



2014 Qualifying Events Report

February 23, 2014 Event

Filed on May 28, 2014

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Event Description

Date of event

February 23, 2014

Event Type

Snow

Service Areas Affected

Whatcom, Skagit and Island Counties

Number of Customers Affected

Approximately 14,000 customers were without power over the course of this event.

Summary of System Impacts

Total Number of Outages	219
Distribution Circuits Totally Out	0
Distribution Circuits Partially Out	219
Transmission Circuits Affected	0
Substations Totally Off-line	0

Mobilization Summary

Operating Bases

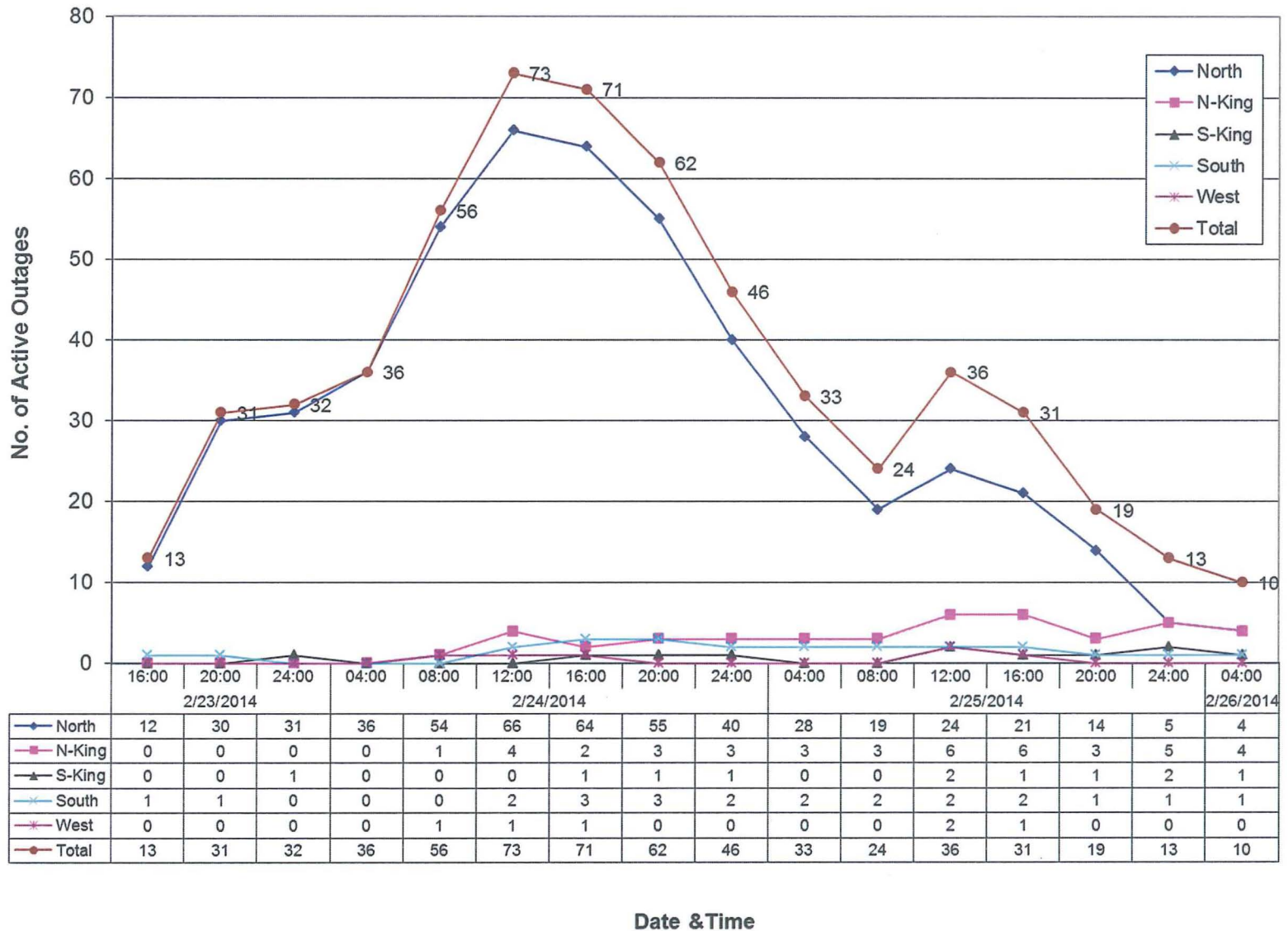
Base	Date Opened	Time Opened	Date Closed	Time Closed
Kitsap	n/a	n/a	n/a	n/a
Kittitas	n/a	n/a	n/a	n/a
North King	n/a	n/a	n/a	n/a
Skagit/Whatcom/ Island	2-23-2014	15:30	2-25-2014	18:00
South King	n/a	n/a	n/a	n/a
Pierce	n/a	n/a	n/a	n/a
Thurston	n/a	n/a	n/a	n/a

