

**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

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DOCKET UE-190882

**AVI ALLISON ON BEHALF OF PUBLIC COUNSEL UNIT**

**EXHIBIT AA-4C**

Puget Sound Energy Revised Response to Staff Data Request No. 5,  
Attachment A, Tab "Variance Analysis"  
(Docket UE-190324)

January 10, 2020

SHADED INFORMATION IS DESIGNATED **PUGET SOUND ENERGY** CONFIDENTIAL  
PER PROTECTIVE ORDER IN DOCKET UE-190882

PUBLIC VERSION

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**Dockets UE-190324  
Puget Sound Energy  
Power Cost Adjustment Mechanism Annual Report**

**WUTC STAFF INFORMAL DATA REQUEST NO. 005**

**“CONFIDENTIAL” Table of Contents**

<b>DR NO.</b>	<b>“CONFIDENTIAL” Material</b>
<b>005</b>	Shaded information is designated CONFIDENTIAL per WAC 480-07-160 as marked in Attachment A to Puget Sound Energy’s First Revised Response to WUTC Staff Data Request No. 005.

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**Docket UE-190324  
Puget Sound Energy  
Power Cost Adjustment Mechanism Annual Report**

**WUTC STAFF INFORMAL DATA REQUEST NO. 005:**

Please provide all workpapers on power cost variance analysis supporting the information presented in Table 1 and Table 2 on Page 13 of Paul Wetherbee's testimony. Please include monthly details on generation output and cost for each generation source (including contracts), payment and revenue related to transmission and gas transportation, calculation of generation variance, and cost variance between the actual level and what's assumed in the current baseline rates.

**First Revised Response:**

In the process of preparing and validating data for Puget Sound Energy's ("PSE") Response to WUTC Staff Informal Data Request No. 022 PSE discovered an error in the monthly net Colstrip generation values provided in the workpaper *PKW-WP C PCA 17 variance analysis (C)*. This workpaper was used to calculate values presented in the Prefiled Direct Testimony of Paul K. Wetherbee and relied upon for PSE's responses to SUBPART A and SUBPART E of WUTC Staff Informal Data Request No. 001. A revised response to WUTC Staff Informal Data Request No. 001 is also provided herewith.

Attached as Attachment A to PSE's Revised Response to WUTC Staff Informal Data Request No. 005, please find an electronic copy of the workpaper *PKW-WP C PCA 17 REVISED variance analysis*. This file replaces *PKW-WP C PCA 17 variance analysis (C)* which was provided with PSE's initial response to this data request and provided to WUTC Staff and Public Counsel via email on April 30, 2019.

**Shaded information is designated as CONFIDENTIAL per WAC 480-07-160 as marked in Attachment A to PSE's First Revised Response to WUTC Staff Informal Data Request No. 001.**

**ATTACHMENT A to PSE's Revised  
Response to  
WUTC Staff Informal  
Data Request No. 005**

**Shaded information is designated CONFIDENTIAL per WAC 480-07-160**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1				Shaded information is designated as confidential per WAC 480-07-160												
2																
3																
4	<b>Market prices comparison</b>			<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
5																
6		Actual monthly flat Mid C price	\$/mwh	21.45	17.48	19.52	14.36	6.90	11.50	52.91	55.67	27.34	41.01	49.53	49.61	30.61
7		Flat price in rates	\$/mwh													
8		variance (actual minus rates)	\$/mwh													
9																
10		Sumas gas price 2018 actual	\$/MMBtu	2.70	2.24	2.09	1.93	1.40	1.53	2.15	2.36	2.29	5.90	12.16	5.77	3.54
11		Sumas gas price in rates (3-mo. avg.)	\$/MMBtu													
12		variance (actual minus rates)	\$/MMBtu													
13																
14		Flat market heat rate 2018 actual	MMBtu/mwh	7.9	7.8	9.3	7.4	4.9	7.5	24.6	23.6	11.9	6.9	4.1	8.6	10.39
15		Flat market heat rate in rates	MMBtu/mwh													
16		variance (actual minus rates)	MMBtu/mwh													

