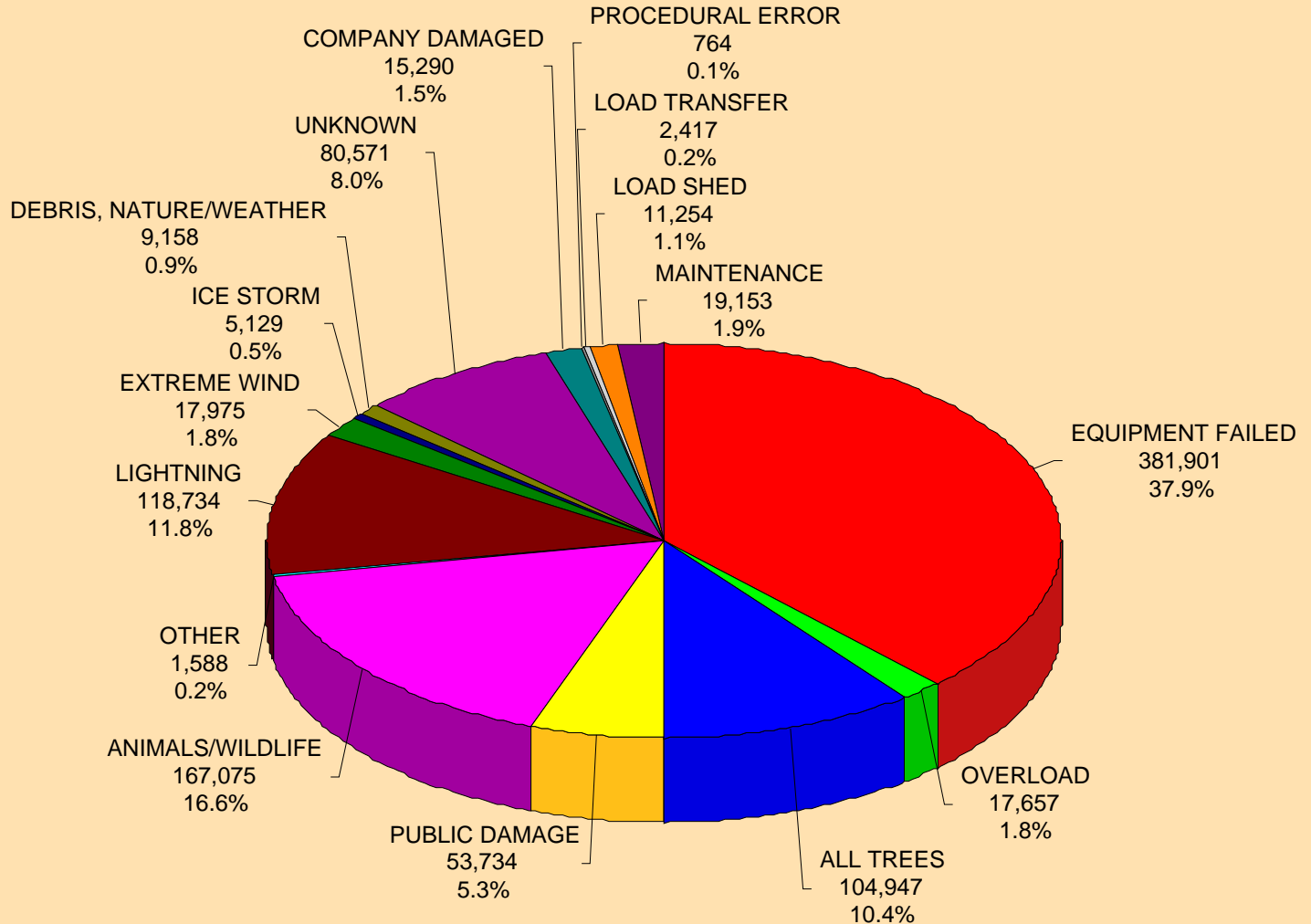


Real time and after restoration



Breakdown of Customers Interrupted by Cause

2005 Normalized



PDD Core

Power Delivery Level

Core Metrics

O&M Budget vs. Actual



Construction Budget vs. Actual



BPI O&M



BPI Construction



OSHA



DART



PVA Rate



SAIDI



SAIFI



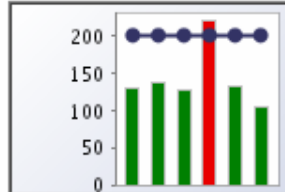
CAIDI



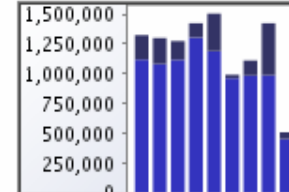
Current Outages



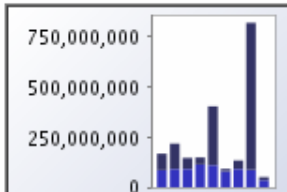
CEMI



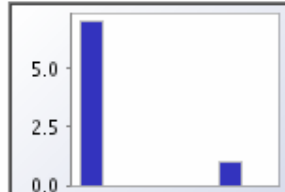
Customers Interrupted



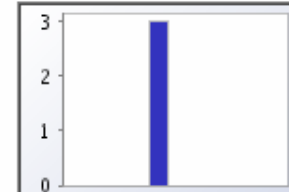
Customer Minutes



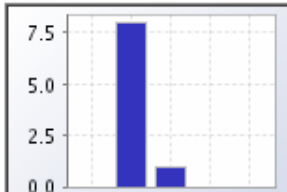
Mandatory Projects



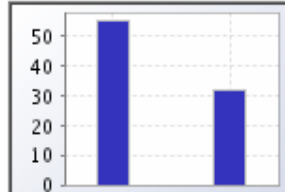
System Needs Projects



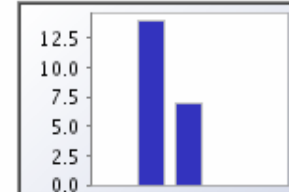
First Aid



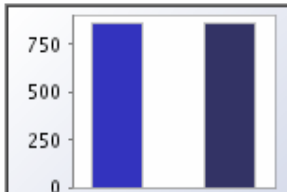
Near Misses



YTD Accidents



Staffing



Overtime



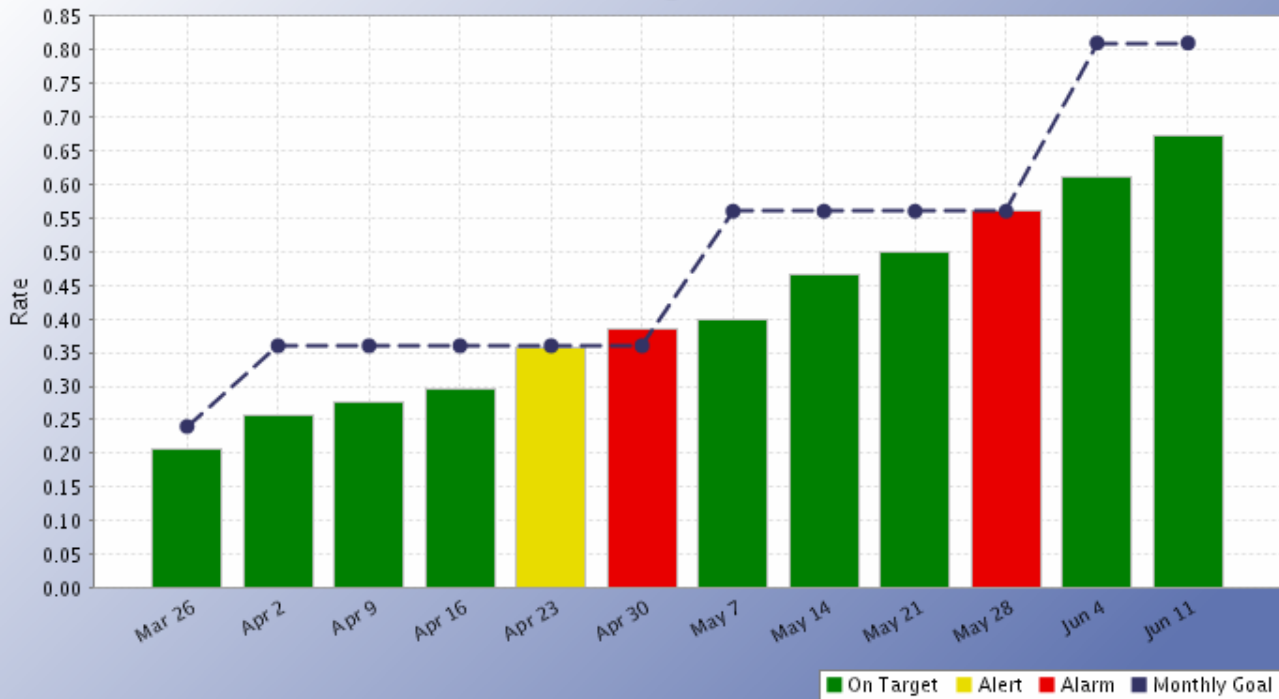
PDD Core