Emergency Coordination Center (ECC)

ECC	Date Opened	Time Opened	Date Closed	Time Closed
	2-24-2014	12:00	2-25-2014	18:00

Outage Event Chart

Outage Events - Feb. 23, 2014 to Feb. 26, 2014



Major Event Day – Qualification

IEEE¹ Standard 1366

IEEE Standard 1366 was established to present a set of terms and definitions which can be used to foster uniformity in the development of electric system service reliability indices, to identify factors which affect the indices, and to aid in consistent reporting practices among utilities. Also, it provides guidance for new personnel in the reliability area and tools for internal as well as external comparisons. The Major Event Day definition was created as part of IEEE Standard 1366 to allow for consistent calculation of reliability metrics between utilities and enable more valid comparisons with other utility reliability metrics.

IEEE Major Event Day Calculation (2.5 BETA METHOD)

1. A threshold on daily SAIDI² is computed once a year, following year end
2. Assemble the 5 most recent years of historical values of SAIDI/day
3. Discard any days in the data set that has a SAIDI/day of zero
4. Find the natural logarithm of each value in the data set
5. Compute the average (Alpha) and the standard deviation (Beta) of the natural logarithms computed in step 4
6. Compute the threshold Tmed where $Tmed = \exp(\text{Alpha} + 2.5 * \text{Beta})$
7. Any day in the next year with SAIDI > Tmed is a major event day

Puget Sound Energy's IEEE Major Event Threshold for 2014: 5.6 Minutes

Qualified Events - 2014

Current Event – Calculation Detail

Event Date	Total Customer Minutes	Average Customer Count	Daily SAI (Customer Minutes /Customer Count)
2-23-2014	9,603,749	1,103,803	8.7

Cumulative list of events that have qualified

Date(s)	Tmed Score	O&M ³ Costs– Deferrable Accumulation
1-11-2014	5.6	\$4,424,835
2-12-2014	9.0	\$ 572,488
2-23-2014	8.7	\$ 1,242,798

¹ IEEE: Institute of Electrical and Electronics Engineers

² SAIDI: System Average Interruption Duration Index

³ O&M: Operations and Maintenance

Event Restoration – Cost Summary

Restoration Costs Detail by Qualifying Event as of May 5, 2014

Date	Qualified Events Deferred Account	Capital Costs	C&D ⁴ Costs Recoverable from Direct Billings (Costs Not Yet Billed)	O&M Costs – Not Deferrable	O&M Costs – Deferrable Accumulation	Total O&M Costs	Total
01-11-2014		\$471,025		\$354,795	\$4,447,511 (r)	\$4,802,306 (r)	\$5,273,331 (r)
02-12-2014		\$62,716		\$37,964	\$572,488	\$610,452	\$673,168
02-23-2014		\$18,513		\$86,609	\$1,242,798	\$1,329,407	\$1,347,921

YTD Storm Restoration Costs Detail

Qualified Events Deferred Account	Capital Costs	C&D Costs Recoverable from Direct Billings (Costs Not Yet Billed)	O&M Costs – Not Deferrable	O&M Costs – Deferrable Accumulation	Total O&M Costs	Total
\$0	\$552,254	\$0	\$479,369	\$6,262,797	\$6,742,165	\$7,294,419