Shaded Information is Designated **PUGET SOUND ENERGY** Confidential per Protective Order in Docket UE-190882.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
17																
18																
19	<b>Energy variance (actual minus rates)</b>			<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
20	Higher / (Lower)															
21	Hydro	Lower Baker	MWh	17,344	14,108	(4,376)	(2,992)	13,245	(6,700)	(11,385)	(14,146)	(7,396)	4,652	8,134	14,639	<b>25,127</b>
22	Hydro	Mid C Hydro	MWh	37,289	84,458	46,898	37,025	(53,729)	(10,805)	(28,208)	(28,633)	(14,823)	(28,001)	(13,891)	(67,023)	<b>(39,442)</b>
23	Hydro	Snoqualmie Falls	MWh	(1,058)	(1,364)	(4,603)	(9,193)	(498)	(12,655)	(8,129)	(4,476)	(5,391)	(11,383)	(6,947)	(5,378)	<b>(71,074)</b>
24	Hydro	Upper Baker	MWh	13,184	6,026	(9,379)	2,462	(6,957)	1,537	(10,845)	(9,992)	1,800	7,239	3,484	7,773	<b>6,331</b>
25	Hydro	<b>Hydro total</b>	MWh	<b>66,759</b>	<b>103,228</b>	<b>28,540</b>	<b>27,302</b>	<b>(47,939)</b>	<b>(28,623)</b>	<b>(58,567)</b>	<b>(57,248)</b>	<b>(25,810)</b>	<b>(27,493)</b>	<b>(9,220)</b>	<b>(49,988)</b>	<b>(79,058)</b>
26																
27	Wind	Hopkins Ridge	MWh	60	26,925	(12,602)	10,161	(16,617)	(6,344)	(12,489)	2,748	(6,294)	(11,411)	3,373	(4,789)	<b>(27,279)</b>
28	Wind	Lower Snake River	MWh	(8,405)	64,796	343	7,993	(25,855)	1,321	(8,330)	(1,473)	(2,170)	(20,225)	16,434	(16,078)	<b>8,351</b>
29	Wind	Wild Horse	MWh	(13,329)	25,909	2,796	8,422	(28,818)	398	(17,754)	(4,189)	(1,389)	(21,952)	(10,306)	(584)	<b>(60,798)</b>
30	Wind	<b>Wind total</b>	MWh	<b>(21,675)</b>	<b>117,629</b>	<b>(9,463)</b>	<b>26,577</b>	<b>(71,290)</b>	<b>(4,625)</b>	<b>(38,574)</b>	<b>(2,914)</b>	<b>(9,853)</b>	<b>(53,589)</b>	<b>9,501</b>	<b>(21,450)</b>	<b>(79,726)</b>
31																
32	Colstrip	Colstrip 1&2	MWh	10,896	(7,344)	14,204	(47,844)	(9,734)	12,049	89,157	71,747	76,937	79,433	67,079	35,460	<b>392,040</b>
33	Colstrip	Colstrip 3&4	MWh	24,152	4,177	20,843	5,540	(2,634)	54,762	(159,454)	(114,386)	(18,158)	18,443	25,352	(25,551)	<b>(166,912)</b>
34	Colstrip	<b>Colstrip total</b>	MWh	<b>35,048</b>	<b>(3,166)</b>	<b>35,047</b>	<b>(42,305)</b>	<b>(12,368)</b>	<b>66,811</b>	<b>(70,297)</b>	<b>(42,639)</b>	<b>58,779</b>	<b>97,876</b>	<b>92,432</b>	<b>9,909</b>	<b>225,128</b>
35																
36	Gas-fired*	Crystal Mountain	MWh	5	0	0	2	12	0	1	1	5	1	31	16	<b>74</b>
37	Gas-fired	Encogen	MWh	(18,205)	(16,333)	(4,154)	(328)	7,391	14,449	55,936	36,563	(32,897)	(14,485)	1,011	(5,350)	<b>23,599</b>
38	Gas-fired	Ferndale	MWh	(54,246)	(54,667)	(39,448)	(37,141)	8,867	(25,430)	76,648	39,100	52,966	(78,571)	(79,275)	(21,085)	<b>(212,282)</b>
39	Gas-fired	Freddy 1	MWh	(38,610)	(52,666)	(42,085)	(25,780)	(12,356)	(19,301)	18,735	17,382	9,869	(56,614)	(67,133)	(38,171)	<b>(306,730)</b>
40	Gas-fired	Frederickson	MWh	(863)	(4,088)	100	(123)	1,559	3,496	(4,677)	(5,186)	(2,945)	(5,487)	(499)	426	<b>(18,285)</b>
