EXH. PKW-8CC DOCKET UE-190882 WITNESS: PAUL K. WETHERBEE

# BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Investigation of

AVISTA CORPORATION d/b/a AVISTA UTILITIES, PUGET SOUND ENERGY, and PACIFIC POWER & LIGHT COMPANY

**Regarding Prudency of Outage and Replacement Power Costs** 

**DOCKET UE-190822** 

## SECOND EXHIBIT (COMPANY CONFIDENTIAL) TO THE PREFILED REBUTTAL TESTIMONY OF

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

**REDACTED VERSION** 

**JANUARY 23, 2020** 

EXH. PKW-8CC DOCKET UE-190882 WITNESS: PAUL K. WETHERBEE

# BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Investigation of

AVISTA CORPORATION d/b/a AVISTA UTILITIES, PUGET SOUND ENERGY, and PACIFIC POWER & LIGHT COMPANY

**Regarding Prudency of Outage and Replacement Power Costs** 

**DOCKET UE-190822** 

## SECOND EXHIBIT (COMPANY CONFIDENTIAL) TO THE PREFILED REBUTTAL TESTIMONY OF

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

**REDACTED VERSION** 

**JANUARY 23, 2020** 

#### **Puget Sound Energy**

### Colstrip Units 3 & 4

Summer 2018 outage replacement power costs

June 29, 2018 through September 5, 2018

Shaded information is designated as Company-confidential per Protective Order in Docket UE-190882

			September			
	June 29-30	July	August	1-5	Period Total	
Total generation reduction relative to volume in rates (MWh):	5,751	159,454	114,386	13,005	292,596	
Total cost increase / revenue reduction from lost generation:	\$33,224	\$7,656,439	\$6,398,679	\$358,182	\$14,446,525	
Actual 3&4 fuel cost reduction relative to rates:*	\$0	\$1,811,111	\$895,865	\$0	\$2,706,976	
Net power cost increase:	\$33,224	\$5,845,328	\$5,502,814	\$358,182	\$11,739,549	