(r) = Revised

⁴ C&D: Clearing and Deferred

Detail Documents

Restoration Cost Detail – Current Event

Detailed List of Distribution Circuits with Outages

Terms, Codes and Definitions Used on Detail Reports

Newsprint Media Coverage

Restoration Cost Detail – Current Event

Puget Sound Energy							
February 23, 2014 - Storm Damage Repair Costs							
	Qualifying Events Deferred Account	Capital	C&D Recoverable from Direct Billings (Costs Not Yet Billed)	O&M- Not Deferrable	O&M- Deferrable Accumulation	Total O&M	Total
Labor							
ST		\$ 434		\$ -	\$ 39,646	\$ 39,646	\$ 40,079
OT		\$ 656		\$ -	\$ 124,070	\$ 124,070	\$ 124,726
Total Labor	\$ -	\$ 1,090	\$ -	\$ -	\$ 163,716	\$ 163,716	\$ 164,805
Labor OH		\$ 631		\$ (60,419)	\$ 152,905	\$ 92,487	\$ 93,118
Materials		\$ 14,322		\$ -	\$ 31,656	\$ 31,656	\$ 45,978
Contractors		\$ 34		\$ -	\$ 991,943	\$ 991,943	\$ 991,977
Other Direct Charges		\$ -		\$ -	\$ 1,687	\$ 1,687	\$ 1,687
Fleet		\$ 330		\$ -	\$ 37,478	\$ 37,478	\$ 37,808
Other Assessments		\$ 2,107		\$ 147,028	\$ (136,586)	\$ 10,442	\$ 12,549
Deferred Expenses						\$ -	\$ -
	\$ -	\$ 18,513	\$ -	\$ 86,609	\$ 1,242,798	\$ 1,329,407	\$ 1,347,921

Detailed List of Outages

NUMBER	DATE	TIME	CKT	MPG	CAZ	EQT	CUST.OUT	CUST.MIN
P00080849-1	2/23/2014	12:28:27 AM	LAU-12	EAA	TV	OFU	1	175
P00080850-1	2/23/2014	12:54:33 AM	ALG-15	EAC	TV	OCO	81	11,826
P00080851-1	2/23/2014	1:22:07 AM	BRS-13	EAC	TV	OCO	49	5,782
P00080854-1	2/23/2014	4:19:00 AM	VWY-12	EAA	TV	OCO	17	6,245
P00081111-1	2/23/2014	4:41:00 AM	SLA-16	EAA	TV	OFU	1,166	1,987,069
P00080857-1	2/23/2014	4:59:00 AM	ALG-15	EAC	TV	OFU	268	165,356
P00080858-1	2/23/2014	5:02:55 AM	BRS-24	EAC	TV	OCO	10	3,640
P00080863-1	2/23/2014	5:34:00 AM	NUG-26	EAA	TV	OCO	32	11,754
P00080871-1	2/23/2014	6:05:06 AM	ALG-15	EAC	TV	OCO	40	8,955
P00080873-1	2/23/2014	6:22:31 AM	NLM-15	EAC	TV	OCO	146	203,001
P00080882-1	2/23/2014	6:23:49 AM	NUG-26	EAA	TV	OFU	72	13,476
P00080880-1	2/23/2014	6:24:00 AM	ALG-15	EAC	TV	OCO	235	155,077
P00082228-1	2/23/2014	6:50:00 AM	NLM-15	EAC	TV	OCO	974	2,064,880
P00080884-1	2/23/2014	7:00:35 AM	BTN-36	EAC	TV	OCO	11	3,311
