

HCC AIR OP1 ANALYSIS (CAPACITY REPLACEMENT CONSTRUCTION COST = \$114.00/kW/yr)

	Proposed Ops	OP-1 Scenario 1a	OP-1 Scenario 1b	OP-1 Scenario 1c	OP-1 Scenario 1d		OP-1 Scenario 1e	OP-1 Scenario 1f	OP-1 Scenario 2	OP-1 Scenario 3	OP-1 Scenario 4	OP-1 Scenario 5	OP-1 Scenario 6
Energy													
Total Average Energy (MWh)	6,562,244	6,569,922	6,560,591	6,554,664	6,576,748	6,574,733	6,558,640	6,536,980	6,562,126	6,559,243	5,507,772	6,244,862	
Total Average Energy Difference (MWh)		7,678	(1,653)	(7,581)	14,504	12,489	(3,604)	(25,264)	(118)	(3,001)	(1,054,472)	(317,382)	
Value													
Total Value (\$1,000)	\$ 351,547	\$ 348,420	\$ 348,437	\$ 349,109	\$ 351,259	\$ 351,334	\$ 348,974	\$ 345,238	\$ 351,236	\$ 348,896	\$ 254,974	\$ 323,829	
Total Value Difference (\$1,000)		\$ (1,496)	\$ (1,734)	\$ (1,548)	\$ 273	\$ 253	\$ (1,505)	\$ (3,482)	\$ (180)	\$ (1,534)	\$ (74,860)	\$ (19,269)	
Transmission Cost (\$1,000)		\$ (1,630)	\$ (1,375)	\$ (890)	\$ (560)	\$ (465)	\$ (1,067)	\$ (2,827)	\$ (131)	\$ (1,117)	\$ (21,713)	\$ (8,448)	
Total Value (\$1,000)		\$ (3,126)	\$ (3,109)	\$ (2,438)	\$ (287)	\$ (212)	\$ (2,572)	\$ (6,309)	\$ (311)	\$ (2,651)	\$ (96,573)	\$ (27,718)	
Capacity													
Brownlee project (MW)	728	728	728	728	728	728	728	657	728	728	220	629	
Oxbow project (MW)	220	220	220	220	220	220	220	220	220	220	69	220	
Hells Canyon project (MW)	330	144	179	236	279	279	210	339	229	210	139	339	
Scenario Impact													
Total Capacity Construction (MW)		(186)	(151)	(94)	(51)	(51)	(120)	(62)	(100)	(120)	(850)	(90)	
Annualized Capacity Capital (\$1,000)		\$ (21,198)	\$ (17,237)	\$ (10,679)	\$ (5,786)	\$ (5,786)	\$ (13,666)	\$ (7,120)	\$ (11,438)	\$ (13,666)	\$ (96,874)	\$ (10,237)	
Total Capacity (\$1,000)		\$ (21,198)	\$ (17,237)	\$ (10,679)	\$ (5,786)	\$ (5,786)	\$ (13,666)	\$ (7,120)	\$ (11,438)	\$ (13,666)	\$ (96,874)	\$ (10,237)	
Ancillary Services													
Total Reserves Construction (MW)		(13)	(11)	(7)	(4)	(4)	(8)	(4)	(7)	(8)	(59)	(6)	
Annualized Reserves Capital (\$1,000)		\$ (1,484)	\$ (1,207)	\$ (748)	\$ (405)	\$ (405)	\$ (957)	\$ (498)	\$ (801)	\$ (957)	\$ (6,781)	\$ (717)	
Annual Reserves (\$1,000)		\$ (1,469)	\$ (1,469)	\$ (735)	\$ (441)	\$ (220)	\$ (955)	\$ (441)	\$ (955)	\$ (955)	\$ (1,469)	\$ (1,469)	
Total Reserves (\$1,000)		\$ (2,953)	\$ (2,676)	\$ (1,482)	\$ (846)	\$ (625)	\$ (1,912)	\$ (939)	\$ (801)	\$ (1,912)	\$ (8,250)	\$ (2,186)	
Physical Project Modifications													
Total Construction (\$1,000)		\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	\$ (298)	
Annual O & M (\$1,000)		\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	\$ (89)	
Total Capital Construction Cost (\$1,000)		\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	\$ (387)	
Lost Flexibility													
								\$ (2,200)		\$ (2,200)	\$ (2,200)	\$ (2,200)	
Total Value of Lost Flexibility (\$1,000)													
TOTAL SCENARIO ANNUALIZED IMPACT (\$1,000):		\$ (27,664)	\$ (23,409)	\$ (14,986)	\$ (7,306)	\$ (7,010)	\$ (18,537)	\$ (14,755)	\$ (12,549)	\$ (18,615)	\$ (202,084)	\$ (40,141)	

