

**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-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

DR NO.	“CONFIDENTIAL” Material
005	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	Market prices comparison			January	February	March	April	May	June	July	August	September	October	November	December	Total
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	Energy variance (actual minus rates)			January	February	March	April	May	June	July	August	September	October	November	December	Total
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	25,127
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)	(39,442)
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)	(71,074)
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	6,331
25	Hydro	Hydro total	MWh	66,759	103,228	28,540	27,302	(47,939)	(28,623)	(58,567)	(57,248)	(25,810)	(27,493)	(9,220)	(49,988)	(79,058)
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)	(27,279)
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)	8,351
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)	(60,798)
30	Wind	Wind total	MWh	(21,675)	117,629	(9,463)	26,577	(71,290)	(4,625)	(38,574)	(2,914)	(9,853)	(53,589)	9,501	(21,450)	(79,726)
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	392,040
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)	(166,912)
34	Colstrip	Colstrip total	MWh	35,048	(3,166)	35,047	(42,305)	(12,368)	66,811	(70,297)	(42,639)	58,779	97,876	92,432	9,909	225,128
35																
36	Gas-fired*	Crystal Mountain	MWh	5	0	0	2	12	0	1	1	5	1	31	16	74
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)	23,599
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)	(212,282)
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)	(306,730)
40	Gas-fired	Frederickson	MWh	(863)	(4,088)	100	(123)	1,559	3,496	(4,677)	(5,186)	(2,945)	(5,487)	(499)	426	(18,285)
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)	(53,673)
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)	(635,034)
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	(460,784)
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)	(297,837)
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)	(32,814)
46	Gas-fired	Gas-fired total	MWh	(416,222)	(419,635)	(212,987)	(260,341)	17,883	(34,944)	245,066	137,851	58,565	(351,468)	(600,563)	(156,973)	(1,993,767)
47																
48	Contracts	Centralia PPA	MWh	0	0	(380)	0	0	0	0	(210)	0	0	380	0	(210)
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	2,197
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)	(40,136)
51	Contracts	Other long-term contracts	MWh	1,782	567	(1,694)	2,212	2,910	(554)	(2,140)	(421)	749	401	907	(311)	4,407
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)	(49,385)
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	6,240
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)	8
55	Contracts	Contracts total	MWh	(5,111)	32,961	(19,215)	2,044	765	7,106	(26,711)	(10,509)	304	(18,863)	(21,557)	(18,094)	(76,879)
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	4,025,018
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)	(3,365,263)
59	Market purchases/sales	Market purchases/sales total	MWh	175,272	182,446	88,573	148,078	(27,141)	(107,933)	(35,657)	(63,676)	(235,070)	236,283	353,347	(54,768)	659,755
60																
61		Total load variance	MWh	(165,929)	13,462	(89,505)	(98,644)	(140,089)	(102,208)	15,261	(39,134)	(153,084)	(117,253)	(176,060)	(291,363)	(1,344,546)
62				-	(0.00)	-	-	-	-	(0.00)	-	-	-	-	-	-