P00080887-1	2/23/2014	7:22:21 AM	BON-13	ECA	EF	USV	1	617
P00080893-1	2/23/2014	7:57:13 AM	WLS-16	EAC	TV	OCO	11	2,035
P00080894-1	2/23/2014	7:58:44 AM	LLS-13	EAA	TV	OFU	20	2,512
P00080895-1	2/23/2014	8:01:01 AM	NUG-26	EAA	TV	OPO	47	19,250
P00080897-1	2/23/2014	8:03:18 AM	ALG-15	EAC	TV	OCO	16	16,499
P00080902-1	2/23/2014	8:27:05 AM	BRS-24	EAC	TV	OCO	86	30,186
P00081282-1	2/23/2014	8:29:11 AM	WOB-23	EAA	TV	OCO	25	34,385
P00080909-1	2/23/2014	8:53:54 AM	WOB-25	EAA	TV	OSV	1	215
P00080910-1	2/23/2014	8:54:07 AM	LLS-17	EAA	TV	OFU	3	422
P00080921-1	2/23/2014	9:00:23 AM	NLM-15	EAC	TV	OCO	29	3,335
P00080939-1	2/23/2014	9:23:44 AM	NLM-15	EAC	TV	OCO	66	8,184
P00080957-1	2/23/2014	9:42:00 AM	NUG-26	EAA	TV	OFU	93	28,026
P00073833-1	2/23/2014	9:50:00 AM	BRE-14	ECD	SO	OJU	32	3,761
P00080955-1	2/23/2014	10:06:00 AM	NUG-26	EAA	TV	OCO	7	4,402
P00081710-1	2/23/2014	10:15:00 AM	BRS-24	EAC	TV	OCO	733	1,182,541
P00081079-1	2/23/2014	10:20:00 AM	NUG-26	EAA	TV	OCO	1	1,178
P00080963-1	2/23/2014	10:20:13 AM	NUG-25	EAA	TV	OFU	7	587
11106538	2/23/2014	10:24:34 AM	BRI-17	EAA	TV	OCR	682	206,566
P00080970-1	2/23/2014	10:29:14 AM	ALG-12	EAC	TV	OCO	102	107,406
P00080974-1	2/23/2014	10:33:05 AM	BLA-13	EAA	TV	OTF	1	503
P00080975-1	2/23/2014	10:38:04 AM	NUG-25	EAA	TV	OFU	28	28,599
P00080982-1	2/23/2014	10:50:32 AM	BTN-36	EAC	TV	OCO	17	1,258
P00080988-1	2/23/2014	11:23:00 AM	SEM-13	EAA	TV	OFU	23	1,734
P00080995-1	2/23/2014	11:37:56 AM	WOB-26	EAA	TV	OSV	2	877
P00081000-1	2/23/2014	11:45:19 AM	HAP-13	EAA	TV	OTF	3	1,295
P00081002-1	2/23/2014	11:48:00 AM	LLS-17	EAA	TV	OTF	7	1,550
P00081006-1	2/23/2014	11:52:00 AM	HAP-15	EAA	TV	OCO	1	2,935
P00081007-1	2/23/2014	11:52:51 AM	WOB-25	EAA	TV	OSV	1	218
P00081020-1	2/23/2014	12:12:37 PM	LLS-17	EAA	TV	OFU	1	1,284
P00081024-1	2/23/2014	12:32:46 PM	HAP-16	EAA	TV	OCO	17	23,969
P00081027-1	2/23/2014	12:42:57 PM	BRS-24	EAC	TV	OCO	4	928
P00081036-1	2/23/2014	12:54:18 PM	NUG-26	EAA	TV	OFU	89	10,560
P00081038-1	2/23/2014	12:59:18 PM	CAR-13	EAA	TV	OFU	271	37,809
P00081043-1	2/23/2014	1:10:58 PM	LLS-13	EAA	TV	OFU	40	2,122