1. Average annual energy for 5 water year types
2. Reserves assumed to be 7% of capacity built

Scenario	YEAR	Total			Energy Value		
		Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)
Proposed Operations	1992	3,193,041	435,815	3,628,856	\$ 181,906	\$ 20,708	\$ 202,615
Proposed Operations	1994	4,047,338	485,095	4,532,433	\$ 225,577	\$ 22,959	\$ 248,536
Proposed Operations	1995	5,824,199	1,563,607	7,387,806	\$ 321,700	\$ 68,777	\$ 390,477
Proposed Operations	1999	5,988,425	2,159,472	8,147,896	\$ 333,408	\$ 98,457	\$ 431,865
Proposed Operations	1997	6,401,675	2,712,553	9,114,228	\$ 358,452	\$ 125,788	\$ 484,240
AVERAGE		5,090,936	1,471,308	6,562,244	\$ 284,209	\$ 67,338	\$ 351,547
Scenario	YEAR	Total			Energy Value Difference		
		Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)
OP-1 Scenario 1a	1992	3,128,482	488,310	3,616,792	\$ (3,898)	\$ 2,703	\$ (1,195)
OP-1 Scenario 1a	1994	3,918,218	622,545	4,540,764	\$ (7,838)	\$ 6,224	\$ (1,615)
OP-1 Scenario 1a	1995	5,702,836	1,707,708	7,410,545	\$ (7,885)	\$ 6,815	\$ (1,070)
OP-1 Scenario 1a	1999	5,899,501	2,269,937	8,169,438	\$ (6,309)	\$ 5,360	\$ (948)
OP-1 Scenario 1a	1997	6,302,943	2,809,129	9,112,072	\$ (7,275)	\$ 4,622	\$ (2,652)
AVERAGE		4,990,396	1,579,526	6,569,922	\$ (6,641)	\$ 5,145	\$ (1,496)
Difference from Proposed Ops		-100,539	108,218	7,678			
OP-1 Scenario 1b	1992	3,146,829	469,898	3,616,727	\$ (2,805)	\$ 1,781	\$ (1,024)
OP-1 Scenario 1b	1994	3,945,485	586,337	4,531,822	\$ (6,162)	\$ 4,564	\$ (1,598)
OP-1 Scenario 1b	1995	5,711,126	1,683,035	7,394,162	\$ (7,309)	\$ 5,601	\$ (1,708)
OP-1 Scenario 1b	1999	5,904,664	2,248,741	8,153,405	\$ (5,877)	\$ 4,338	\$ (1,538)
OP-1 Scenario 1b	1997	6,307,269	2,799,571	9,106,840	\$ (6,960)	\$ 4,156	\$ (2,803)
AVERAGE		5,003,075	1,557,517	6,560,591	\$ (5,823)	\$ 4,088	\$ (1,734)
Difference from Proposed Ops		-87,861	86,208	-1,653			
OP-1 Scenario 1c	1992	3,169,785	451,483	3,621,268	\$ (1,443)	\$ 819	\$ (624)
OP-1 Scenario 1c	1994	3,980,738	544,929	4,525,667	\$ (3,920)	\$ 2,665	\$ (1,255)
OP-1 Scenario 1c	1995	5,751,059	1,629,902	7,380,962	\$ (4,785)	\$ 3,063	\$ (1,722)
OP-1 Scenario 1c	1999	5,925,982	2,216,463	8,142,445	\$ (4,468)	\$ 2,758	\$ (1,709)
OP-1 Scenario 1c	1997	6,332,460	2,770,515	9,102,975	\$ (5,170)	\$ 2,740	\$ (2,430)
AVERAGE		5,032,005	1,522,659	6,554,664	\$ (3,957)	\$ 2,409	\$ (1,548)
Difference from Proposed Ops		-58,931	51,350	-7,581			
OP-1 Scenario 1d	1992	3,177,654	446,693	3,624,348	\$ (836)	\$ 534	\$ (302)
OP-1 Scenario 1d	1994	4,006,272	531,983	4,538,255	\$ (2,064)	\$ 1,832	\$ (232)
OP-1 Scenario 1d	1995	5,779,013	1,634,408	7,413,421	\$ (2,663)	\$ 3,184	\$ 521
OP-1 Scenario 1d	1999	5,982,303	2,206,737	8,189,040	\$ (348)	\$ 2,252	\$ 1,904
OP-1 Scenario 1d	1997	6,370,919	2,747,755	9,118,673	\$ (2,241)	\$ 1,714	\$ (527)
AVERAGE		5,063,232	1,513,515	6,576,748	\$ (1,630)	\$ 1,903	\$ 273
Difference from Proposed Ops		-27,703	42,207	14,504			
OP-1 Scenario 1e	1992	3,185,031	442,105	3,627,136	\$ (463)	\$ 321	\$ (142)
OP-1 Scenario 1e	1994	4,015,132	516,072	4,531,204	\$ (1,621)	\$ 1,216	\$ (406)
OP-1 Scenario 1e	1995	5,789,690	1,619,326	7,409,016	\$ (2,114)	\$ 2,585	\$ 471
OP-1 Scenario 1e	1999	5,982,971	2,204,569	8,187,540	\$ (321)	\$ 2,184	\$ 1,863
OP-1 Scenario 1e	1997	6,371,043	2,747,724	9,118,768	\$ (2,236)	\$ 1,713	\$ (523)