Dashboard Home

Company

Region

Westar 2006 SAIFI Progress - Normalized

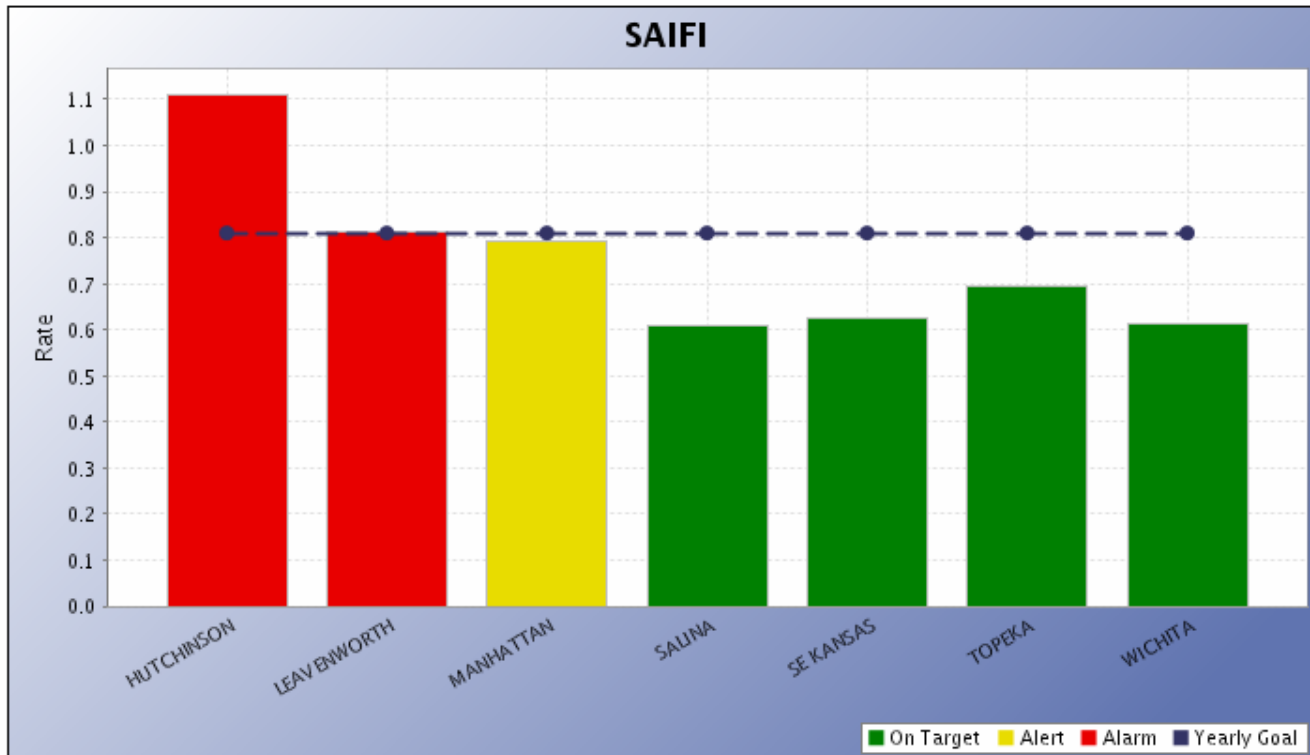


PDD Core

Dashboard Home

Company

Region

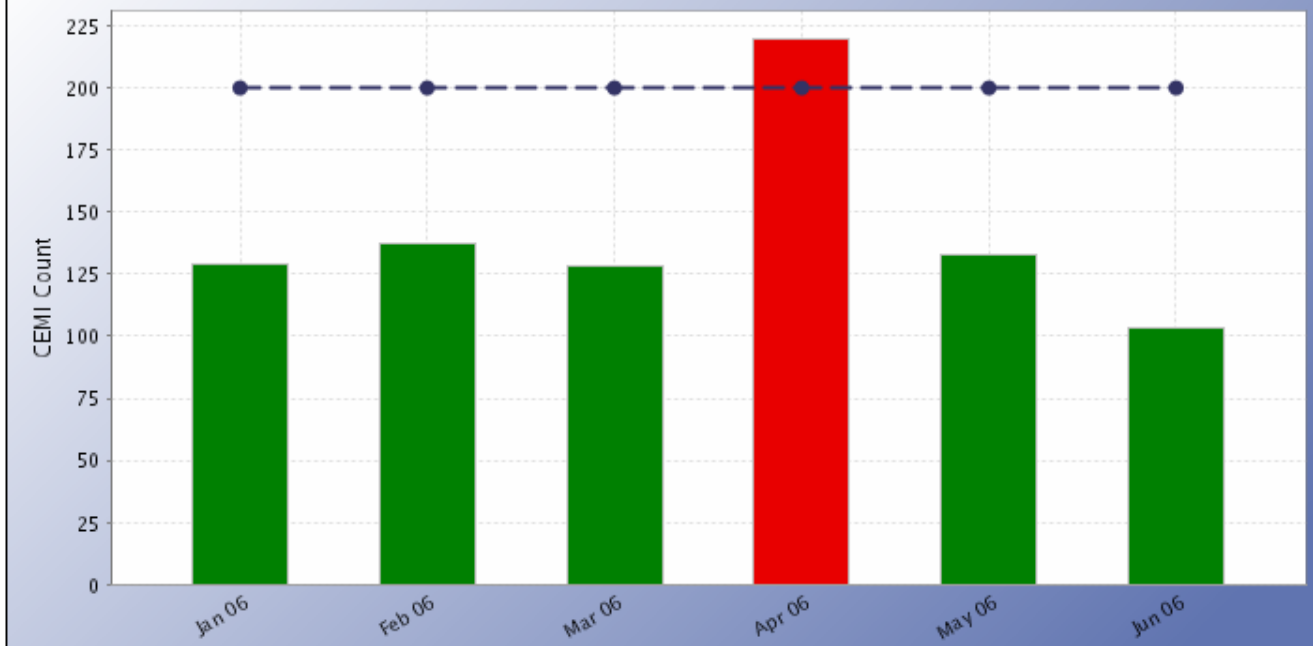


CEMI

? - B

- Dashboard Home
- Company
- Region

Customers Experiencing Multiple Interruptions



Current Month is Previous 11 Months + Current Month to date

Show Details

Show 24-hr Graph

REAL TIME INTERRUPTIONS WHILE RESTORATIONS ARE IN PROGRESS

As of: 6/15/2006 2:51:00 PM

11-PENT,108

48-CANA,8

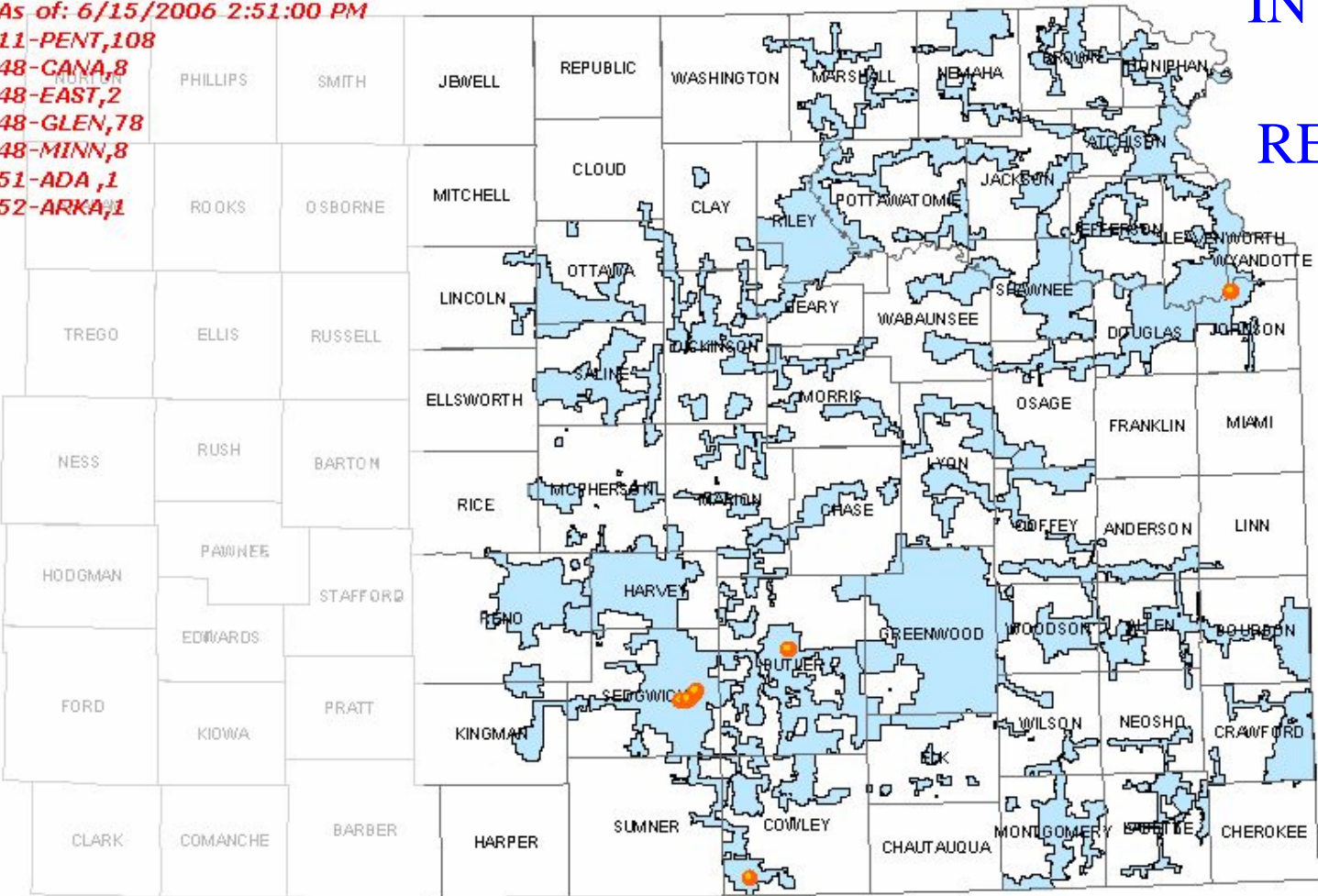
48-EAST,2

48-GLEN,78

48-MINN,8

51-ADA,1

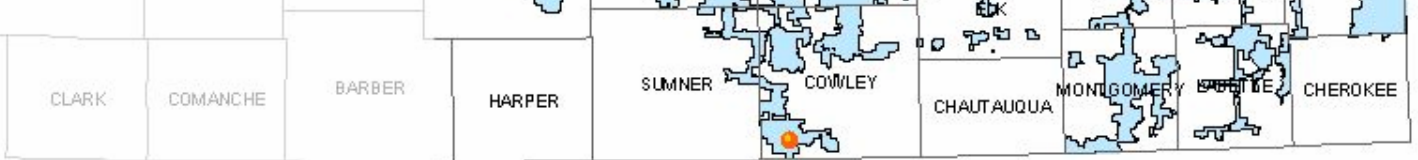
52-ARKA,1



recordset retrieved 6/15/2006, 2:51:00 PM

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OFFICE	CALLS	RESTORED	REMAINING	ISOLATED	TSTATION	LATERAL	MAINLINE	PENDING
Total Offices	468	1654	204	0	4	3	0	0
02-MISSION, KS								
00-EMPORIA, KS	2	7						



recordset retrieved 6/15/2006, 2:51:00 PM