41	Gas-fired	Fredonia	MWh	(9,892)	(17,365)	(4,100)	(7,124)	1,727	3,546	20,001	(7,810)	(15,479)	(4,576)	(4,335)	(8,266)	<b>(53,673)</b>
42	Gas-fired	Goldendale	MWh	(133,203)	(119,931)	(62,279)	(108,937)	(17,640)	(17,931)	44,258	42,953	35,944	(27,633)	(198,097)	(72,538)	<b>(635,034)</b>
43	Gas-fired	Mint Farm	MWh	(126,906)	(111,476)	(30,426)	(52,995)	33,374	23,672	43,443	13,058	9,741	(75,991)	(196,898)	10,620	<b>(460,784)</b>
44	Gas-fired	Sumas	MWh	(33,804)	(35,898)	(30,104)	(25,949)	(8,444)	(19,406)	(7,233)	11,704	6,777	(79,590)	(54,570)	(21,320)	<b>(297,837)</b>
45	Gas-fired	Whitehorn	MWh	(499)	(7,210)	(491)	(1,965)	3,393	1,961	(2,045)	(9,916)	(5,416)	(8,522)	(799)	(1,305)	<b>(32,814)</b>
46	Gas-fired	<b>Gas-fired total</b>	MWh	<b>(416,222)</b>	<b>(419,635)</b>	<b>(212,987)</b>	<b>(260,341)</b>	<b>17,883</b>	<b>(34,944)</b>	<b>245,066</b>	<b>137,851</b>	<b>58,565</b>	<b>(351,468)</b>	<b>(600,563)</b>	<b>(156,973)</b>	<b>(1,993,767)</b>
47																
48	Contracts	Centralia PPA	MWh	0	0	(380)	0	0	0	0	(210)	0	0	380	0	<b>(210)</b>
49	Contracts	Electron Hydro PPA	MWh	(1,188)	(1,464)	(4,451)	(106)	187	(1,964)	5,066	11,886	1,339	(4,969)	(2,340)	201	<b>2,197</b>
50	Contracts	Klondike Wind PPA	MWh	(4,457)	2,495	(5,891)	(2,414)	(779)	(2,317)	(4,602)	(4,031)	(4,682)	(8,214)	(1,943)	(3,301)	<b>(40,136)</b>
51	Contracts	Other long-term contracts	MWh	1,782	567	(1,694)	2,212	2,910	(554)	(2,140)	(421)	749	401	907	(311)	<b>4,407</b>
52	Contracts	Schedule 91 contracts	MWh	(2,806)	(2,490)	(4,655)	(2,249)	(5,103)	(5,224)	(4,843)	(4,694)	(4,702)	(4,044)	(4,378)	(4,197)	<b>(49,385)</b>
53	Contracts	Twin Falls PPA	MWh	3,727	3,226	(2,144)	4,601	3,550	(4,804)	(2,861)	(350)	(451)	(2,038)	2,509	1,275	<b>6,240</b>
54	Contracts	PG&E Exchange	MWh	(2,169)	30,626	0	0	0	21,969	(17,331)	(12,688)	8,051	0	(16,691)	(11,760)	<b>8</b>
55	Contracts	<b>Contracts total</b>	MWh	<b>(5,111)</b>	<b>32,961</b>	<b>(19,215)</b>	<b>2,044</b>	<b>765</b>	<b>7,106</b>	<b>(26,711)</b>	<b>(10,509)</b>	<b>304</b>	<b>(18,863)</b>	<b>(21,557)</b>	<b>(18,094)</b>	<b>(76,879)</b>
56																
57	Market purchases/sales	Market purchases	MWh	281,806	503,942	348,882	335,030	197,344	145,313	263,653	184,446	134,187	494,291	607,924	528,199	<b>4,025,018</b>
58	Market purchases/sales	Market sales	MWh	(106,534)	(321,496)	(260,310)	(186,952)	(224,485)	(253,246)	(299,310)	(248,121)	(369,257)	(258,008)	(254,576)	(582,967)	<b>(3,365,263)</b>
59	Market purchases/sales	<b>Market purchases/sales total</b>	MWh	<b>175,272</b>	<b>182,446</b>	<b>88,573</b>	<b>148,078</b>	<b>(27,141)</b>	<b>(107,933)</b>	<b>(35,657)</b>	<b>(63,676)</b>	<b>(235,070)</b>	<b>236,283</b>	<b>353,347</b>	<b>(54,768)</b>	<b>659,755</b>
60																
61		<b>Total load variance</b>	MWh	<b>(165,929)</b>	<b>13,462</b>	<b>(89,505)</b>	<b>(98,644)</b>	<b>(140,089)</b>	<b>(102,208)</b>	<b>15,261</b>	<b>(39,134)</b>	<b>(153,084)</b>	<b>(117,253)</b>	<b>(176,060)</b>	<b>(291,363)</b>	<b>(1,344,546)</b>
62																