Net Actual Output				Increase /		Market
Date   Output   (MWh)   Rates (MWh)   Relative to Rates   (S/MWh)   S.7.8   S.8.296   S.2.49.28   S.2.49.29   S.		Net Actual	Average		ICE Daily	Value of
29-Jun-18 30-Jun-18 10-Jul-18 11-Jul-18 12-Jul-18 130-Jun-18 11-Jul-18 14-Jul-18 15-Jul-18 16,946) 1512.99 150,206 1519,342 16,946) 1512.93 1519,342 16,922) 1515,78 1519,342 16,922) 1515,78 1519,342 16,921) 1518 16,922) 1517,71 1515,77 1515,77 1515,77 1518 16,970) 17-Jul-18 16,970) 17-Jul-18 17-Jul-18 18 18 18 18 18 18 18 18 18 18 18 18 1		Output	•			
30-Jun-18 1-Jul-18 1-	Date	(MWh)	Rates (MWh)	Rates	(\$/MWh)	Generation
1-Jul-18 2-Jul-18 3-Jul-18 (6,946) \$12.99 \$90,206 3-Jul-18 (6,946) \$22.94 \$159,342 4-Jul-18 (6,921) \$35.78 \$247,647 6-Jul-18 (6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$37.27 \$188,764 7-Jul-18 (6,970) \$27.27 \$190,073 8-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (3,487) \$24.38 \$85,014 (2,795) \$25.86 \$72,279 10-Jul-18 (6,984) \$34.30 \$239,529 12-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (6,984) \$34.30 \$239,529 14-Jul-18 (6,970) \$43.41 \$302,545 (5,527) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$92,581 (2,515) \$45.85 \$119,907 17-Jul-18 (1,792) \$35.23 \$63,133 18-Jul-18 (2,932) \$27.92 \$81,852 19-Jul-18 (2,932) \$27.92 \$81,852 19-Jul-18 (2,932) \$27.92 \$81,852 19-Jul-18 (3,102) \$27.67 \$85,823 24-Jul-18 (2,787) \$159.70 \$445,087 25-Jul-18 (2,787) \$159.70 \$445,087 (1,655) \$157.24 \$260,230 44,064) \$143.58 \$833,499 27-Jul-18 (6,946) \$88.50 \$614,700 6,841) \$70.99 \$448,566 29-Jul-18 (6,946) \$88.50 \$614,700 6,946) \$88.50 \$614,700 6,946) \$88.50 \$614,700 6,946) \$88.50 \$514,603 31-Jul-18 (6,946) \$88.50 \$614,700 6,946) \$88.50 \$514,603 31-Jul-18 (6,946) \$88.50 \$614,700 6,946) \$88.50 \$614,700 6,946) \$88.50 \$514,603 31-Jul-18 (4,651) \$53.48 \$230,749 3-Aug-18 (4,651) \$53.28 \$29,597 14-Aug-18 (4,651) \$63.29 \$294,342 14-Aug-18 (4,666) \$45.28 \$208,530 1-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,666) \$45.28 \$208,530 14-Aug-18 (6,676) \$45.95 \$310,837 13-Aug-18 (6,676) \$45.95 \$310,837 13-Aug-18 (6,676) \$45.95 \$310,837 14-Aug-18 (6,676) \$45.95 \$310,83	29-Jun-18			(1,436)	\$5.78	\$8,296
2-Jul-18 3-Jul-18 4-Jul-18 (6,946) \$12.99 \$90,206 3-Jul-18 (6,946) \$22.94 \$159,342 4-Jul-18 (6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$27.27 \$188,764 7-Jul-18 (6,922) \$27.27 \$188,764 7-Jul-18 (6,970) \$27.27 \$190,073 8-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (3,487) \$24.38 \$85,014 (2,795) \$25.86 \$72,279 10-Jul-18 (4,701) \$24.08 \$113,216 11-Jul-18 (6,984) \$34.30 \$239,529 12-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (2,735) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$187,090 17-Jul-18 (2,553) \$28.72 \$73,323 16-Jul-18 (2,615) \$45.85 \$119,907 17-Jul-18 (2,932) \$27.92 \$81,852 20-Jul-18 (2,932) \$27.92 \$81,852 21-Jul-18 (2,932) \$27.92 \$81,852 22-Jul-18 (3,102) \$27.67 \$85,823 24-Jul-18 (2,787) \$159.70 \$445,087 (2,787) \$150.70 \$10.70 (2,787) \$150.70 (2,787) \$150.70 (2,787)	30-Jun-18			(4,315)	\$5.78	\$24,928
2-Jul-18 3-Jul-18 4-Jul-18 (6,946) \$12.99 \$90,206 3-Jul-18 (6,946) \$22.94 \$159,342 4-Jul-18 (6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$27.27 \$188,764 7-Jul-18 (6,922) \$27.27 \$188,764 7-Jul-18 (6,970) \$27.27 \$190,073 8-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (3,487) \$24.38 \$85,014 (2,795) \$25.86 \$72,279 10-Jul-18 (4,701) \$24.08 \$113,216 11-Jul-18 (6,984) \$34.30 \$239,529 12-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (2,735) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$187,090 17-Jul-18 (2,553) \$28.72 \$73,323 16-Jul-18 (2,615) \$45.85 \$119,907 17-Jul-18 (2,932) \$27.92 \$81,852 20-Jul-18 (2,932) \$27.92 \$81,852 21-Jul-18 (2,932) \$27.92 \$81,852 22-Jul-18 (3,102) \$27.67 \$85,823 24-Jul-18 (2,787) \$159.70 \$445,087 (2,787) \$150.70 \$10.70 (2,787) \$150.70 (2,787) \$150.70 (2,787)	1-Jul-18			(7,066)	\$5.78	\$40,842