AVERAGE		5,068,773	1,505,959	6,574,733	\$ (1,351)	\$ 1,604	\$ 253
Difference from Proposed Ops		-22,162	34,651	12,489			
OP-1 Scenario 1f	1992	3,160,500	457,195	3,617,695	\$ (1,933)	\$ 1,094	\$ (839)
OP-1 Scenario 1f	1994	3,970,756	562,269	4,533,025	\$ (4,448)	\$ 3,360	\$ (1,088)
OP-1 Scenario 1f	1995	5,733,369	1,658,004	7,391,373	\$ (5,776)	\$ 4,339	\$ (1,437)
OP-1 Scenario 1f	1999	5,921,575	2,225,386	8,146,961	\$ (4,731)	\$ 3,169	\$ (1,562)
OP-1 Scenario 1f	1997	6,323,142	2,781,004	9,104,146	\$ (5,851)	\$ 3,252	\$ (2,599)
AVERAGE		5,021,869	1,536,772	6,558,640	\$ (4,548)	\$ 3,043	\$ (1,505)
Difference from Proposed Ops		-69,067	65,463	-3,604			
OP-1 Scenario 2	1992	3,146,981	454,361	3,601,343	\$ (4,045)	\$ 810	\$ (3,235)
OP-1 Scenario 2	1994	3,981,961	536,027	4,517,988	\$ (4,881)	\$ 1,947	\$ (2,934)
OP-1 Scenario 2	1995	5,680,715	1,678,431	7,359,146	\$ (9,212)	\$ 4,919	\$ (4,292)
OP-1 Scenario 2	1999	5,940,142	2,209,009	8,149,152	\$ (4,438)	\$ 2,421	\$ (2,016)
OP-1 Scenario 2	1997	6,323,282	2,733,992	9,057,274	\$ (5,821)	\$ 890	\$ (4,931)
AVERAGE		5,014,616	1,522,364	6,536,980	\$ (5,679)	\$ 2,198	\$ (3,482)
Difference from Proposed Ops		-76,319	51,056	-25,264			
OP-1 Scenario 3	1992	3,189,289	439,614	3,628,903	\$ (339)	\$ 170	\$ (168)
OP-1 Scenario 3	1994	4,023,713	509,989	4,533,702	\$ (1,651)	\$ 1,131	\$ (520)
OP-1 Scenario 3	1995	5,819,880	1,566,110	7,385,990	\$ (319)	\$ 125	\$ (194)
OP-1 Scenario 3	1999	5,987,911	2,159,898	8,147,809	\$ (36)	\$ 20	\$ (17)
OP-1 Scenario 3	1997	6,401,675	2,712,553	9,114,228	\$ -	\$ -	\$ -
AVERAGE		5,084,493	1,477,633	6,562,126	\$ (469)	\$ 289	\$ (180)
Difference from Proposed Ops		-6,442	6,324	-118			
OP-1 Scenario 4	1992	3,161,398	456,275	3,617,673	\$ (1,988)	\$ 1,034	\$ (954)
OP-1 Scenario 4	1994	3,964,683	571,380	4,536,063	\$ (4,888)	\$ 3,772	\$ (1,116)
OP-1 Scenario 4	1995	5,733,369	1,658,004	7,391,373	\$ (5,776)	\$ 4,339	\$ (1,437)
OP-1 Scenario 4	1999	5,921,575	2,225,386	8,146,961	\$ (4,731)	\$ 3,169	\$ (1,562)
OP-1 Scenario 4	1997	6,323,142	2,781,004	9,104,146	\$ (5,851)	\$ 3,252	\$ (2,599)
AVERAGE		5,020,834	1,538,410	6,559,243	\$ (4,647)	\$ 3,113	\$ (1,534)
Difference from Proposed Ops		-70,102	67,101	-3,001			
OP-1 Scenario 5	1992	1,876,743	1,131,899	3,008,642	\$ (79,603)	\$ 33,688	\$ (45,915)
OP-1 Scenario 5	1994	2,381,032	1,419,989	3,801,021	\$ (100,769)	\$ 43,722	\$ (57,048)
OP-1 Scenario 5	1995	3,851,447	2,263,920	6,115,367	\$ (123,884)	\$ 34,366	\$ (89,517)
OP-1 Scenario 5	1999	4,323,137	2,549,267	6,872,404	\$ (108,262)	\$ 19,199	\$ (89,063)
OP-1 Scenario 5	1997	4,864,833	2,876,596	7,741,429	\$ (101,207)	\$ 8,453	\$ (92,754)
AVERAGE		3,459,438	2,048,334	5,507,772	\$ (102,745)	\$ 27,885	\$ (74,860)
Difference from Proposed Ops		-1,631,498	577,026	-1,054,472			
OP-1 Scenario 6	1992	3,082,463	469,696	3,552,159	\$ (8,918)	\$ 1,466	\$ (7,453)
OP-1 Scenario 6	1994	3,785,348	492,001	4,277,349	\$ (18,407)	\$ 80	\$ (18,328)
OP-1 Scenario 6	1995	5,329,123	1,524,105	6,853,229	\$ (28,128)	\$ (1,193)	\$ (29,321)
OP-1 Scenario 6	1999	5,629,379	2,140,037	7,769,415	\$ (20,911)	\$ (173)	\$ (21,084)
OP-1 Scenario 6	1997	6,091,873	2,680,283	8,772,157	\$ (18,349)	\$ (1,814)	\$ (20,163)
AVERAGE		4,783,637	1,461,225	6,244,862	\$ (18,943)	\$ (327)	\$ (19,269)
Difference from Proposed Ops		-307,299	-10,084	-317,382			