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
63																
64	<b>Cost variance (actual minus rates) thousands</b>			<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
65																
66	Colstrip	Colstrip 1&2 fixed fuel	\$	\$106	(\$318)	(\$43)	(\$58)	(\$220)	(\$327)	(\$56)	(\$76)	(\$2)	(\$185)	(\$121)	\$126	(\$1,175)
67	Colstrip	Colstrip 1&2 variable fuel	\$	(\$305)	(\$911)	\$616	(\$870)	(\$115)	\$2,714	\$915	\$2,168	\$1,634	\$1,969	\$1,214	\$830	\$9,860
68	Colstrip	Colstrip 3&4 fixed fuel	\$	(\$96)	(\$292)	(\$204)	(\$69)	(\$22)	(\$141)	(\$190)	(\$265)	(\$245)	(\$255)	(\$198)	(\$2,116)	(\$2,116)
69	Colstrip	Colstrip 3&4 variable fuel	\$	\$92	(\$40)	\$129	(\$197)	\$106	\$1,054	(\$1,621)	(\$757)	\$178	\$997	\$440	(\$374)	\$8
70	Colstrip	<b>Colstrip total</b>	\$	(\$202)	(\$1,561)	\$498	(\$1,194)	(\$250)	\$3,301	(\$952)	\$1,196	\$1,544	\$2,536	\$1,278	\$384	\$6,578
71																
72	Gas fuel	Encogen fuel	\$	(\$627)	(\$757)	(\$196)	(\$7)	\$72	\$79	\$587	\$251	(\$835)	(\$359)	\$181	(\$88)	(\$1,699)
73	Gas fuel	Ferndale fuel	\$	(\$1,664)	(\$1,785)	(\$1,217)	(\$758)	(\$46)	(\$541)	\$514	\$37	\$63	(\$1,356)	(\$1,837)	\$702	(\$7,887)
74	Gas fuel	Freddy 1 fuel	\$	(\$1,160)	(\$1,410)	(\$1,056)	(\$397)	(\$191)	(\$301)	(\$74)	(\$67)	(\$269)	(\$1,085)	(\$1,411)	(\$478)	(\$7,900)
75	Gas fuel	Frederickson fuel	\$	\$20	\$1	(\$2)	\$130	\$71	\$130	(\$92)	(\$59)	(\$34)	(\$140)	\$11	\$141	\$177
76	Gas fuel	Fredonia fuel	\$	(\$360)	(\$657)	(\$137)	(\$163)	\$23	\$26	\$457	(\$204)	(\$412)	\$152	(\$109)	(\$265)	(\$1,647)
77	Gas fuel	Goldendale fuel	\$	(\$3,592)	(\$3,147)	(\$2,227)	(\$1,773)	(\$337)	(\$640)	(\$55)	(\$58)	(\$368)	(\$896)	(\$3,710)	\$1,628	(\$15,174)
78	Gas fuel	Mint Farm fuel	\$	(\$3,801)	(\$3,347)	(\$2,132)	(\$1,001)	(\$344)	(\$454)	(\$357)	(\$576)	(\$841)	(\$1,681)	(\$4,186)	\$4,493	(\$14,228)
79	Gas fuel	Sumas fuel	\$	(\$978)	(\$1,098)	(\$848)	(\$520)	(\$148)	(\$359)	(\$373)	(\$76)	(\$216)	(\$1,469)	(\$1,246)	\$140	(\$7,192)
80	Gas fuel	Whitehorn fuel	\$	\$98	(\$184)	\$74	(\$23)	\$182	\$57	\$4	(\$233)	(\$143)	(\$235)	(\$26)	\$9	(\$419)
81	Gas fuel	Gas hedges	\$	\$1,202	\$3,221	\$3,107	(\$148)	(\$1,000)	(\$966)	\$1,194	\$464	\$1,939	(\$3,404)	(\$34,488)	(\$21,427)	(\$50,305)
82	Gas fuel	Balancing/reserves fuel	\$	(\$1,254)	(\$265)	(\$153)	(\$84)	(\$142)	(\$688)	(\$786)	(\$589)	(\$213)	(\$116)	(\$175)	(\$312)	(\$4,777)
83	Gas fuel	<b>Gas fuel total</b>	\$	(\$12,115)	(\$9,429)	(\$4,786)	(\$4,744)	(\$1,861)	(\$3,657)	\$1,021	(\$1,110)	(\$1,329)	(\$10,587)	(\$46,996)	(\$15,456)	(\$111,052)
84																
85	Gas-related	Gas other	\$	(\$182)	(\$182)	(\$187)	(\$77)	(\$76)	(\$77)	(\$77)	(\$77)	(\$76)	(\$77)	(\$103)	(\$104)	(\$1,295)
86	Gas-related	Gas transportation	\$	\$584	\$554	\$572	\$520	\$597	\$463	\$851	\$860	\$666	\$429	\$291	\$1,317	\$7,704
87	Gas-related	<b>Gas-related total</b>	\$	\$402	\$372	\$386	\$442	\$521	\$385	\$774	\$784	\$590	\$351	\$187	\$1,213	\$6,409
88																
89	Contracts	Centralia PPA	\$	(\$0)	(\$0)	(\$19)	(\$0)	(\$3)	(\$0)	(\$34)	(\$0)	(\$10)	(\$0)	\$19	(\$1)	(\$48)
90	Contracts	Electron Hydro PPA	\$	(\$76)	(\$94)	(\$286)	(\$8)	\$9	(\$131)	\$325	\$765	\$86	(\$320)	(\$151)	\$10	\$130
91	Contracts	Klondike Wind PPA	\$	(\$277)	\$161	(\$378)	(\$133)	(\$49)	(\$148)	(\$445)	(\$258)	(\$300)	(\$528)	(\$82)	(\$212)	(\$2,648)
92	Contracts	Mid C hydro PPAs	\$	\$869	(\$537)	(\$335)	\$65	(\$228)	(\$176)	\$140	(\$291)	(\$1,659)	(\$1,051)	(\$898)	(\$2,816)	(\$6,916)
93	Contracts	Other long-term contracts	\$	\$97	\$1,968	(\$129)	\$162	\$315	\$1,022	(\$1,175)	(\$748)	\$539	(\$15)	(\$996)	(\$807)	\$233
94	Contracts	Schedule 91 contracts	\$	(\$991)	\$105	(\$69)	\$65	(\$94)	(\$181)	(\$160)	(\$157)	\$369	\$392	\$292	\$398	(\$31)
95	Contracts	Twin Falls PPA	\$	\$270	\$234	(\$165)	\$335	\$255	(\$364)	(\$216)	(\$26)	(\$34)	(\$79)	\$129	\$105	\$445
96	Contracts	WNP-3 Settlement	\$	\$978	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$978
97	Contracts	<b>Contracts total</b>	\$	\$870	\$1,837	(\$1,383)	\$487	\$205	\$23	(\$1,564)	(\$714)	(\$1,009)	(\$1,600)	(\$1,687)	(\$3,323)	(\$7,857)
98																
99	Market purchases/sales	Market purchases	\$	\$2,759	\$2,751	\$1,655	\$2,692	(\$675)	\$2,075	\$22,410	\$21,492	\$4,771	\$16,217	\$30,365	\$16,043	\$122,556
100	Market purchases/sales	Market sales	\$	(\$572)	\$87	(\$2,582)	(\$1,226)	(\$206)	(\$1,165)	(\$5,683)	(\$4,765)	(\$9,261)	(\$6,859)	(\$7,155)	(\$12,262)	(\$51,648)