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
63																
64	Cost variance (actual minus rates) thousands			January	February	March	April	May	June	July	August	September	October	November	December	Total
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)	(\$245)	(\$198)	(\$198)	(\$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	Colstrip total	\$	(\$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	Gas fuel total	\$	(\$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	Gas-related total	\$	\$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	Contracts total	\$	\$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	Market purchases/sales total	\$	\$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	Transmission total	\$	\$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	Other power supply expense	\$	\$349	(\$226)	\$831	\$308	\$812	\$645	\$1,099	\$490	\$773	\$724	\$420	\$199	\$6,426
110																
111		Total power cost variance	\$	(\$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	Load and generation variance impact on market purchases/sales cost															
115	<i>increase/(decrease) in cost relative to rates @ flat price in rates</i>			January	February	March	April	May	June	July	August	September	October	November	December	Total
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)	(\$33,671)
117		Hydro	\$	(\$1,852)	(\$2,991)	(\$823)	(\$683)	\$151	\$313	\$3,099	\$3,187	\$708	\$1,319	\$727	\$2,972	\$6,127
118		Wind	\$	\$464	(\$3,391)	\$167	(\$578)	\$492	\$35	\$2,041	\$244	\$269	\$2,198	(\$10)	\$1,064	\$2,996
119		Colstrip 1&2	\$	(\$301)	\$128	(\$358)	\$687	\$67	(\$269)	(\$2,198)	(\$1,852)	(\$1,996)	(\$1,979)	(\$1,762)	(\$980)	(\$10,813)
120		Colstrip 3&4	\$	(\$668)	(\$120)	(\$525)	(\$120)	\$18	(\$1,222)	\$8,437	\$6,368	\$497	(\$459)	(\$666)	\$1,268	\$12,806
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	\$65,415
122		PG&E Exchange	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
123		Contracts	\$	\$29	(\$112)	\$375	(\$80)	(\$95)	\$171	\$639	\$233	\$215	\$780	\$329	\$347	\$2,831
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	\$47,190
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)	\$23,719
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)	(\$30,525)
129		Hydro	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	\$9,529
130		Wind	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	\$4,340
131		Colstrip 1&2	\$	(\$299)	\$156	(\$418)	\$753	\$142	(\$34)	(\$982)	\$87	(\$1,673)	(\$2,455)	(\$1,864)	(\$1,066)	(\$7,652)
132		Colstrip 3&4	\$	(\$663)	(\$105)	(\$613)	(\$113)	\$39	(\$155)	\$10,612	\$9,460	\$573	(\$570)	(\$704)	\$1,206	\$18,967
133		Gas-fired	\$	\$9,002	\$8,920	\$3,258	\$4,097	(\$749)	\$573	(\$2,305)	\$852	(\$1,195)	\$12,308	\$28,857	\$7,651	\$71,269
134		PG&E Exchange	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
135		Contracts	\$	\$30	\$12	\$294	(\$77)	(\$90)	\$309	\$1,004	\$518	\$216	\$667	\$297	\$303	\$3,483
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	\$70,908
137		check against market purchases/sales variance above	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
138																
139																
140		Increase/(decrease) to Power Costs by source		January	February	March	April	May	June	July	August	September	October	November	December	2018 Total
141																
142		Load	\$	(\$4,557)	\$286	(\$2,632)	(\$2,008)	(\$1,786)	(\$288)	\$1,016	\$48	(\$3,330)	(\$3,623)	(\$4,892)	(\$8,759)	(\$30,525)
144		Hydro generation	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	\$9,529
145		Hydro total	\$	(\$1,840)	(\$2,602)	(\$943)	(\$646)	\$521	\$870	\$3,898	\$4,734	\$817	\$1,154	\$713	\$2,851	\$9,529
147		Wind generation	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	\$4,340
148		Wind total	\$	\$468	(\$2,947)	\$127	(\$541)	\$1,042	\$125	\$2,567	\$323	\$311	\$1,877	(\$24)	\$1,012	\$4,340
150		Colstrip 1&2 generation	\$	(\$299)	\$156	(\$418)	\$753	\$142	(\$34)	(\$982)	\$87	(\$1,673)	(\$2,455)	(\$1,864)	(\$1,066)	(\$7,652)
151		Costrip 1&2 fuel cost	\$	(\$199)	(\$1,230)	\$573	(\$928)	(\$334)	\$2,387	\$860	\$2,092	\$1,632	\$1,784	\$1,093	\$956	\$8,685
152		Colstrip total 1&2	\$	(\$498)	(\$1,074)	\$155	(\$175)	(\$192)	\$2,353	(\$122)	\$2,179	(\$42)	(\$671)	(\$771)	(\$1,110)	\$1,033
154		Colstrip 3&4 generation	\$	(\$663)	(\$105)	(\$613)	(\$113)	\$39	(\$155)	\$10,612	\$9,460	\$573	(\$570)	(\$704)	\$1,206	\$18,967
155		Costrip 3&4 fuel cost	\$	(\$3)	(\$332)	(\$75)	(\$266)	\$84	\$914	(\$1,811)	(\$896)	(\$87)	\$752	\$185	(\$572)	(\$2,108)
156		Colstrip total 3&4	\$	(\$666)	(\$436)	(\$688)	(\$379)	\$122	\$759	\$8,801	\$8,564	\$485	\$182	(\$520)	\$634	\$16,859
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	\$71,269
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)	(\$111,052)
160		Gas-related charges	\$	\$402	\$372	\$386	\$442	\$521	\$385	\$774	\$784	\$590	\$351	\$187	\$1,213	\$6,409
161		Gas-fired total	\$	(\$2,711)	(\$137)	(\$1,142)	(\$205)	(\$2,089)	(\$2,699)	(\$510)	\$525	(\$1,934)	\$2,072	(\$17,952)	(\$6,592)	(\$33,374)
163		PG&E generation	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
164		PG&E total	\$	\$47	(\$883)	\$0	\$0	\$0	(\$490)	\$917	\$706	(\$209)	\$0	\$827	\$583	\$1,498
166		Contracts volume	\$	\$30	\$12	\$294	(\$77)	(\$90)	\$309	\$1,004	\$518	\$216	\$667	\$297	\$303	\$3,483
167		Contracts cost	\$	\$870	\$1,837	(\$1,383)	\$487	\$205	\$23	(\$1,564)	(\$714)	(\$1,009)	(\$1,600)	(\$1,687)	(\$3,323)	(\$7,857)
168		Contracts total	\$	\$900	\$1,850	(\$1,089)	\$410	\$116	\$333	(\$560)	(\$196)	(\$793)	(\$933)	(\$1,390)	(\$3,020)	(\$4,374)
170		Transmission costs	\$	\$183	\$58	(\$165)	(\$72)	(\$328)	\$137	\$108	\$811	\$616	\$740	\$518	\$500	\$3,106
172		Other power supply (557) expense	\$	\$349	(\$226)	\$831	\$308	\$812	\$645	\$1,099	\$490	\$773	\$724	\$420	\$199	\$6,426
174		Total increase/(decrease) to Power Costs	\$	(\$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)
175		<i>check against total cost variance above</i>	\$	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
176		Non-PCA 557 expense variance included above	\$	\$345	(\$259)	\$834	\$302	\$800	\$639	\$1,107	\$482	\$755	\$699	\$410	\$191	\$6,305
177		Under/(over) recovery due strictly to Power Costs	\$	(\$8,671)	(\$5,851)	(\$6,379)	(\$3,609)	(\$2,582)	\$1,107	\$16,106	\$17,702	(\$4,061)	\$822	(\$23,480)	(\$12,892)	(\$31,787)
178																
179		Revenue comparison														
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	21,550,621
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	20,704,280
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)	(846,340)
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	32.8952
186		Revenue higher/(lower) due to load (thousands)	\$	(\$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)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
187																
188																
189		Summary of under/(over) recovery														
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		Under/(over) recovery due to load	\$	(\$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		Total under/(over) recovery explained	\$	(\$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	Load and generation variance impact on market purchases/sales cost													
18	<i>increase/(decrease) in cost relative to rates @ flat mid-c price</i>													
19		January	February	March	April	May	June	July	August	September	October	November	December	Total
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)	(\$108)	(\$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
56														
57														
58														
59														
60														
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)
62														

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
17																
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46																
47																
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																