ENERGY COMPARISON

Proposed Operations

Month	1992			Energy Value			1994			Energy Value			1995				
	Total	Heavy Load (MWh)	Light Load (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
	January	339,496	43,594	383,090	\$ 23,796	\$ 2,616	\$ 26,411	392,939	52,764	445,703	\$ 27,541	\$ 3,166	\$ 30,707	490,394	131,684	622,078	
February	351,041	48,846	399,888	\$ 22,554	\$ 2,687	\$ 25,241	330,978	43,930	374,908	\$ 21,265	\$ 2,416	\$ 23,681	483,109	138,807	621,916		
March	336,145	45,274	381,419	\$ 19,634	\$ 2,264	\$ 21,898	419,378	58,439	477,817	\$ 24,495	\$ 2,922	\$ 27,417	512,430	180,415	692,846		
April	274,883	34,860	309,743	\$ 12,103	\$ 1,224	\$ 13,328	400,990	38,958	439,949	\$ 17,656	\$ 1,368	\$ 19,024	547,280	129,624	676,903		
May	268,819	36,146	304,965	\$ 10,703	\$ 1,148	\$ 11,851	449,646	42,882	492,528	\$ 17,903	\$ 1,362	\$ 19,265	625,556	256,221	881,777		
June	171,059	23,689	194,748	\$ 7,852	\$ 867	\$ 8,720	286,969	29,429	316,398	\$ 13,173	\$ 1,078	\$ 14,251	635,208	316,314	951,523		
July	199,069	28,130	227,199	\$ 10,668	\$ 1,229	\$ 11,897	297,176	30,203	327,379	\$ 15,926	\$ 1,320	\$ 17,246	511,938	93,141	605,079		
August	179,040	26,137	205,177	\$ 11,107	\$ 1,322	\$ 12,429	263,470	28,829	292,299	\$ 16,345	\$ 1,458	\$ 17,803	379,195	36,366	415,561		
September	235,044	27,952	262,996	\$ 13,897	\$ 1,348	\$ 15,244	301,527	29,467	330,994	\$ 17,827	\$ 1,421	\$ 19,248	439,501	45,023	484,525		
October	281,237	38,017	319,254	\$ 16,363	\$ 1,856	\$ 18,218	341,623	46,466	388,088	\$ 19,876	\$ 2,268	\$ 22,144	409,064	63,656	472,720		
November	256,628	41,135	297,763	\$ 14,510	\$ 1,951	\$ 16,462	256,377	40,352	296,729	\$ 14,496	\$ 1,914	\$ 16,410	310,292	51,001	361,292		
December	300,580	42,034	342,614	\$ 18,719	\$ 2,196	\$ 20,916	306,266	43,376	349,642	\$ 19,074	\$ 2,266	\$ 21,340	480,232	121,356	601,587		
TOTALS	3,193,041	435,815	3,628,856	\$ 181,906	\$ 20,708	\$ 202,615	4,047,338	485,095	4,532,433	\$ 225,577	\$ 22,959	\$ 248,536	5,824,199	1,563,607	7,387,806		