4-Jul-18 5-Jul-18 6,922) \$21.71 \$150,277 5-Jul-18 6,922) \$35.78 \$247,647 6-Jul-18 (6,922) \$27.27 \$188,764 7-Jul-18 (6,921) \$27.27 \$190,073 8-Jul-18 (6,970) \$27.27 \$190,073 8-Jul-18 (2,795) \$25.86 \$72,279 10-Jul-18 (4,701) \$24.08 \$113,216 11-Jul-18 (6,984) \$34.30 \$239,529 12-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (6,970) \$43.41 \$302,545 13-Jul-18 (2,735) \$33.85 \$187,090 14-Jul-18 (2,735) \$33.85 \$92,581 15-Jul-18 (2,753) \$28.72 \$73,323 16-Jul-18 (2,615) \$45.85 \$119,907 17-Jul-18 (2,932) \$27.92 \$81,852 19-Jul-18 (2,932) \$27.92 \$81,852 19-Jul-18 (3,102) \$27.67 \$85,823 20-Jul-18 (4,572) \$35.91 \$252,902 22-Jul-18 (6,935) \$58.09 \$402,855 23-Jul-18 (2,787) \$159,70 \$445,087 25-Jul-18 (2,787) \$159,70 \$445,087 25-Jul-18 (6,319) \$70.99 \$449,890 29-Jul-18 (6,319) \$70.99 \$449,890 30-Jul-18 (1,655) \$157.24 \$260,230 44,064 \$143.58 \$833,499 27-Jul-18 (6,319) \$70.99 \$449,800 30-Jul-18 (6,319) \$70.99 \$449,800 31-Jul-18 (6,946) \$88.50 \$614,700 31-Jul-18 (6,946) \$88.50 \$614,700 31-Jul-18 (6,948) \$88.50 \$614,700 31-Jul-18 (6,948) \$88.50 \$51.85 15-Aug-18 (4,651) \$53.48 \$230,749 3-Aug-18 (4,630) \$51.85 \$158,810 4,4061 \$43.58 \$833,899 402,818 (4,661) \$63.29 \$23.12 \$83,899 8-Aug-18 (4,661) \$63.29 \$294,342 (1,442) \$190.64 \$274,837 7-Aug-18 (4,666) \$45.28 \$295,597 14-Aug-18 (4,666) \$45.28 \$295,597 12-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,676) \$45.95 \$310,837 13-Aug-18 (6,676) \$45.95 \$310,837 13-Aug-18 (6,676) \$45.95 \$310,837 14-Aug-18 (6,676) \$45.95 \$310,837 14-Au	2-Jul-18			(6,946)	\$12.99	
5-Jul-18 6-Jul-18 6-Jul-18 7-Jul-18 8-Jul-18 9-Jul-18 12-Jul-18 12-Jul-18 13-Jul-18 14-Jul-18 15-Jul-18 15-Jul-18 17-Jul-18 17-Jul-18 18 18-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-Ju	3-Jul-18			(6,946)	\$22.94	\$159,342
6-Jul-18 7-Jul-18 8-Jul-18 9-Jul-18 9-Jul-18 10-Jul-18 11-Jul-18 1	4-Jul-18			(6,922)	\$21.71	\$150,277
7-Jul-18 8-Jul-18 9-Jul-18 9-Jul-18 10-Jul-18 11-Jul-18 11-Jul-18 11-Jul-18 12-Jul-18 13-Jul-18 15-Jul-18 15-Jul-18 16,970 17-Jul-18 16,970 17-Jul-18 18 18-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-	5-Jul-18			(6,922)	\$35.78	\$247,647
8-Jul-18 9-Jul-18 10-Jul-18 10-Jul-18 11-Jul-18 11-Jul-1	6-Jul-18			(6,922)	\$27.27	\$188,764
9-Jul-18 10-Jul-18 11-Jul-18 11-Jul-	7-Jul-18	Γ		(6,970)	\$27.27	\$190,073
10-Jul-18 11-Jul-18 11-Jul-18 12-Jul-18 12-Jul-18 13-Jul-18 14-Jul-18 15-Jul-18 15-Jul-18 16-Jul-18 16-Jul-18 16-Jul-18 17-Jul-18 18-Jul-18 18-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-Jul	8-Jul-18			(3,487)	\$24.38	\$85,014
11-Jul-18 12-Jul-18 12-Jul-18 13-Jul-18 14-Jul-18 15-Jul-18 16,970) \$43.41 \$302,545 13-Jul-18 16,970) \$43.41 \$302,545 13-Jul-18 16,970) \$43.41 \$302,545 13-Jul-18 16,970) \$43.41 \$302,545 14-Jul-18 16,5527) \$33.85 \$187,090 14-Jul-18 16,2615) \$45.85 \$119,907 17-Jul-18 17-Jul-18 11,792) \$35.23 \$63,133 18-Jul-18 12,932) \$27.92 \$81,852 19-Jul-18 12,932) \$27.92 \$81,852 11,655) \$157.24 \$260,230 12,932) \$27.92 \$81,852 12,932) \$27.92 \$81,852 12,932) \$27.92 \$81,852 12,932) \$27.92 \$81,852 12,932) \$27.92 \$81,852 12,932) \$27.92 \$81,852 18,523 11,907 12,90	9-Jul-18			(2,795)	\$25.86	\$72,279