101	Market purchases/sales	<b>Market purchases/sales total</b>	\$	\$2,187	\$2,838	(\$927)	\$1,466	(\$881)	\$911	\$16,727	\$16,727	(\$4,490)	\$9,357	\$23,210	\$3,782	\$70,908
102																
103	Transmission	Reassignments	\$	\$228	\$77	(\$93)	(\$8)	(\$234)	\$52	\$173	\$486	\$596	\$581	\$494	\$341	\$2,692
104	Transmission	Wheeling	\$	(\$45)	(\$19)	(\$72)	(\$64)	(\$93)	\$86	(\$65)	\$325	\$19	\$159	\$24	\$159	\$414
105	Transmission	<b>Transmission total</b>	\$	\$183	\$58	(\$165)	(\$72)	(\$328)	\$137	\$108	\$811	\$616	\$740	\$518	\$500	\$3,106
106																
107	Other power supply expense	Brokerage fees	\$	\$4	\$34	(\$3)	\$6	\$12	\$7	(\$9)	\$8	\$18	\$25	\$11	\$8	\$121
108	Other power supply expense	557 not in PCA	\$	\$345	(\$259)	\$834	\$302	\$800	\$639	\$1,107	\$482	\$755	\$699	\$410	\$191	\$6,305
109	Other power supply expense	<b>Other power supply expense</b>	\$	\$349	(\$226)	\$831	\$308	\$812	\$645	\$1,099	\$490	\$773	\$724	\$420	\$199	\$6,426
110																
111		<b>Total power cost variance</b>	\$	(\$8,325)	(\$6,111)	(\$5,545)	(\$3,307)	(\$1,782)	\$1,745	\$17,214	\$18,184	(\$3,306)	\$1,521	(\$23,070)	(\$12,701)	(\$25,482)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
112				-	-	-	-	-	-	-	-	-	-	-	-	-
113																
114	<b>Load and generation variance impact on market purchases/sales cost</b>															
115	<i>increase/(decrease) in cost relative to rates @ flat price in rates</i>			<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
116		Total load	\$	(\$4,587)	\$235	(\$2,254)	(\$2,144)	(\$2,867)	(\$2,281)	\$807	(\$1,010)	(\$3,972)	(\$2,921)	(\$4,623)	(\$8,054)	<b>(\$33,671)</b>
117		Hydro	\$	(\$1,852)	(\$2,991)	(\$823)	(\$683)	\$151	\$313	\$3,099	\$3,187	\$708	\$1,319	\$727	\$2,972	<b>\$6,127</b>
118		Wind	\$	\$464	(\$3,391)	\$167	(\$578)	\$492	\$35	\$2,041	\$244	\$269	\$2,198	(\$10)	\$1,064	<b>\$2,996</b>
119		Colstrip 1&2	\$	(\$301)	\$128	(\$358)	\$687	\$67	(\$269)	(\$2,198)	(\$1,852)	(\$1,996)	(\$1,979)	(\$1,762)	(\$980)	<b>(\$10,813)</b>
120		Colstrip 3&4	\$	(\$668)	(\$120)	(\$525)	(\$120)	\$18	(\$1,222)	\$8,437	\$6,368	\$497	(\$459)	(\$666)	\$1,268	<b>\$12,806</b>
121		Gas-fired	\$	\$8,926	\$7,335	\$4,158	\$3,739	(\$888)	(\$108)	(\$5,648)	(\$2,875)	(\$1,441)	\$14,413	\$29,773	\$8,031	<b>\$65,415</b>
122		PG&E Exchange	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	<b>\$1,498</b>
123		Contracts	\$	\$29	(\$112)	\$375	(\$80)	(\$95)	\$171	\$639	\$233	\$215	\$780	\$329	\$347	<b>\$2,831</b>
124		Impact to market purchases/sales cost from volume changes only	\$	\$2,058	\$201	\$740	\$821	(\$3,122)	(\$3,852)	\$8,094	\$5,002	(\$5,929)	\$13,350	\$24,596	\$5,230	<b>\$47,190</b>
125		Remaining impact from price differences	\$	\$129	\$2,637	(\$1,667)	\$645	\$2,241	\$4,762	\$8,633	\$11,726	\$1,439	(\$3,992)	(\$1,386)	(\$1,448)	<b>\$23,719</b>
126																
127	<i>allocate impact from price differences to source of volume variance</i>															
128		Total load	\$	(\$4,557)	\$286	(\$2,632)	(\$2,008)	(\$1,786)	(\$288)	\$1,016	\$48	(\$3,330)	(\$3,623)	(\$4,892)	(\$8,759)	<b>(\$30,525)</b>
129		Hydro	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	<b>\$9,529</b>
130		Wind	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	<b>\$4,340</b>
131		Colstrip 1&2	\$	(\$299)	\$156	(\$418)	\$753	\$142	(\$34)	(\$982)	\$87	(\$1,673)	(\$2,455)	(\$1,864)	(\$1,066)	<b>(\$7,652)</b>
132		Colstrip 3&4	\$	(\$663)	(\$105)	(\$613)	(\$113)	\$39	(\$155)	\$10,612	\$9,460	\$573	(\$570)	(\$704)	\$1,206	<b>\$18,967</b>
133		Gas-fired	\$	\$9,002	\$8,920	\$3,258	\$4,097	(\$749)	\$573	(\$2,305)	\$852	(\$1,195)	\$12,308	\$28,857	\$7,651	<b>\$71,269</b>
134		PG&E Exchange	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	<b>\$1,498</b>
135		Contracts	\$	\$30	\$12	\$294	(\$77)	(\$90)	\$309	\$1,004	\$518	\$216	\$667	\$297	\$303	<b>\$3,483</b>
136		Total increase/(decrease) to market purchases/sales cost	\$	\$2,187	\$2,838	(\$927)	\$1,466	(\$881)	\$911	\$16,727	\$16,727	(\$4,490)	\$9,357	\$23,210	\$3,782	<b>\$70,908</b>
137		check against market purchases/sales variance above	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
138																
139																
140		<b>Increase/(decrease) to Power Costs by source</b>		<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>2018 Total</b>