Alternative Scenario: OP-1 Scenario 1a

Month	1992			Differential Energy Value			1994			Differential Energy Value			1995				
	Total	Heavy Load (MWh)	Light Load (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
	January	326,669	53,431	380,100	\$ (899)	\$ 590	\$ (309)	379,065	68,236	447,301	\$ (972)	\$ 928	\$ (44)	481,158	144,410	625,568	
February	338,814	61,663	400,477	\$ (786)	\$ 705	\$ (81)	318,859	55,840	374,699	\$ (779)	\$ 655	\$ (124)	474,787	149,944	624,731		
March	324,328	55,126	379,454	\$ (690)	\$ 493	\$ (198)	405,939	76,659	482,598	\$ (785)	\$ 911	\$ 126	505,598	191,809	697,407		
April	268,754	37,532	306,286	\$ (270)	\$ 94	\$ (176)	385,714	56,234	441,949	\$ (673)	\$ 607	\$ (66)	534,565	147,818	682,384		
May	266,520	37,539	304,059	\$ (92)	\$ 44	\$ (47)	435,940	65,345	501,285	\$ (546)	\$ 713	\$ 168	619,468	264,062	883,530		
June	170,766	24,042	194,809	\$ (20)	\$ 13	\$ (7)	277,775	38,531	316,306	\$ (630)	\$ 333	\$ (297)	634,118	315,225	949,343		
July	198,608	29,026	227,634	\$ (36)	\$ 39	\$ 3	283,263	39,668	322,931	\$ (1,101)	\$ 414	\$ (688)	485,746	117,490	603,235		
August	179,036	26,138	205,174	\$ (0)	\$ 0	\$ (0)	256,623	36,654	293,277	\$ (527)	\$ 396	\$ (131)	361,452	50,752	412,204		
September	230,437	33,333	263,770	\$ (272)	\$ 259	\$ (13)	287,128	40,163	327,292	\$ (851)	\$ 516	\$ (336)	418,867	66,452	485,319		
October	273,524	43,434	316,957	\$ (449)	\$ 264	\$ (184)	331,094	56,074	387,168	\$ (613)	\$ 469	\$ (144)	403,292	76,756	480,048		
November	256,406	41,350	297,756	\$ (13)	\$ 10	\$ (2)	256,172	40,625	296,797	\$ (12)	\$ 13	\$ 1	312,412	50,751	363,163		
December	294,619	45,698	340,317	\$ (371)	\$ 191	\$ (180)	300,646	48,516	349,162	\$ (350)	\$ 269	\$ (81)	471,373	132,239	603,612		
TOTALS	3,128,482	488,310	3,616,792	\$ (3,898)	\$ 2,703	\$ (1,195)	3,918,218	622,545	4,540,764	\$ (7,838)	\$ 6,224	\$ (1,615)	5,702,836	1,707,708	7,410,545		

Alternative Scenario: OP-1 Scenario 1b

Month	1992			Differential Energy Value			1994			Differential Energy Value			1995				
	Total	Heavy Load (MWh)	Light Load (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Total	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
	January	330,294	49,899	380,193	\$ (645)	\$ 378	\$ (267)	382,873	64,044	446,918	\$ (706)	\$ 677	\$ (29)	482,431	141,329	623,760	
February	341,988	57,841	399,828	\$ (582)	\$ 495	\$ (87)	321,789	51,977	373,766	\$ (590)	\$ 443	\$ (148)	475,136	148,429	623,565		
March	327,772	51,902	379,674	\$ (489)	\$ 331	\$ (158)	408,609	71,456	480,065	\$ (629)	\$ 651	\$ 22	503,542	191,089	694,631		
April	271,426	35,798	307,224	\$ (152)	\$ 33	\$ (119)	390,003	51,313	441,317	\$ (484)	\$ 434	\$ (50)	536,361	145,456	681,817		
May	267,515	36,523	304,039	\$ (52)	\$ 12	\$ (40)	437,302	60,099	497,401	\$ (491)	\$ 547	\$ 55	620,331	263,504	883,835		
June	171,072	23,686	194,758	\$ 1	\$ 0	\$ 1	280,259	36,053	316,312	\$ (460)	\$ 243	\$ (217)	634,401	317,138	951,539		
July	199,093	28,407	227,499	\$ 1	\$ 12	\$ 13	285,937	38,340	324,277	\$ (890)	\$ 356	\$ (534)	487,191	112,334	599,525		
August	179,040	26,137	205,177	\$ (0)	\$ 0	\$ (0)	258,015	35,066	293,080	\$ (420)	\$ 315	\$ (105)	365,289	46,942	412,231		
September	231,251	32,112	263,363	\$ (224)	\$ 201	\$ (24)	289,769	37,660	327,429	\$ (695)	\$ 395	\$ (300)	422,090	61,994	484,084		
October	274,962	42,462	317,424	\$ (365)	\$ 217	\$ (148)	333,561	53,471	387,033	\$ (469)	\$ 342	\$ (127)	400,880	73,541	474,421		
November	256,470	41,278	297,748	\$ (9)	\$ 7	\$ (2)	256,318	40,483	296,802	\$ (3)	\$ 6	\$ 3	310,533	50,705	361,238		
December	295,946	43,844	339,790	\$ (289)	\$ 95	\$ (194)	301,049	46,374	347,423	\$ (325)	\$ 157	\$ (168)	472,942	130,574	603,516		
TOTALS	3,146,829	469,898	3,616,727	\$ (2,805)	\$ 1,781	\$ (1,024)	3,945,485	586,337	4,531,822	\$ (6,162)	\$ 4,564	\$ (1,598)	5,711,126	1,683,035	7,394,162		