 This page is set to refresh automatically every 10 minutes.

OFFICE	CALLS	RESTORED	REMAINING	ISOLATED	TSTATION	LATERAL	MAINLINE	PENDING
Total Offices	468	1654	204	0	4	3	0	0
02-MISSION, KS								
09-EMPORIA, KS	3	7						
11-OLATHE, KS	69	67	108			1		
12-OTTAWA,KS								
13-LAWRENCE, KS	46	159						
14-LEAVENWORTH, KS	16	75						
16-ATCHISON, KS	3	99						
17-HIAWATHA, KS	1	1						
18-TOPEKA, KS	70	374						
19-HUTCHINSON, KS	14	19						
20-LYONS, KS								
22-KINSLEY, KS								
24-MANHATTAN, KS	5	38						
25-JUNCTION CITY, KS	5	3						
26-MARYSVILLE, KS	2	4						
28-CHERRYVALE, KS								
29-SALINA, KS	5	37						
31-ABILENE, KS								
43-PARSONS, KS								
44-PITTSBURG, KS	2	2						
46-HUMBOLDT, KS	2	2						
47-FT. SCOTT, KS		2						
48-WICHITA, KS	170	541	94		2	2		
49-NEWTON, KS	3	3						
50-WELLINGTON, KS								
51-EL DORADO, KS	3	1	1		1			
52-ARKANSAS CITY, KS	48	219	1		1			
53-INDEPENDENCE, KS	1	1						