141																
142		<b>Load</b>	\$	(\$4,557)	\$286	(\$2,632)	(\$2,008)	(\$1,786)	(\$288)	\$1,016	\$48	(\$3,330)	(\$3,623)	(\$4,892)	(\$8,759)	<b>(\$30,525)</b>
144		Hydro generation	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	<b>\$9,529</b>
145		<b>Hydro total</b>	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	<b>\$9,529</b>
147		Wind generation	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	<b>\$4,340</b>
148		<b>Wind total</b>	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	<b>\$4,340</b>
150		Colstrip 1&2 generation	\$	(\$299)	\$156	(\$418)	\$753	\$142	(\$34)	(\$982)	\$87	(\$1,673)	(\$2,455)	(\$1,864)	(\$1,066)	<b>(\$7,652)</b>
151		Colstrip 1&2 fuel cost	\$	(\$199)	(\$1,230)	\$573	(\$928)	(\$334)	\$2,387	\$860	\$2,092	\$1,632	\$1,784	\$1,093	\$956	<b>\$8,685</b>
152		<b>Colstrip total 1&amp;2</b>	\$	(\$498)	(\$1,074)	\$155	(\$175)	(\$192)	\$2,353	(\$122)	\$2,179	(\$42)	(\$671)	(\$771)	(\$110)	<b>\$1,033</b>
154		Colstrip 3&4 generation	\$	(\$663)	(\$105)	(\$613)	(\$113)	\$39	(\$155)	\$10,612	\$9,460	\$573	(\$570)	(\$704)	\$1,206	<b>\$18,967</b>
155		Colstrip 3&4 fuel cost	\$	(\$3)	(\$332)	(\$75)	(\$266)	\$84	\$914	(\$1,811)	(\$896)	(\$87)	\$752	\$185	(\$572)	<b>(\$2,108)</b>
156		<b>Colstrip total 3&amp;4</b>	\$	(\$666)	(\$436)	(\$688)	(\$379)	\$122	\$759	\$8,801	\$8,564	\$485	\$182	(\$520)	\$634	<b>\$16,859</b>
158		Gas-fired generation	\$	\$9,002	\$8,920	\$3,258	\$4,097	(\$749)	\$573	(\$2,305)	\$852	(\$1,195)	\$12,308	\$28,857	\$7,651	<b>\$71,269</b>
159		Gas fuel cost (incl. hedges)	\$	(\$12,115)	(\$9,429)	(\$4,786)	(\$4,744)	(\$1,861)	(\$3,657)	\$1,021	(\$1,110)	(\$1,329)	(\$10,587)	(\$46,996)	(\$15,456)	<b>(\$111,052)</b>
160		Gas-related charges	\$	\$402	\$372	\$386	\$442	\$521	\$385	\$774	\$784	\$590	\$351	\$187	\$1,213	<b>\$6,409</b>
161		<b>Gas-fired total</b>	\$	(\$2,711)	(\$137)	(\$1,142)	(\$205)	(\$2,089)	(\$2,699)	(\$510)	\$525	(\$1,934)	\$2,072	(\$17,952)	(\$6,592)	<b>(\$33,374)</b>
163		PG&E generation	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	<b>\$1,498</b>
164		<b>PG&amp;E total</b>	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	<b>\$1,498</b>
166		Contracts volume	\$	\$30	\$12	\$294	(\$77)	(\$90)	\$309	\$1,004	\$518	\$216	\$667	\$297	\$303	<b>\$3,483</b>
167		Contracts cost	\$	\$870	\$1,837	(\$1,383)	\$487	\$205	\$23	(\$1,564)	(\$714)	(\$1,009)	(\$1,600)	(\$1,687)	(\$3,323)	<b>(\$7,857)</b>
168		<b>Contracts total</b>	\$	\$900	\$1,850	(\$1,089)	\$410	\$116	\$333	(\$560)	(\$196)	(\$793)	(\$933)	(\$1,390)	(\$3,020)	<b>(\$4,374)</b>
170		<b>Transmission costs</b>	\$	\$183	\$58	(\$165)	(\$72)	(\$328)	\$137	\$108	\$811	\$616	\$740	\$518	\$500	<b>\$3,106</b>
172		<b>Other power supply (557) expense</b>	\$	\$349	(\$226)	\$831	\$308	\$812	\$645	\$1,099	\$490	\$773	\$724	\$420	\$199	<b>\$6,426</b>
174		<b>Total increase/(decrease) to Power Costs</b>	\$	(\$8,325)	(\$6,111)	(\$5,545)	(\$3,307)	(\$1,782)	\$1,745	\$17,214	\$18,184	(\$3,306)	\$1,521	(\$23,070)	(\$12,701)	<b>(\$25,482)</b>
175		<i>check against total cost variance above</i>	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
176		Non-PCA 557 expense variance included above	\$	\$345	(\$259)	\$834	\$302	\$800	\$639	\$1,107	\$482	\$755	\$699	\$410	\$191	<b>\$6,305</b>
177		<b>Under/(over) recovery due strictly to Power Costs</b>	\$	(\$8,671)	(\$5,851)	(\$6,379)	(\$3,609)	(\$2,582)	\$1,107	\$16,106	\$17,702	(\$4,061)	\$822	(\$23,480)	(\$12,892)	<b>(\$31,787)</b>
178																
179		<b>Revenue comparison</b>														
180		Delivered load in rates	MWh	2,173,656	1,873,460	1,963,911	1,712,866	1,583,147	1,530,709	1,590,573	1,602,836	1,548,524	1,721,219	1,931,080	2,318,640	<b>21,550,621</b>
181		Actual delivered load	MWh	2,043,402	1,989,159	1,870,558	1,653,903	1,504,373	1,471,898	1,637,601	1,561,173	1,431,798	1,652,766	1,804,883	2,082,766	<b>20,704,280</b>
182		Delivered load higher/(lower) than rates	MWh	(130,254)	115,699	(93,353)	(58,963)	(78,774)	(58,811)	47,029	(41,662)	(116,726)	(68,453)	(126,197)	(235,874)	<b>(846,340)</b>
184		Variable Baseline Rate from Exhibit A-1	\$/MWh	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	32.8952	<b>32.8952</b>
186		<b>Revenue higher/(lower) due to load (thousands)</b>	\$	(\$4,285)	\$3,806	(\$3,071)	(\$1,940)	(\$2,591)	(\$1,935)	\$1,547	(\$1,370)	(\$3,840)	(\$2,252)	(\$4,151)	(\$7,759)	<b>(\$27,841)</b>