Alternative Scenario: OP-1 Scenario 1c
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	334,292	45,816	380,108	\$ (365)	\$ 133	\$ (231)	385,335	59,621	444,956	\$ (533)	\$ 411	\$ (122)	486,883	136,144	623,026
February	345,424	53,516	398,939	\$ (361)	\$ 257	\$ (104)	325,344	47,923	373,267	\$ (362)	\$ 220	\$ (142)	480,073	142,575	622,647
March	331,158	48,409	379,567	\$ (291)	\$ 157	\$ (135)	412,986	66,043	479,029	\$ (373)	\$ 380	\$ 7	508,991	185,843	694,834
April	274,150	35,096	309,246	\$ (32)	\$ 8	\$ (24)	392,497	46,862	439,359	\$ (374)	\$ 278	\$ (96)	539,630	137,829	677,459
May	268,590	36,152	304,742	\$ (9)	\$ 0	\$ (9)	439,316	53,941	493,257	\$ (411)	\$ 351	\$ (60)	621,812	261,238	883,050
June	171,073	23,693	194,767	\$ 1	\$ 0	\$ 1	282,926	33,107	316,033	\$ (277)	\$ 135	\$ (142)	634,857	316,826	951,684
July	199,084	28,144	227,227	\$ 1	\$ 1	\$ 1	291,098	35,798	326,896	\$ (481)	\$ 244	\$ (237)	491,760	105,954	597,713
August	179,040	26,137	205,177	\$ (0)	\$ -	\$ (0)	261,226	31,390	292,616	\$ (173)	\$ 130	\$ (43)	369,459	42,104	411,564
September	233,256	29,776	263,032	\$ (106)	\$ 88	\$ (18)	294,500	35,058	329,558	\$ (415)	\$ 270	\$ (146)	426,333	56,852	483,185
October	277,958	41,031	318,989	\$ (191)	\$ 147	\$ (44)	335,444	50,500	385,944	\$ (360)	\$ 197	\$ (163)	405,970	69,045	475,015
November	256,553	41,200	297,753	\$ (4)	\$ 3	\$ (1)	256,384	40,412	296,797	\$ 0	\$ 3	\$ 3	310,523	50,457	360,980
December	299,208	42,514	341,722	\$ (85)	\$ 25	\$ (60)	303,682	44,273	347,955	\$ (161)	\$ 47	\$ (114)	474,768	125,036	599,804
TOTALS	3,169,785	451,483	3,621,268	\$ (1,443)	\$ 819	\$ (624)	3,980,738	544,929	4,525,667	\$ (3,920)	\$ 2,665	\$ (1,255)	5,751,059	1,629,902	7,380,962

Alternative Scenario: OP-1 Scenario 1d
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	339,187	43,744	382,932	\$ (22)	\$ 9	\$ (13)	391,672	52,946	444,619	\$ (89)	\$ 11	\$ (78)	486,911	136,729	623,640
February	349,889	50,820	400,709	\$ (74)	\$ 109	\$ 34	330,278	44,217	374,495	\$ (45)	\$ 16	\$ (29)	478,500	144,161	622,662
March	327,757	51,922	379,679	\$ (490)	\$ 332	\$ (158)	408,280	71,214	479,494	\$ (648)	\$ 639	\$ (9)	503,022	191,112	694,134
April	271,426	35,798	307,225	\$ (152)	\$ 33	\$ (119)	390,003	51,313	441,317	\$ (484)	\$ 434	\$ (50)	536,361	145,456	681,817
May	267,515	36,517	304,033	\$ (52)	\$ 12	\$ (40)	437,302	60,099	497,401	\$ (491)	\$ 547	\$ 55	620,331	263,504	883,835
June	171,076	23,691	194,767	\$ 1	\$ 0	\$ 1	286,336	30,075	316,411	\$ (43)	\$ 24	\$ (20)	635,190	316,494	951,684
July	199,094	28,096	227,190	\$ 1	\$ (1)	\$ (0)	296,244	31,227	327,471	\$ (74)	\$ 45	\$ (29)	505,090	100,059	605,150
August	179,040	26,137	205,177	\$ (0)	\$ (0)	\$ (0)	263,189	29,247	292,436	\$ (22)	\$ 21	\$ (1)	376,019	37,906	413,925
September	235,059	28,094	263,154	\$ 1	\$ 7	\$ 8	299,779	31,157	330,935	\$ (103)	\$ 81	\$ (22)	436,959	50,507	487,466
October	280,543	38,762	319,305	\$ (40)	\$ 36	\$ (4)	340,987	46,745	387,732	\$ (37)	\$ 14	\$ (23)	413,417	69,893	483,310
November	256,614	41,098	297,712	\$ (1)	\$ (2)	\$ (3)	256,424	40,277	296,701	\$ 3	\$ (4)	\$ (1)	309,152	54,438	363,590
December	300,452	42,015	342,467	\$ (8)	\$ (1)	\$ (9)	305,779	43,465	349,244	\$ (30)	\$ 5	\$ (26)	478,061	124,148	602,209
TOTALS	3,177,654	446,693	3,624,348	\$ (836)	\$ 534	\$ (302)	4,006,272	531,983	4,538,255	\$ (2,064)	\$ 1,832	\$ (232)	5,779,013	1,634,408	7,413,421