Show Details

Hide 24-hr Graph

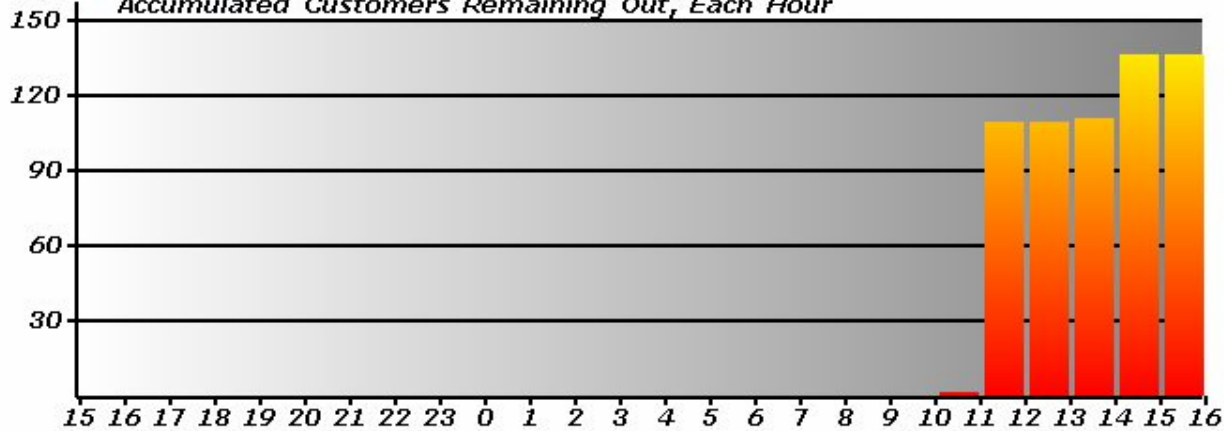
Last 24-Hour History, Total Company as of: 6/15/2006 3:01:30 PM

Pending Customers: 137

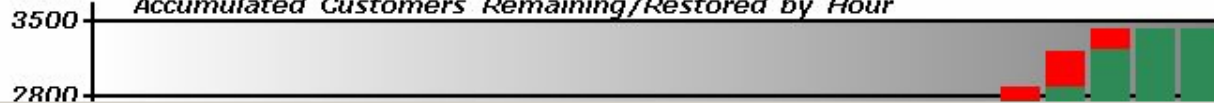
Total Restored Customers Past 24hours: 3445

Disclaimer: This information is unaudited and dynamic and is not intended for use in corporate reports.

Accumulated Customers Remaining Out, Each Hour



Accumulated Customers Remaining/Restored by Hour



As of: 6/15/2006 2:51:00 PM

11-PENT,108

48-CANA,8

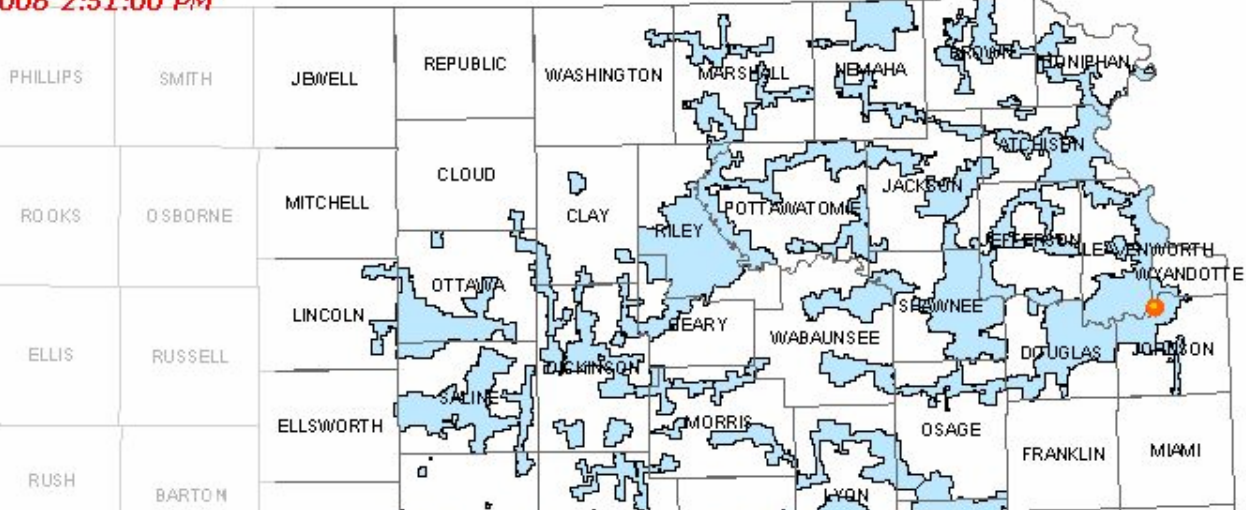
48-EAST,2

48-GLEN,78

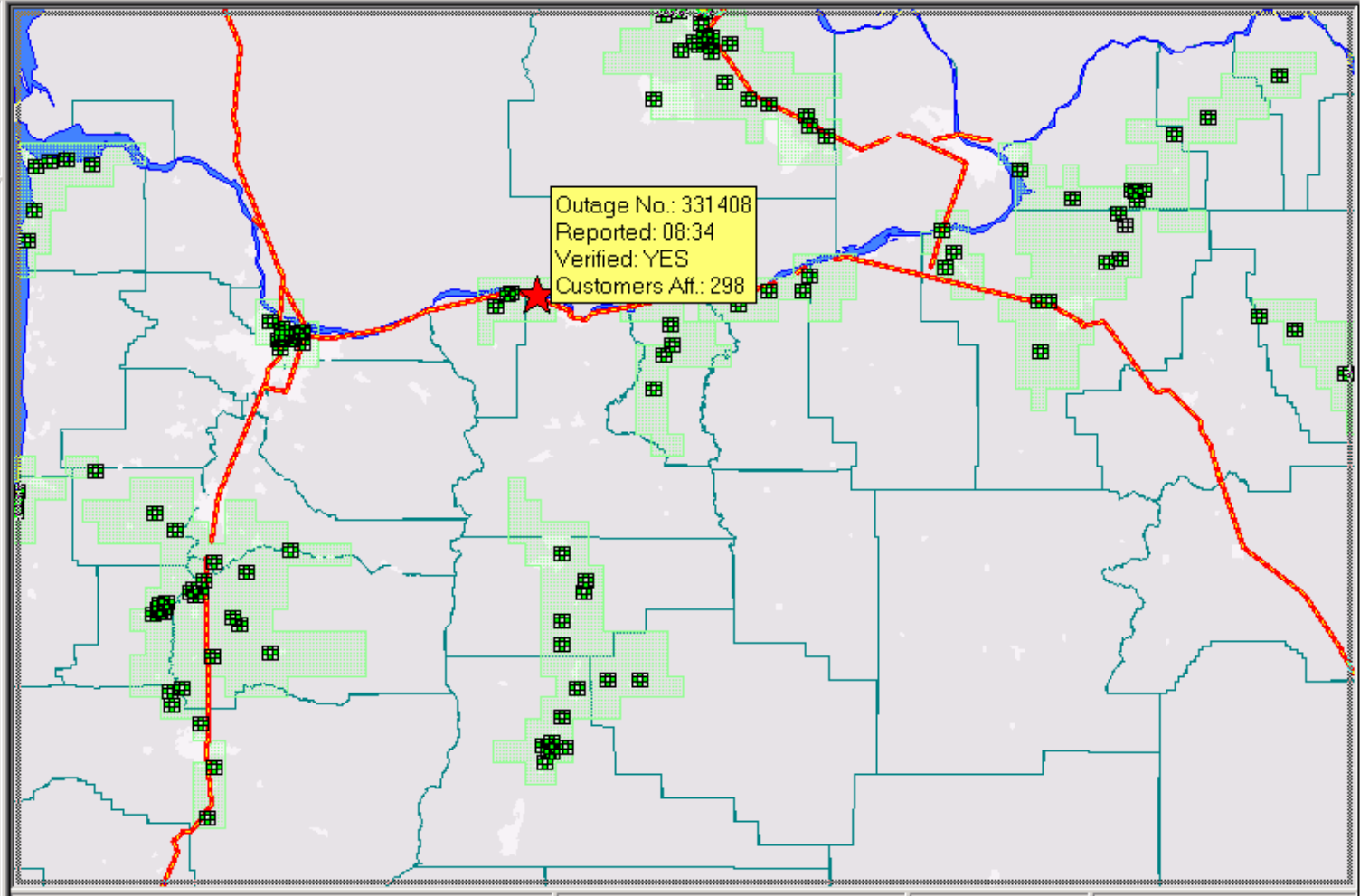
48-MINN,8

51-ADA,1

52-ARKA,1



Map: Outages
Search: Area
Go!
Ex: Metro; Holl



Outages : Outage No.: 331408-Reported: 08:34-Verified: YES-Cu: 1 : 2,644,492 343 x 227 (mi)

PacifiCorp Operations Visualization System

OVS provides an easy-to-use graphical tool to view operations information through maps and reports.