NUMBER	DATE	TIME	CKT	MPG	CAZ	EQT	CUST.OUT	CUST.MIN
P00081053-1	2/23/2014	1:48:48 PM	HEM-15	ECA	EF	OTF	3	153
P00081056-1	2/23/2014	1:51:17 PM	PTR-14	EAA	TV	OFU	175	37,861
P00081059-1	2/23/2014	1:56:44 PM	NUG-26	EAA	TV	OFU	11	2,930
P00081063-1	2/23/2014	2:01:03 PM	RAI-11	ECC	AO	OCO	4	1,064
P00081085-1	2/23/2014	2:04:43 PM	NUG-26	EAA	TV	OCO	320	45,440
P00081080-1	2/23/2014	2:15:54 PM	BRI-15	EAA	TV	OCO	9	13,622
P00081100-1	2/23/2014	2:52:26 PM	BRW-15	EAC	TV	OTF	2	858
P00081103-1	2/23/2014	3:01:00 PM	NUG-26	EAC	TV	OCO	2	877
P00081107-1	2/23/2014	3:08:00 PM	WOB-23	EAA	TV	OCO	86	118,253
P00081108-1	2/23/2014	3:08:47 PM	NUG-26	EAA	TV	OCO	16	17,296
P00081112-1	2/23/2014	3:20:45 PM	WOB-23	EAA	TV	OTF	2	190
P00081165-1	2/23/2014	3:26:47 PM	LLS-17	EAA	TV	OFU	54	34,734
P00081150-1	2/23/2014	3:36:00 PM	BTN-36	EAC	TV	OCO	104	79,165
P00081160-1	2/23/2014	3:41:56 PM	HAP-16	EAA	TV	OFU	1	1,704
P00081195-1	2/23/2014	4:08:00 PM	NUG-26	EAA	TV	OPO	47	33,031
P00081203-1	2/23/2014	4:15:00 PM	WOB-25	EAA	TV	OCO	2	2,336
P00081209-1	2/23/2014	4:17:26 PM	HAP-16	EAA	TV	OTF	7	4,471
P00081231-1	2/23/2014	4:25:00 PM	BRW-15	EAC	TV	OTF	1	360
P00081238-1	2/23/2014	4:27:44 PM	BRS-24	EAC	TV	OCO	145	270,029
P00081239-1	2/23/2014	4:31:00 PM	BRI-17	EAA	TV	OCO	126	34,553
P00081259-1	2/23/2014	4:50:43 PM	ALG-15	EAC	TV	OCO	36	6,948
P00081301-1	2/23/2014	4:52:06 PM	VWY-13	EAA	TV	OFU	21	12,126
P00081264-1	2/23/2014	5:01:26 PM	BRI-14	EAA	TV	OFU	77	6,041
P00081293-1	2/23/2014	5:23:05 PM	NUG-26	EAA	TV	OFU	7	3,109
P00081296-1	2/23/2014	5:28:00 PM	ALG-15	EAA	TV	OCO	37	31,322
P00082322-1	2/23/2014	5:42:00 PM	BRS-24	EAC	TV	OCE	765	114,750
P00081308-1	2/23/2014	5:42:19 PM	BRS-24	EAC	TV	OCO	3	4,096
P00081345-1	2/23/2014	5:51:29 PM	ALG-15	EAC	TV	OCO	187	41,888
P00081350-1	2/23/2014	6:01:00 PM	HAM-15	EAC	TV	OCO	371	270,716
P00081351-1	2/23/2014	6:12:05 PM	BCH-16	EAA	TV	OCO	30	22,669
P00081355-1	2/23/2014	6:12:14 PM	LUH-14	ECC	TV	OCO	17	4,267
P00081357-1	2/23/2014	6:13:52 PM	NUG-26	EAA	TV	OFU	12	4,693
P00081391-1	2/23/2014	6:24:30 PM	SUM-21	EAC	TV	OCO	443	71,315
P00081378-1	2/23/2014	6:26:37 PM	NUG-26	EAA	TV	OFU	5	477
P00081377-1	2/23/2014	6:26:41 PM	BTN-36	EAC	TV	OCO	26	11,084
P00081400-1	2/23/2014	6:46:36 PM	HAM-15	EAC	TV	OCO	5	4,410
P00081406-1	2/23/2014	6:53:00 PM	HAP-16	EAA	TV	OCO	392	242,179
P00081425-1	2/23/2014	6:58:59 PM	PTR-14	EAA	TV	OFU	175	142,231
P00081465-1	2/23/2014	7:08:38 PM	WOB-25	EAA	TV	OPI	345	127,156
P00081455-1	2/23/2014	7:23:08 PM	ROE-17	EAA	TV	OSV	1	178
P00081470-1	2/23/2014	7:50:12 PM	HAP-15	EAA	TV	OCO	14	19,630
P00081475-1	2/23/2014	7:59:17 PM	VWY-12	EAA	TV	OSV	2	998
P00081478-1	2/23/2014	8:00:42 PM	WLS-16	EAC	TV	OCO	28	4,256
P00081482-1	2/23/2014	8:07:38 PM	ALG-15	EAC	TV	OCO	38	11,628
P00081494-1	2/23/2014	8:26:25 PM	HOB-16	EBI	EF	OTF	1	94
P00081502-1	2/23/2014	8:34:00 PM	WLS-16	EAC	TV	OCO	103	94,657
P00081505-1	2/23/2014	8:38:00 PM	KEN-13	EAA	TV	OPO	140	66,327
P00081544-1	2/23/2014	8:55:49 PM	ALG-15	EAC	TV	OCO	306	52,020
P00081662-1	2/23/2014	9:13:40 PM	ALG-15	EAA	TV	OCO	15	15,885
P00081616-1	2/23/2014	9:14:54 PM	ALG-12	EAC	TV	OCO	208	84,580
P00081619-1	2/23/2014	9:16:00 PM	LLS-13	EAA	TV	OCO	2,666	611,325
P00081630-1	2/23/2014	9:57:20 PM	NUG-26	EAA	TV	OFU	20	1,345
P00081634-1	2/23/2014	10:16:00 PM	MCK-15	EAA	EF	UPT	1	2,871