Alternative Scenario: OP-1 Scenario 1e
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	339,187	43,744	382,932	\$ (22)	\$ 9	\$ (13)	391,672	52,946	444,619	\$ (89)	\$ 11	\$ (78)	486,911	136,729	623,640
February	350,065	50,810	400,875	\$ (63)	\$ 108	\$ 45	330,278	44,217	374,495	\$ (45)	\$ 16	\$ (29)	478,500	144,161	622,662
March	331,160	48,411	379,571	\$ (291)	\$ 157	\$ (134)	412,776	65,955	478,732	\$ (386)	\$ 376	\$ (10)	508,938	185,916	694,854
April	274,150	35,096	309,246	\$ (32)	\$ 8	\$ (24)	392,497	46,862	439,359	\$ (374)	\$ 278	\$ (96)	539,630	137,829	677,459
May	268,590	36,151	304,741	\$ (9)	\$ 0	\$ (9)	439,316	53,941	493,264	\$ (411)	\$ 351	\$ (60)	621,812	261,238	883,050
June	171,076	23,691	194,767	\$ 1	\$ 0	\$ 1	286,212	30,027	316,239	\$ (52)	\$ 22	\$ (30)	635,200	316,501	951,701
July	199,094	28,096	227,190	\$ 1	\$ (1)	\$ (0)	296,231	31,226	327,456	\$ (75)	\$ 45	\$ (30)	505,091	100,059	605,150
August	179,040	26,137	205,177	\$ (0)	\$ (0)	\$ (0)	263,184	29,247	292,431	\$ (22)	\$ 21	\$ (1)	376,019	37,906	413,925
September	235,059	28,094	263,154	\$ 1	\$ 7	\$ 8	299,775	31,157	330,932	\$ (104)	\$ 81	\$ (22)	436,959	50,507	487,466
October	280,543	38,762	319,305	\$ (40)	\$ 36	\$ (4)	340,987	46,745	387,732	\$ (37)	\$ 14	\$ (23)	413,417	69,893	483,310
November	256,614	41,098	297,712	\$ (1)	\$ (2)	\$ (3)	256,424	40,277	296,701	\$ 3	\$ (4)	\$ (1)	309,152	54,438	363,590
December	300,452	42,015	342,467	\$ (8)	\$ (1)	\$ (9)	305,779	43,465	349,244	\$ (30)	\$ 5	\$ (26)	478,061	124,148	602,209
TOTALS	3,185,031	442,105	3,627,136	\$ (463)	\$ 321	\$ (142)	4,015,132	516,072	4,531,204	\$ (1,621)	\$ 1,216	\$ (406)	5,789,690	1,619,326	7,409,016

Alternative Scenario: OP-1 Scenario 1f
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	334,084	46,198	380,282	\$ (379)	\$ 156	\$ (223)	386,071	60,089	446,161	\$ (481)	\$ 440	\$ (42)	485,593	138,032	623,624
February	345,132	53,991	399,124	\$ (380)	\$ 283	\$ (97)	325,318	48,385	373,702	\$ (364)	\$ 245	\$ (119)	477,865	145,996	623,861
March	327,774	51,899	379,673	\$ (489)	\$ 331	\$ (158)	408,529	71,234	479,763	\$ (634)	\$ 640	\$ 6	503,396	191,039	694,435
April	271,426	35,798	307,224	\$ (152)	\$ 33	\$ (119)	390,003	51,313	441,317	\$ (484)	\$ 434	\$ (50)	536,361	145,456	681,817
May	267,515	36,518	304,034	\$ (52)	\$ 12	\$ (40)	437,302	60,099	497,401	\$ (491)	\$ 547	\$ 55	620,331	263,504	883,835
June	171,073	23,693	194,767	\$ 1	\$ 0	\$ 1	283,124	33,118	316,242	\$ (263)	\$ 135	\$ (128)	634,848	316,820	951,667
July	199,083	28,145	227,227	\$ 1	\$ 1	\$ 1	290,154	35,855	326,009	\$ (556)	\$ 247	\$ (309)	491,166	107,871	599,037
August	179,040	26,137	205,177	\$ (0)	\$ -	\$ (0)	260,820	31,373	292,193	\$ (204)	\$ 129	\$ (75)	369,911	42,152	412,062
September	232,996	29,770	262,766	\$ (121)	\$ 88	\$ (33)	293,884	35,075	328,960	\$ (452)	\$ 270	\$ (181)	425,544	57,877	483,421
October	277,210	41,203	318,413	\$ (234)	\$ 156	\$ (79)	335,780	50,810	386,590	\$ (340)	\$ 212	\$ (128)	403,681	70,761	474,441
November	256,527	41,217	297,744	\$ (6)	\$ 4	\$ (2)	256,351	40,445	296,795	\$ (1)	\$ 4	\$ 3	310,265	50,513	360,778
December	298,638	42,627	341,265	\$ (121)	\$ 31	\$ (90)	303,420	44,473	347,893	\$ (177)	\$ 57	\$ (120)	474,411	127,984	602,395
TOTALS	3,160,500	457,195	3,617,695	\$ (1,933)	\$ 1,094	\$ (839)	3,970,756	562,269	4,533,025	\$ (4,448)	\$ 3,360	\$ (1,088)	5,733,369	1,658,004	7,391,373