Follow the links below for:

- More information [about OVS](#)
- Assistance from [On-line Help](#)
- Details about [using our maps](#)
- [OVS Technical Support](#)

Gatekeeper Systems
Applications and Systems for the Internet

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Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit

Address <http://pmr.pacificorp.us/> Go Links



Final Daily Outage Summary

Report Date: June 14, 2006

Select Prior



Interruption Summary (SAIDI)										
	CA	OR	WA	Pacific	ID	UT	WY	Rocky Mtn.	Pacifi Corp	
This report period	.01	2.62	.01	2.00	1.02	.92	1.03	.94	1.39	
Abbr. Calendar Year through June - Total*										
Abbr. Calendar Year through June - underlying*										
Abbr. Calendar Year-end forecast										
Abbr. Calendar Year-end target										
Incident Summary										
	CA	OR	WA	Pacific	ID	UT	WY	Rocky Mtn.	Pacifi Corp	
Transmission	0	0	0	0	2	2	0	4	4	
Distribution (10 or more customers)	0	7	0	7	7	42	7	58	63	
Distribution (less than 10 customers)	2	30	5	37	30	96	16	142	179	
Planned - Customer involved	1	5	6	12	1	10	6	17	29	
Lockout Statistics										
	CA	OR	WA	Pacific	ID	UT	WY	Rocky Mtn.	Pacifi Corp	
Lockout	0	2	0	2	0	4	1	5	7	
Crew Arrivals										
	CA	OR	WA	Pacific	ID	UT	WY	Rocky Mtn.	Pacifi Corp	
Average arrival time this period (hours)	1.47	1.06	0.86	1.05	1.42	3.40	0.94	2.77	2.53	
CG1 and PS5 During Period										
	CA	OR	WA	Pacific	ID	UT	WY	Rocky Mtn.	Pacifi Corp	
Interrupted this period	3	3678	11	3692	367	6001	722	7090	10782	

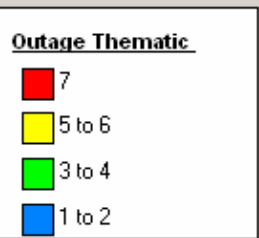
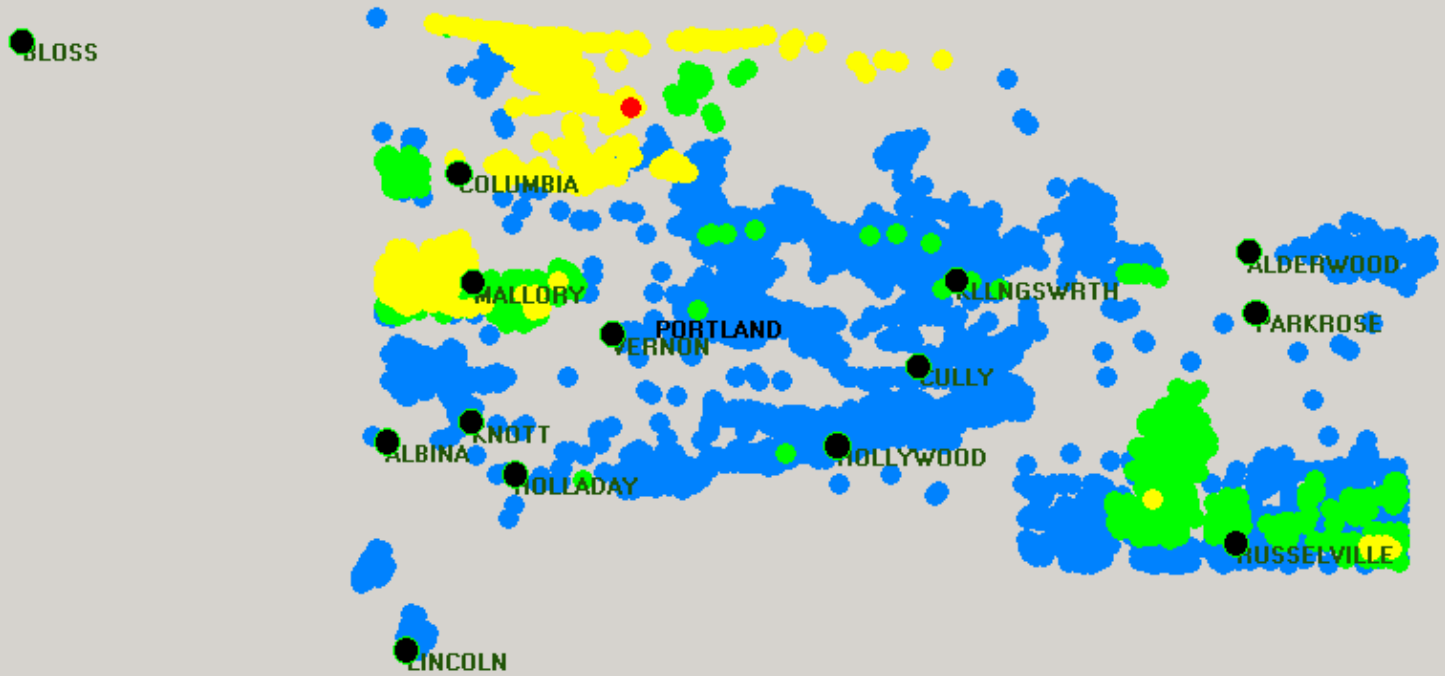
Done Trusted sites

Start Connected - BlackBer... Inbox - Microsoft Outl... Tree Wire Close-out ... Outage Morning Repo...

Windows Media Player Microsoft PowerPoint ... Final Daily Outage ...