12-Jul-18 13-Jul-18 13-Jul-18 14-Jul-18 15-Jul-18 15-Jul-18 15-Jul-18 16-Jul-18 16-Jul-18 16-Jul-18 17-Jul-18 17-Jul-18 18 18-Jul-18 18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18	10-Jul-18			(4,701)	\$24.08	\$113,216
13-Jul-18 14-Jul-18 15-Jul-18 15-Jul-18 15-Jul-18 16-Jul-18 16-Jul	11-Jul-18			(6,984)	\$34.30	\$239,529
14-Jul-18 15-Jul-18 15-Jul-18 16-Jul-18 16-Jul-18 16-Jul-18 17-Jul-18 17-Jul-18 18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-	12-Jul-18			(6,970)	\$43.41	\$302,545
15-Jul-18 16-Jul-18 16-Jul-18 16-Jul-18 17-Jul-18 18-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-Jul	13-Jul-18			(5,527)	\$33.85	\$187,090
16-Jul-18 17-Jul-18 17-Jul-18 18-Jul-18 19-Jul-18 19-Jul-18 19-Jul-18 10-Jul-18 10-Jul	14-Jul-18			(2,735)	\$33.85	\$92,581
17-Jul-18 18-Jul-18 19-Jul-18 19-Jul-18 20-Jul-18 20-Jul-18 21-Jul-18 22-Jul-18 22-Jul-18 22-Jul-18 23-Jul-18 24-Jul-18 25-Jul-18 26-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 30-Jul-18 31-Jul-18 31-Jul	15-Jul-18			(2,553)	\$28.72	\$73,323
18-Jul-18       (2,932)       \$27.92       \$81,852         19-Jul-18       (3,102)       \$27.67       \$85,823         20-Jul-18       (4,572)       \$35.91       \$164,197         21-Jul-18       (7,042)       \$35.91       \$252,902         22-Jul-18       (6,935)       \$58.09       \$402,855         23-Jul-18       (2,787)       \$159.70       \$445,087         25-Jul-18       (1,655)       \$157.24       \$260,230         26-Jul-18       (4,064)       \$143.58       \$583,499         27-Jul-18       (6,319)       \$70.99       \$448,566         28-Jul-18       (6,970)       \$54.09       \$377,009         30-Jul-18       (6,970)       \$54.09       \$377,009         30-Jul-18       (6,946)       \$88.50       \$614,700         31-Jul-18       (6,946)       \$88.50       \$614,700         31-Aug-18       (4,315)       \$53.48       \$230,749         3-Aug-18       (4,315)       \$53.48       \$230,749         3-Aug-18       (4,651)       \$63.29       \$294,342         (4-Aug-18       (5,036)       \$51.85       \$240,064         (4,651)       \$63.29       \$294,342         (1,442)	16-Jul-18			(2,615)	\$45.85	\$119,907
19-Jul-18 20-Jul-18 20-Jul-18 21-Jul-18 21-Jul-18 22-Jul-18 22-Jul-18 23-Jul-18 24-Jul-18 25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 20-Jul-18 20-Jul	17-Jul-18			(1,792)	\$35.23	\$63,133
20-Jul-18 21-Jul-18 22-Jul-18 22-Jul-18 23-Jul-18 24-Jul-18 24-Jul-18 25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 20-Jul-18 20-Jul	18-Jul-18			(2,932)	\$27.92	\$81,852
21-Jul-18 22-Jul-18 22-Jul-18 23-Jul-18 24-Jul-18 25-Jul-18 25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 20-Aug-18 20-Aug	19-Jul-18			(3,102)	\$27.67	\$85,823
22-Jul-18 23-Jul-18 24-Jul-18 25-Jul-18 25-Jul-18 26-Jul-18 27-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 20-Jul-18 20-Jul	20-Jul-18			(4,572)	\$35.91	\$164,197
23-Jul-18 24-Jul-18 25-Jul-18 25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 20-Jul-18 20-Jul	21-Jul-18			(7,042)	\$35.91	\$252,902
24-Jul-18 25-Jul-18 25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 27-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 20-Jul-18 20-Jul	22-Jul-18			(6,935)	\$58.09	\$402,855
25-Jul-18 26-Jul-18 26-Jul-18 27-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 20-Jul-18 20-Jul	23-Jul-18			(3,353)	\$151.32	\$507,390
26-Jul-18 27-Jul-18 27-Jul-18 28-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 29-Jul-18 30-Jul-18 31-Jul-18 31-Aug-18 3-Aug-18 4-Aug-18 5-Aug-18 6-Aug-18	24-Jul-18			(2,787)	\$159.70	\$445,087