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
187																
188																
189		<b>Summary of under/(over) recovery</b>														
190																
191		Baseline Rate revenues due to load	\$	\$4,285	(\$3,806)	\$3,071	\$1,940	\$2,591	\$1,935	(\$1,547)	\$1,370	\$3,840	\$2,252	\$4,151	\$7,759	\$27,841
192		Power Costs due to load	\$	(\$4,557)	\$286	(\$2,632)	(\$2,008)	(\$1,786)	(\$288)	\$1,016	\$48	(\$3,330)	(\$3,623)	(\$4,892)	(\$8,759)	(\$30,525)
193		<b>Under/(over) recovery due to load</b>	\$	(\$272)	(\$3,520)	\$439	(\$68)	\$805	\$1,646	(\$531)	\$1,418	\$510	(\$1,372)	(\$741)	(\$1,000)	(\$2,685)
194																
195	Hydro generation	Hydro	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	\$9,529
196	Wind generation	Wind	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	\$4,340
197	Colstrip	Colstrip 1&2	\$	(\$498)	(\$1,074)	\$155	(\$175)	(\$192)	\$2,353	(\$122)	\$2,179	(\$42)	(\$671)	(\$771)	(\$110)	\$1,033
198	Colstrip	Colstrip 3&4	\$	(\$666)	(\$436)	(\$688)	(\$379)	\$122	\$759	\$8,801	\$8,564	\$485	\$182	(\$520)	\$634	\$16,859
199	Gas-fired generation	Gas-fired plants	\$	(\$2,711)	(\$137)	(\$1,142)	(\$205)	(\$2,089)	(\$2,699)	(\$510)	\$525	(\$1,934)	\$2,072	(\$17,952)	(\$6,592)	(\$33,374)
200		PG&E Exchange	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
201	Long-term contracts	Contracts	\$	\$900	\$1,850	(\$1,089)	\$410	\$116	\$333	(\$560)	(\$196)	(\$793)	(\$933)	(\$1,390)	(\$3,020)	(\$4,374)
202	Transmission/wheeling	Transmission/wheeling	\$	\$183	\$58	(\$165)	(\$72)	(\$328)	\$137	\$108	\$811	\$616	\$740	\$518	\$500	\$3,106
203		501 Adjustment	\$						(\$1,782)	\$1,782						
204	other	Montana electric energy tax	\$	\$2	\$18	\$18	\$69	\$18	\$18	(\$163)	\$18	\$18	(\$19)	\$18	\$18	\$33
205	other	Centralia PPA equity adjustment	\$	\$8	(\$33)	\$7	(\$6)	\$8	(\$6)	\$7	\$8	(\$6)	\$8	(\$5)	\$8	(\$1)
206	other	EIM fixed cost adjustment	\$	\$0	\$1,410	\$705	\$705	\$705	\$176	\$617	\$617	\$617	\$617	\$617	\$617	\$7,402
207	other	Brokerage Fees	\$	\$4	\$34	(\$3)	\$6	\$12	\$7	(\$9)	\$8	\$18	\$25	\$11	\$8	\$121
208	other	Expected shaping difference	\$	\$3,216	\$3,750	\$757	(\$2,195)	(\$2,456)	(\$4,462)	(\$6,165)	(\$6,748)	(\$978)	\$1,190	\$5,756	\$8,333	(\$0)
209	other	Remove firm wholesale	\$	\$0	\$2	\$1	\$1	\$1	\$1	(\$4)	(\$4)	\$0	(\$2)	\$4	(\$1)	(\$1)
210																
211		<b>Total under/(over) recovery explained</b>	\$	(\$1,160)	(\$4,511)	(\$1,820)	(\$3,095)	(\$1,714)	(\$3,013)	\$10,634	\$12,963	(\$570)	\$4,869	(\$12,939)	\$3,842	\$3,486
212		under/(over) recovery per Sched. B	\$	(\$1,159)	(\$4,510)	(\$1,820)	(\$3,094)	(\$1,714)	(\$3,013)	\$10,635	\$12,964	(\$569)	\$4,869	(\$12,938)	\$3,842	\$3,491
213	other	check total		0.48	0.47	0.44	0.39	0.35	0.34	0.38	0.37	0.34	0.39	0.42	0.49	4.85