4:52 PM Thursday

Geographic Reliability Tool

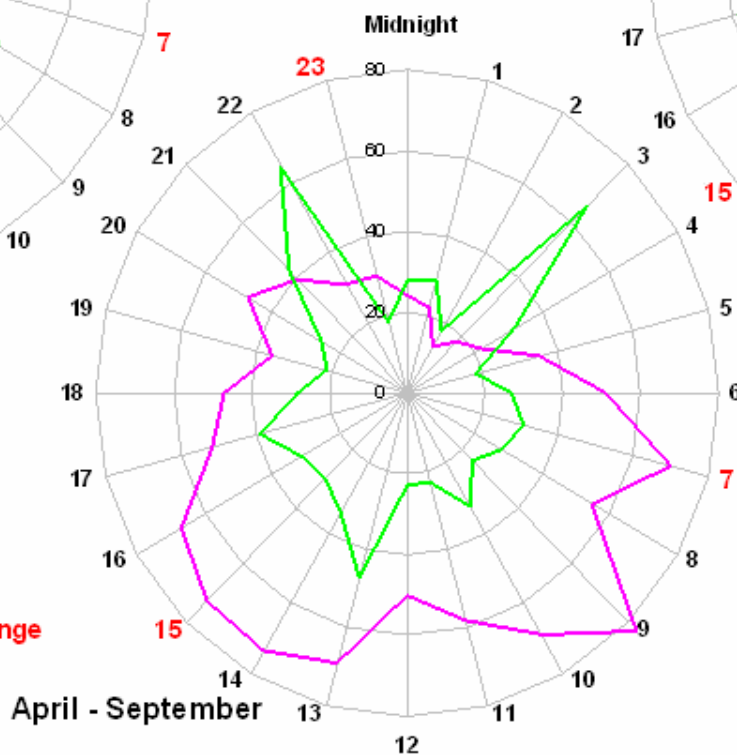
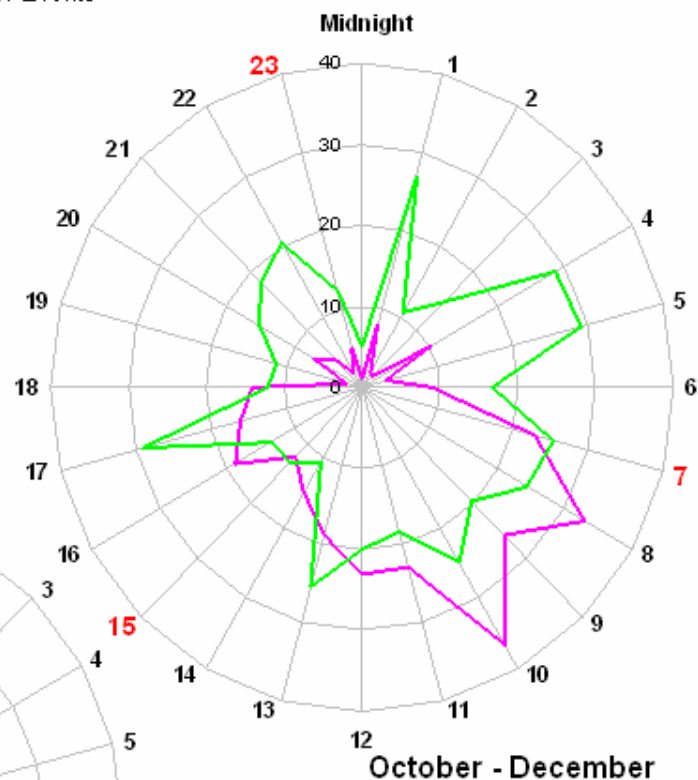
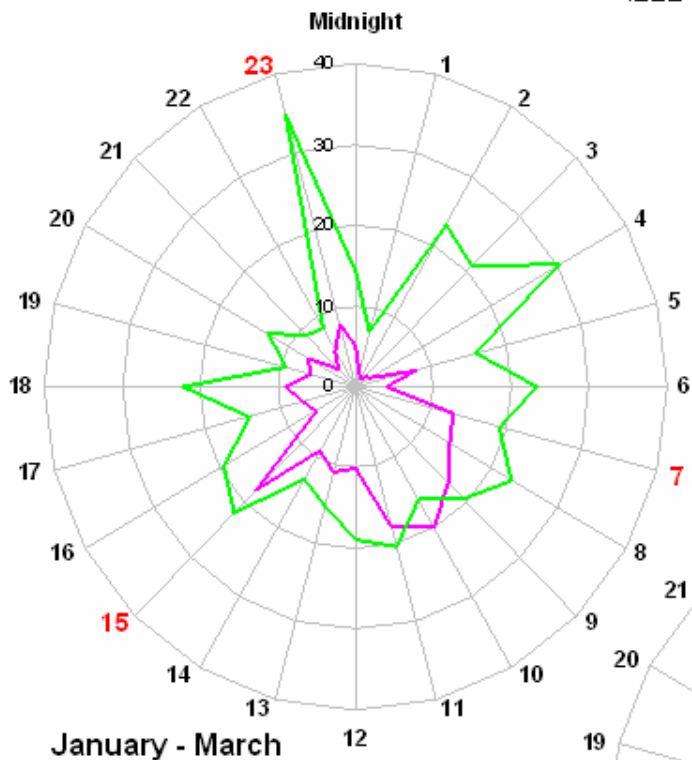


Total Number of Outages Starting in Each Hour vs. Average Time to Dispatch per Outage Start Hour for 2 Year Period