P00081653-1	2/23/2014	10:30:51 PM	BRS-24	EAC	TV	OCO	395	36,340
P00081687-1	2/23/2014	11:08:26 PM	BRI-17	EAA	TV	OCO	434	370,202
NUMBER	DATE	TIME	CKT	MPG	CAZ	EQT	CUST.OUT	CUST.MIN
P00081683-1	2/23/2014	11:11:42 PM	HAP-15	EAA	TV	OTF	6	998
P00081686-1	2/23/2014	11:31:43 PM	NNO-12	EBJ	EF	OTF	3	170
P00081709-1	2/23/2014	11:51:45 PM	WLS-15	EAC	TV	OCO	1	1,546

Terms, Codes and Definitions Used on Detail Reports

Notification (NUMBER)	A number assigned by SAP, identifying the outage record	
Date (DATE)	The date of the outage	
Time (TIME)	The time of the outage	
Circuit (CKT)	The circuit identifier for the affected circuit	
Area (MPG)	Maintenance Planner Group A code representing the energy, region and service center	
	EAA – Bellingham	EBJ – South King
	EAB – Lynden	EBK – Southwest King
	EAC – Skagit	EBL – Vashon
	EAD – Whidbey	ECA – Puyallup
	EBD – Redmond	ECC – Olympia
	EBE – Factoria	ECD – Port Orchard
	EBF – Snoqualmie	ECE – Poulsbo
	EBI – Enumclaw	ECF – Port Townsend
Cause (CAZ)	Cause of Outage	
	AO – Accident Other	EF – Equipment Failure
	BA – Bird or Animal	EO – Electrical Overload
	CP – Car Pole	FI – Faulty Installation
	CR – Customer Request	TF – Tree Off Right-of-Way
	DU – Dig-up Underground	TO – Tree On Right-of-Way
	TV – Trees/Vegetation	SO – Scheduled Outage
	UN – Unknown	
Equipment (EQT)	Affected by, or involved in the outage	
	OCN – Connector	OSW – Overhead Switch
	OCO – Overhead Conductor	OTF – Overhead Transformer Fuse
	OCR – Crossarm	OTR – Overhead Transformer
	OFC – Overhead Cut-out	OUP – OH to UG Primary
	OFS – Overhead Fire Signal	OUS – OH to UG Secondary Service
	OFU – Fuse Link/OH Line Fuse	SBF – High-side Bank Fuse
	OGS – Span Guy	SCB – Power Circuit Breaker
	OHR – Overhead Recloser	UOT – Underground Outdoor Term
	OIN – Insulator	UPC – Underground Primary Cable
	OJU- Jump Wire	UPT – Padmount Transformer
	OPI – Overhead Pin Insulator	USV – Underground Service
	OPO – Pole	UTC – Underground Terminal Fuse
	OSV – Overhead Service	UTR – Submersible Transformer
	ORE – Regulator	
CUST OUT (CUST.OUT)	Customer Out , The number of customers without power for any given outage record	
CUST MIN (CUST. MIN)	Customer Minutes , The total number of minutes customers were without power for any given record	

Media Coverage

The Western Front

Inches of snow hit Western Washington

Snow began falling in Bellingham, Wash. early Friday, Feb. 22, and it didn't stop. By early Sunday morning, there were reports of 2 to 3 inches of snow, with higher elevations receiving closer to 10 inches.

The National Weather Service issued a winter storm warning for areas in Whatcom County, including Bellingham. The warning lasts through 6:00 a.m. Monday, Feb. 24 and states that areas could receive 2-5 inches on top of what the area has already received as of Sunday morning.

On top of the snow, Bellingham residents can anticipate some windy weather. Sunday evening northeast winds are expected to be 20-30 MPH, with gusts of 40 MPH.

Currently, all Bellingham Public Schools are closed Monday, but Western is still scheduled to be open. For updates on what is closed, head to KGMI 790's website.