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD
17	<b>Load and generation variance impact on market purchases/sales cost</b>													
18	<i>increase/(decrease) in cost relative to rates @ flat mid-c price</i>													
19		<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
20														
21		(\$479)	(\$407)	\$85	\$43	(\$271)	\$77	\$602	\$788	\$202	(\$116)	(\$214)	(\$405)	(\$94)
22		(\$1,031)	(\$2,435)	(\$1,181)	(\$805)	\$371	\$124	\$1,493	\$1,594	\$405	\$1,148	\$688	\$3,325	\$3,697
23		\$23	\$24	\$90	\$132	\$3	\$146	\$430	\$249	\$147	\$467	\$344	\$267	\$2,322
24		(\$364)	(\$174)	\$183	(\$54)	\$48	(\$34)	\$574	\$556	(\$47)	(\$180)	(\$91)	(\$215)	\$202
25		(\$1,852)	(\$2,991)	(\$823)	(\$683)	\$151	\$313	\$3,099	\$3,187	\$708	\$1,319	\$727	\$2,972	\$6,127
26														
27		(\$2)	(\$776)	\$246	(\$221)	\$115	\$73	\$661	(\$71)	\$172	\$468	(\$89)	\$238	\$814
28		\$180	(\$1,868)	(\$9)	(\$174)	\$178	(\$29)	\$441	\$82	\$59	\$829	(\$432)	\$798	\$56
29		\$286	(\$747)	(\$70)	(\$183)	\$199	(\$9)	\$939	\$233	\$38	\$900	\$511	\$29	\$2,126
30		\$464	(\$3,391)	\$167	(\$578)	\$492	\$35	\$2,041	\$244	\$269	\$2,198	(\$10)	\$1,064	\$2,996
31														
32		(\$301)	\$128	(\$358)	\$687	\$67	(\$269)	(\$2,198)	(\$1,852)	(\$1,996)	(\$1,979)	(\$1,762)	(\$980)	(\$10,813)
33		(\$668)	(\$120)	(\$525)	(\$120)	\$18	(\$1,222)	\$8,437	\$6,368	\$497	(\$459)	(\$666)	\$1,268	\$12,806
34		(\$969)	\$8	(\$883)	\$567	\$85	(\$1,491)	\$6,239	\$4,516	(\$1,500)	(\$2,438)	(\$2,427)	\$287	\$1,994
35														
36		(\$0)	\$0	\$0	(\$0)	(\$0)	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$1)	(\$0)	(\$2)
37		\$390	\$286	\$81	\$5	(\$151)	(\$322)	(\$1,379)	(\$944)	\$900	\$594	(\$27)	\$265	(\$303)
38		\$1,163	\$956	\$770	\$533	(\$181)	\$292	(\$1,890)	(\$1,009)	(\$1,374)	\$3,222	\$3,927	\$1,046	\$7,455
39		\$828	\$921	\$822	\$370	\$85	\$222	(\$462)	(\$449)	(\$256)	\$2,322	\$3,325	\$1,894	\$9,622
40		\$19	\$71	(\$3)	\$2	(\$32)	(\$78)	\$247	\$289	\$81	\$225	\$25	(\$12)	\$834
41		\$212	\$304	\$80	\$102	(\$35)	(\$79)	(\$493)	\$435	\$423	\$188	\$215	\$410	\$1,761
42		\$2,857	\$2,096	\$1,216	\$1,564	\$122	\$206	(\$1,091)	(\$1,109)	(\$933)	\$1,133	\$9,813	\$3,599	\$19,473
43		\$2,722	\$1,949	\$594	\$761	(\$683)	(\$528)	(\$1,071)	(\$337)	(\$253)	\$3,116	\$9,753	(\$294)	\$15,729
44		\$725	\$628	\$588	\$373	\$58	\$223	\$383	(\$302)	(\$176)	\$3,264	\$2,703	\$1,058	\$9,524
45		\$11	\$126	\$10	\$28	(\$69)	(\$44)	\$108	\$552	\$148	\$349	\$40	\$65	\$1,323
46		\$8,926	\$7,335	\$4,158	\$3,739	(\$888)	(\$180)	(\$5,648)	(\$2,875)	(\$1,441)	\$14,413	\$29,773	\$8,031	\$65,415
47														
48		\$0	\$0	\$7	\$0	\$0	\$0	\$0	\$12	\$0	\$0	(\$10)	\$0	\$9
49		\$25	\$26	\$87	\$2	(\$4)	\$23	(\$125)	(\$307)	(\$35)	\$204	\$116	(\$6)	\$6
50		\$96	(\$72)	\$115	\$35	\$5	\$27	\$243	\$224	\$128	\$337	\$96	\$164	\$1,398
51		(\$49)	(\$16)	\$33	(\$48)	(\$60)	\$6	\$113	\$23	(\$19)	(\$10)	(\$24)	\$15	(\$35)
52		\$60	\$44	\$91	\$32	\$35	\$60	\$256	\$261	\$129	\$166	\$217	\$208	\$1,559
53		(\$103)	(\$93)	\$42	(\$100)	(\$73)	\$55	\$151	\$19	\$12	\$84	(\$66)	(\$35)	(\$106)
54		\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
55		\$75	(\$995)	\$375	(\$80)	(\$95)	(\$319)	\$1,556	\$940	\$6	\$780	\$1,156	\$930	\$4,329
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61		(\$4,587)	\$235	(\$2,254)	(\$2,144)	(\$2,867)	(\$2,281)	\$807	(\$1,010)	(\$3,972)	(\$2,921)	(\$4,623)	(\$8,054)	(\$33,671)
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48			rates	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	
49			mwhs	60,212	45,380	-	-	-	(44,243)	(112,717)	(135,944)	(120,097)	-	129,213	178,189	
50			price	27.64	28.83	25.18	21.73	20.47	22.31	24.66	25.82	25.95	24.91	26.26	27.64	
51																
52																
53			actuals	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	
54			mwhs	58,043	76,006	0	0	0	(22,274)	(130,048)	(148,632)	(112,046)	0	112,522	166,429	
55			price	21.45	17.48	19.52	14.36	6.90	11.50	52.91	55.67	27.34	41.01	49.53	49.61	
56				1,245	1,329	-	-	-	(256)	(6,881)	(8,274)	(3,064)	-	5,574	8,257	(2,071)
57																
58			change	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	
59			mwhs	(2,169)	30,626	-	-	-	21,969	(17,331)	(12,688)	8,051	-	(16,691)	(11,760)	
60																
61				(60)	535				490.23	(916.99)	(706.33)	208.93		(438)	(325)	(1,212)
62																