IEEE Definition Interruptions excluding Major Events

West Area 2004 - 2005 Non-Storm

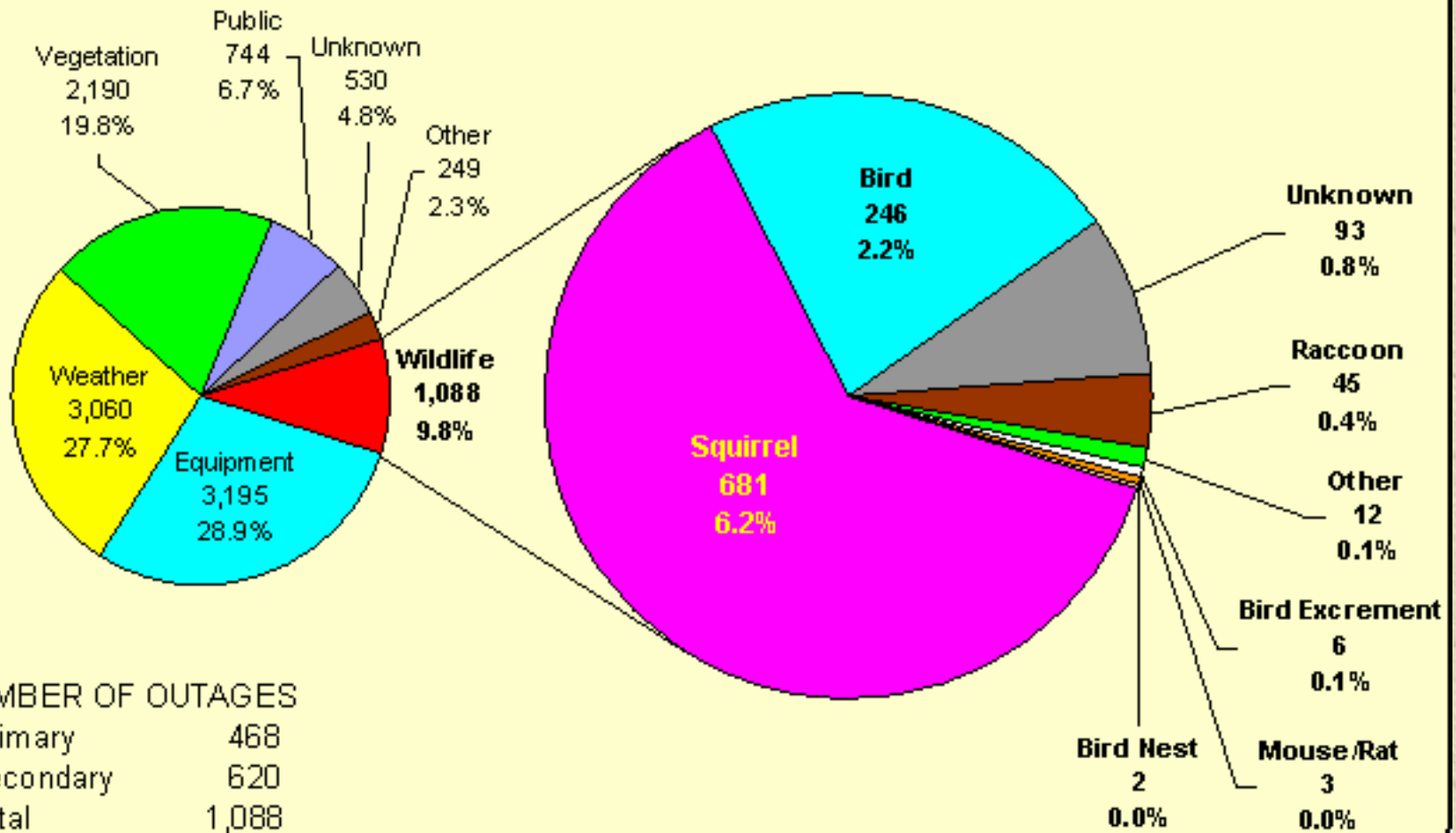
Storm based on ICC Definition



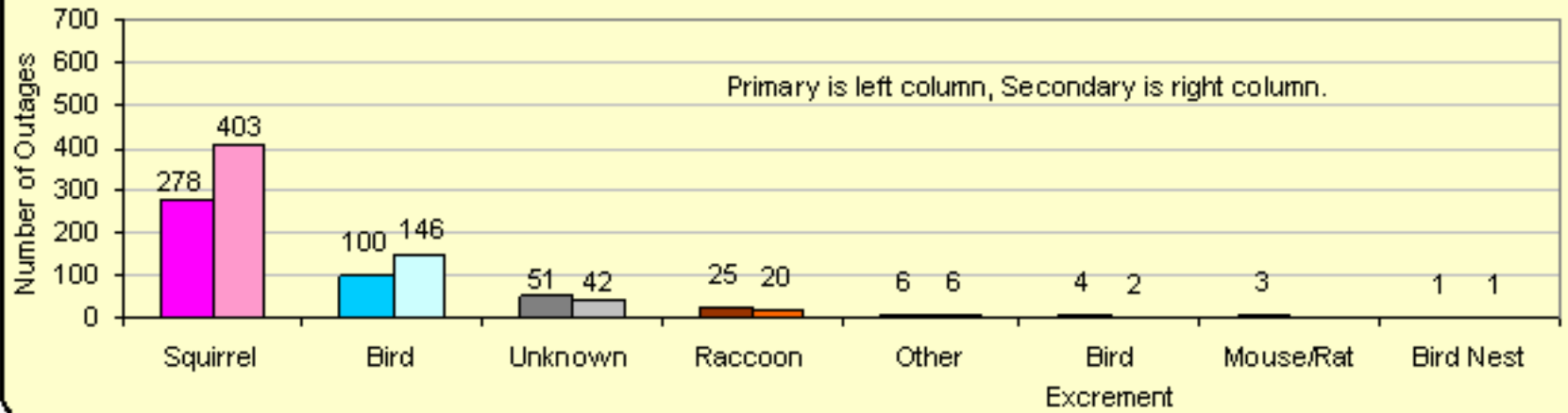
Hours in red indicate Shift Change

Outages
Avg Minutes to Dispatch

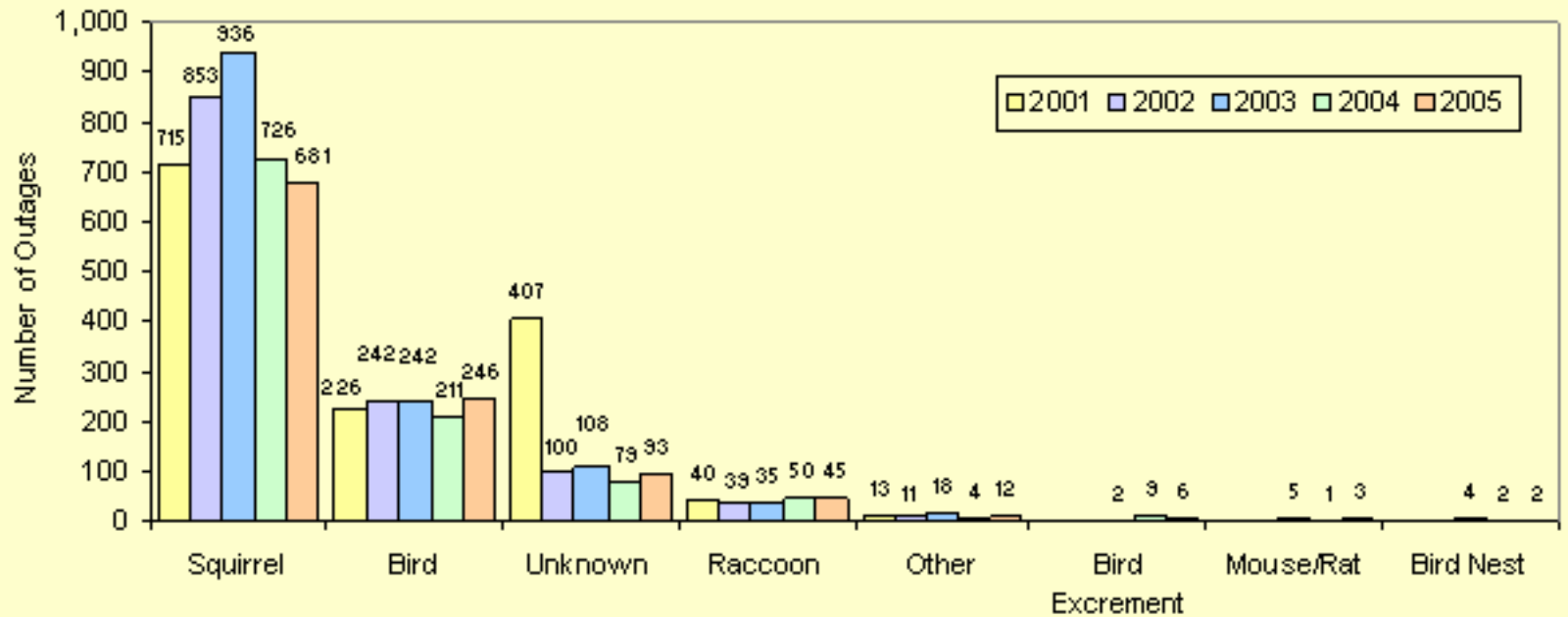
2005 OUTAGE CAUSES - WILDLIFE



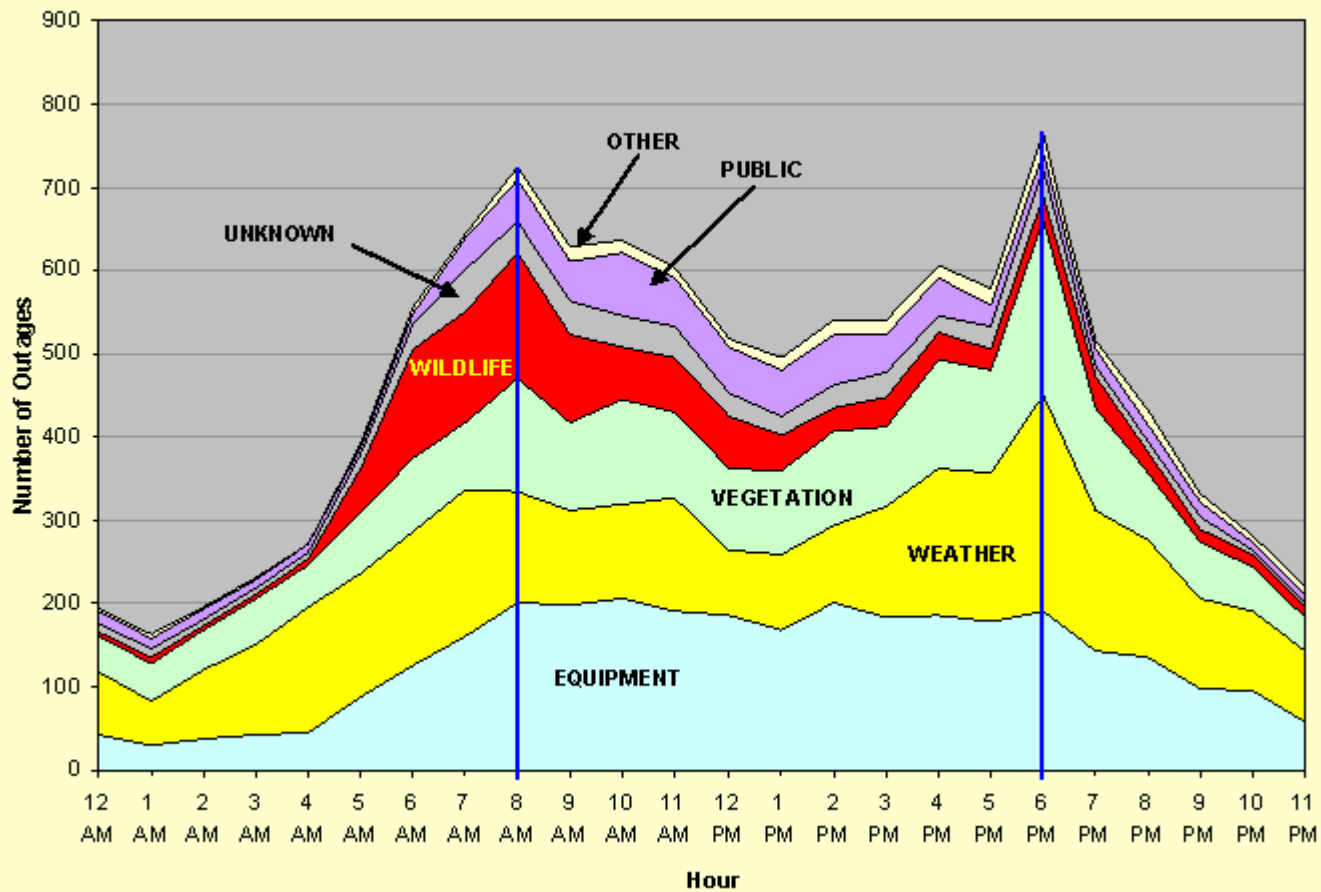
BREAKDOWN BY PRIMARY & SECONDARY VOLTAGES



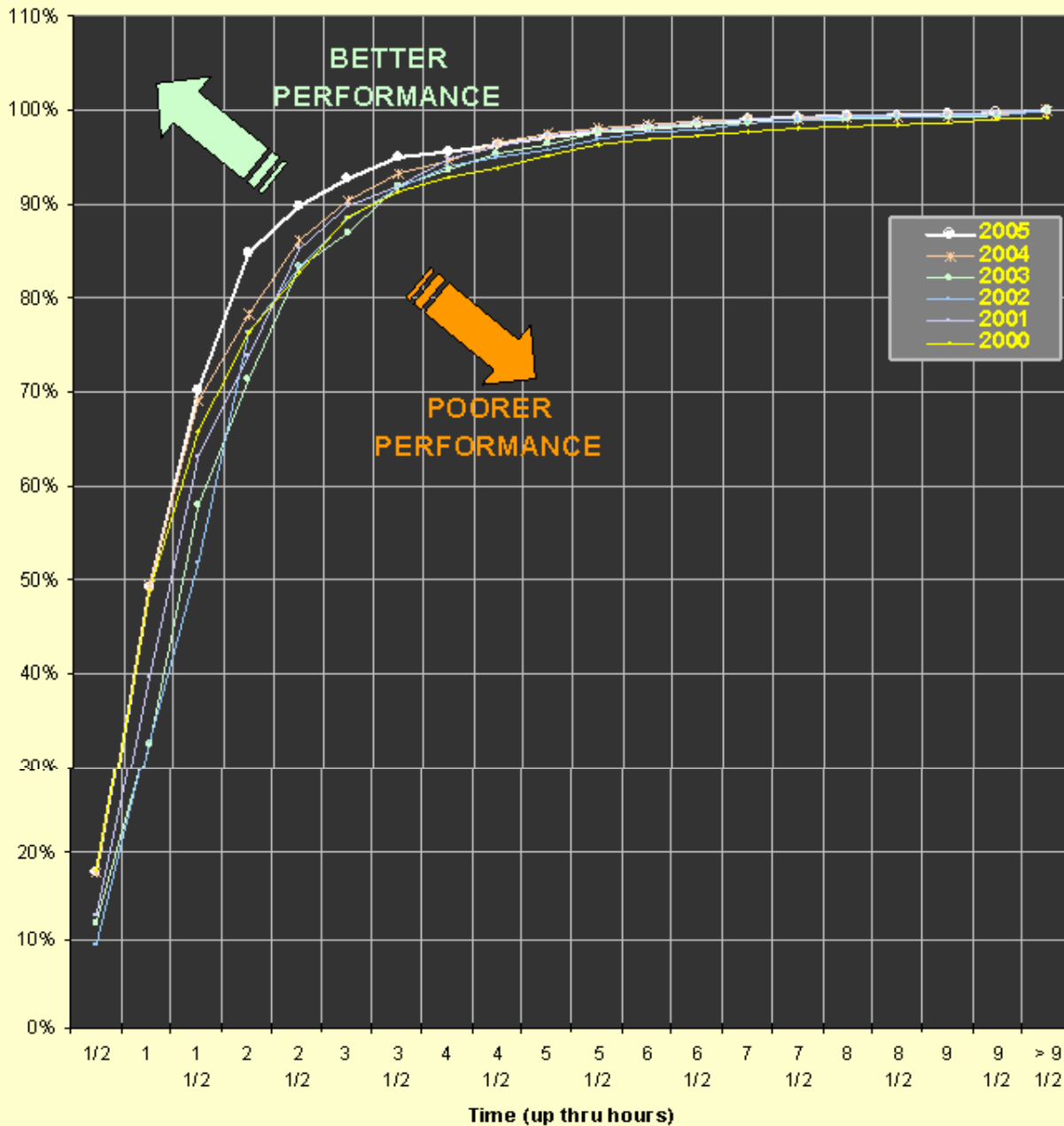
FIVE YEAR OUTAGE CAUSES - WILDLIFE



2005 TIME OF DAY AND OUTAGE CAUSE COMPARISON



TOTAL SYSTEM: CUMULATIVE PERCENT OF THE NUMBER OF CUSTOMERS RESTORED AND TIME TO RESTORE - NO MAJOR STORM DAYS OR EXTRAORDINARY STORMS INCLUDED

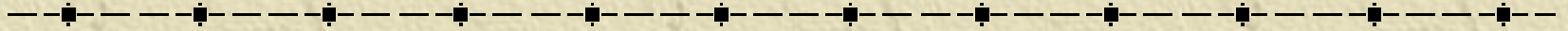


Reporting Practices – 3rd White Paper

DATA USAGE & PRACTICES

✦ Schedule of Paper development

- ◆ First draft of sections by August 1st
 - ◆ Draft paper to Task Force for review prior to January 2007 in Orlando
 - ◆ 3rd white paper final review by Task Force at 2007 summer meeting
- ✦ Begin compiling all three white papers for the draft trial use guide in summer of 2007



DISCUSSION

Washington FY2006 SAIDI YTD Comparison to Plan

SAIDI Minutes