27-Jul-18 28-Jul-18 29-Jul-18 29-Jul-18 30-Jul-18 31-Jul-18 31-Jul-18 3-Aug-18 4-Aug-18 5-Aug-18 6-Aug-18 6-Aug	25-Jul-18			(1,655)	\$157.24	\$260,230
28-Jul-18 29-Jul-18 30-Jul-18 31-Jul-18 1-Aug-18 2-Aug-18 3-Aug-18 4-Aug-18 6-Aug-18	26-Jul-18			(4,064)	\$143.58	\$583,499
29-Jul-18 30-Jul-18 31-Jul-18 1-Aug-18 2-Aug-18 3-Aug-18 4-Aug-18 6-Aug-18	27-Jul-18			(6,319)	\$70.99	\$448,566
30-Jul-18 31-Jul-18 1-Aug-18 2-Aug-18 3-Aug-18 4-Aug-18 6-Aug-18 6	28-Jul-18			(7,042)	\$70.99	\$499,890
31-Jul-18 1-Aug-18 2-Aug-18 3-Aug-18 4-Aug-18 6,881) \$75.09 \$516,673 (5,328) \$60.99 \$324,918 (4,315) \$53.48 \$230,749 (3,063) \$51.85 \$158,810 (4,630) \$51.85 \$240,064 (4,651) \$63.29 \$294,342 (4,651) \$63.29 \$294,342 (1,442) \$190.64 \$274,837 7-Aug-18 (3,693) \$223.12 \$823,899 8-Aug-18 (5,036) \$115.97 \$584,005 9-Aug-18 (4,896) \$101.66 \$497,695 10-Aug-18 (4,606) \$45.28 \$208,530 11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18	29-Jul-18			(6,970)	\$54.09	\$377,009
1-Aug-18 2-Aug-18 3-Aug-18 4-Aug-18 6-Aug-18 6-A	30-Jul-18			(6,946)	\$88.50	\$614,700
2-Aug-18 3-Aug-18 (3,063) \$51.85 \$158,810 (4,630) \$51.85 \$240,064 (4,651) \$63.29 \$294,342 (4,651) \$63.29 \$294,342 (4,651) \$63.29 \$294,342 (1,442) \$190.64 \$274,837 7-Aug-18 (3,693) \$223.12 \$823,899 8-Aug-18 (5,036) \$115.97 \$584,005 9-Aug-18 (4,896) \$101.66 \$497,695 10-Aug-18 (4,606) \$45.28 \$208,530 11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	31-Jul-18			(6,881)	\$75.09	\$516,673
3-Aug-18 4-Aug-18 (4,630) \$51.85 \$158,810 (4,630) \$51.85 \$240,064 (4,651) \$63.29 \$294,342 (4,651) \$63.29 \$294,342 (1,442) \$190.64 \$274,837 7-Aug-18 (3,693) \$223.12 \$823,899 (5,036) \$115.97 \$584,005 9-Aug-18 (4,896) \$101.66 \$497,695 10-Aug-18 (4,606) \$45.28 \$208,530 11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	1-Aug-18			(5,328)	\$60.99	\$324,918
4-Aug-18 5-Aug-18 6-Aug-18 6-A	2-Aug-18			(4,315)	\$53.48	\$230,749
5-Aug-18 6-Aug-18 (1,442) \$190.64 \$274,837 7-Aug-18 (3,693) \$223.12 \$823,899 8-Aug-18 (5,036) \$115.97 \$584,005 9-Aug-18 (4,696) \$101.66 \$497,695 10-Aug-18 (4,606) \$45.28 \$208,530 11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	3-Aug-18			(3,063)	\$51.85	\$158,810
6-Aug-18 7-Aug-18 8-Aug-18 9-Aug-18 10-Aug-18 11-Aug-18 12-Aug-18 13-Aug-18 14-Aug-18 15-94 16-505 16-Aug-18 16-605 16-529 16-765 16-76	4-Aug-18			(4,630)	\$51.85	\$240,064
7-Aug-18 8-Aug-18 9-Aug-18 10-Aug-18 11-Aug-18 12-Aug-18 13-Aug-18 14-Aug-18 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 15,036) 16,036) 16,039) 16,039) 17,030 18,037 18,037 18,048,05) 19,030 19,030 19,030 10	5-Aug-18			(4,651)	\$63.29	\$294,342
8-Aug-18 9-Aug-18 (5,036) \$115.97 \$584,005 (4,896) \$101.66 \$497,695 10-Aug-18 (4,606) \$45.28 \$208,530 11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	6-Aug-18			(1,442)	\$190.64	\$274,837
9-Aug-18 10-Aug-18 11-Aug-18 12-Aug-18 13-Aug-18 14-Aug-18 16-529 17-Aug-18 18-409-18 19-65-529	7-Aug-18			(3,693)	\$223.12	\$823,899
10-Aug-18	8-Aug-18					
11-Aug-18 (6,529) \$45.28 \$295,597 12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	9-Aug-18			(4,896)		\$497,695
12-Aug-18 (6,765) \$45.95 \$310,837 13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	10-Aug-18			(4,606)	\$45.28	\$208,530
13-Aug-18 (4,865) \$71.13 \$346,025 14-Aug-18 (2,196) \$69.41 \$152,402	11-Aug-18			(6,529)	\$45.28	\$295,597
14-Aug-18 (2,196) \$69.41 \$152,402	12-Aug-18			(6,765)	\$45.95	\$310,837
	13-Aug-18					
15-Aug-18 (1,692) \$55.00 \$93,037					\$69.41	\$152,402
	15-Aug-18			(1,692)	\$55.00	\$93,037

#### Colstrip Units 3 & 4

Summer 2018 outage replacement power costs

June 29, 2018 through September 5, 2018

Shaded information is designated as Company-confidential per Protective Order in Docket UE-190882

			September			
	June 29-30	July	August	1-5	Period Total	
Total generation reduction relative to volume in rates (MWh):	5,751	159,454	114,386	13,005	292,596	
Total cost increase / revenue reduction from lost generation:	\$33,224	\$7,656,439	\$6,398,679	\$358,182	\$14,446,525	
Actual 3&4 fuel cost reduction relative to rates:*	\$0	\$1,811,111	\$895,865	\$0	\$2,706,976	
Net power cost increase:	\$33,224	\$5.845.328	\$5,502,814	\$358.182	\$11.739.549	

			Market		
	<b>Net Actual</b>	Average	(Decrease)	ICE Daily	Value of
	Output	Output in	Relative to	Mid C Price	Lost
Date	(MWh)	Rates (MWh)	Rates	(\$/MWh)	Generation
16-Aug-18			(1,735)	\$42.84	\$74,308
17-Aug-18			(1,823)	\$33.47	\$61,011
18-Aug-18			(6,339)	\$33.47	\$212,177
19-Aug-18			(6,418)	\$34.91	\$224,041
20-Aug-18			(5,730)	\$44.50	\$254,952
21-Aug-18			(2,500)	\$39.04	\$97,596
22-Aug-18			(1,715)	\$30.66	\$52,572
23-Aug-18			(1,774)	\$23.85	\$42,296
24-Aug-18			(1,972)	\$22.14	\$43,653
25-Aug-18			(4,748)	\$22.14	\$105,114
26-Aug-18			(4,531)	\$20.11	\$91,112
27-Aug-18			(1,506)	\$25.47	\$38,350
28-Aug-18			(2,073)	\$30.74	\$63,707
29-Aug-18			(2,108)	\$25.99	\$54,772
30-Aug-18			(2,998)	\$25.76	\$77,230
31-Aug-18			(2,719)	\$25.76	\$70,042
1-Sep-18			(2,457)	\$23.48	\$57,702
2-Sep-18			(2,258)	\$23.33	\$52,682
3-Sep-18			(3,395)	\$26.24	\$89,089
4-Sep-18			(3,441)	\$30.59	\$105,253
5-Sep-18			(1,453)	\$36.79	\$53,456

<sup>\*</sup>Fuel cost data is only available on a monthly basis and a pro-rata allocation is not appropriate given the daily shape of actual generation differences. Minor fuel cost savings in June and September are therefore excluded from this calculation.