Alternative Scenario: OP-1 Scenario 2
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	339,187	43,744	382,932	\$ (22)	\$ 9	\$ (13)	391,672	52,946	444,619	\$ (89)	\$ 11	\$ (78)	486,911	136,729	623,640
February	349,889	50,820	400,709	\$ (74)	\$ 109	\$ 34	330,278	44,217	374,495	\$ (45)	\$ 16	\$ (29)	478,500	144,161	622,662
March	327,757	51,922	379,679	\$ (490)	\$ 332	\$ (158)	408,280	71,214	479,494	\$ (648)	\$ 639	\$ (9)	503,022	191,112	694,134
April	271,426	35,798	307,225	\$ (152)	\$ 33	\$ (119)	390,003	51,313	441,317	\$ (484)	\$ 434	\$ (50)	536,361	145,456	681,817
May	267,515	36,517	304,033	\$ (52)	\$ 12	\$ (40)	437,346	59,682	497,028	\$ (490)	\$ 534	\$ 44	620,331	263,504	883,835
June	196,935	25,855	222,789	\$ 1,188	\$ 79	\$ 1,267	321,089	31,566	352,655	\$ 1,566	\$ 78	\$ 1,645	634,912	319,114	954,026
July	321,873	40,770	362,643	\$ 6,581	\$ 552	\$ 7,133	408,813	45,325	454,138	\$ 5,983	\$ 661	\$ 6,643	560,184	174,011	734,195
August	161,395	24,286	185,681	\$ (1,359)	\$ (94)	\$ (1,452)	241,607	28,932	270,540	\$ (1,683)	\$ 5	\$ (1,678)	340,203	36,130	376,333
September	179,489	26,920	206,409	\$ (3,285)	\$ (50)	\$ (3,334)	216,368	27,662	244,029	\$ (5,035)	\$ (87)	\$ (5,122)	365,553	43,282	408,834
October	216,653	35,590	252,243	\$ (3,758)	\$ (118)	\$ (3,876)	277,566	39,383	316,949	\$ (3,727)	\$ (346)	\$ (4,073)	369,379	52,841	422,219
November	254,179	41,345	295,524	\$ (139)	\$ 10	\$ (129)	256,186	40,373	296,560	\$ (11)	\$ 1	\$ (10)	309,122	50,814	359,935
December	260,683	40,795	301,478	\$ (2,485)	\$ (65)	\$ (2,549)	302,753	43,412	346,165	\$ (219)	\$ 2	\$ (217)	476,237	121,277	597,514
TOTALS	3,146,981	454,361	3,601,343	\$ (4,045)	\$ 810	\$ (3,235)	3,981,961	536,027	4,517,988	\$ (4,881)	\$ 1,947	\$ (2,934)	5,680,715	1,678,431	7,359,146

Alternative Scenario: OP-1 Scenario 3
1992

Month	Total			Differential Energy Value			Total			Differential Energy Value			Total		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	339,417	43,650	383,067	\$ (5)	\$ 3	\$ (2)	392,939	52,764	445,703	\$ -	\$ -	\$ -	490,394	131,684	622,078
February	351,031	48,838	399,869	\$ (1)	\$ (0)	\$ (1)	330,561	44,090	374,651	\$ (27)	\$ 9	\$ (18)	483,109	138,807	621,916
March	336,145	45,274	381,419	\$ -	\$ -	\$ -	419,411	58,432	477,844	\$ 2	\$ (0)	\$ 2	512,430	180,415	692,846
April	274,883	34,860	309,743	\$ -	\$ -	\$ -	400,986	38,944	439,930	\$ (0)	\$ (1)	\$ (1)	547,280	129,624	676,903
May	265,873	35,725	301,597	\$ (117)	\$ (13)	\$ (131)	449,418	42,875	492,293	\$ (9)	\$ (0)	\$ (9)	625,556	256,221	881,777
June	178,866	24,991	203,856	\$ 358	\$ 48	\$ 406	282,953	34,192	317,145	\$ (275)	\$ 174	\$ (101)	635,208	316,314	951,523
July	197,266	28,472	225,738	\$ (143)	\$ 15	\$ (128)	290,672	37,020	327,691	\$ (515)	\$ 298	\$ (217)	511,457	93,207	604,664
August	176,985	23,386	200,371	\$ (158)	\$ (139)	\$ (297)	258,528	34,979	293,507	\$ (381)	\$ 311	\$ (69)	376,245	38,337	414,582
September	233,541	29,542	263,083	\$ (89)	\$ 77	\$ (12)	295,608	35,622	331,231	\$ (350)	\$ 297	\$ (53)	439,137	45,441	484,578
October	278,194	41,411	319,605	\$ (177)	\$ 166	\$ (11)	340,322	47,202	387,524	\$ (76)	\$ 36	\$ (40)	409,080	63,648	472,728
November	256,470	41,278	297,748	\$ (9)	\$ 7	\$ (2)	256,375	40,350	296,725	\$ (0)	\$ (0)	\$ (0)	310,292	51,001	361,292
December	300,618	42,188	342,807	\$ 2	\$ 8	\$ 10	305,938	43,520	349,459	\$ (20)	\$ 8	\$ (13)	479,692	121,412	601,104
TOTALS	3,189,289	439,614	3,628,903	\$ (339)	\$ 170	\$ (168)	4,023,713	509,989	4,533,702	\$ (1,651)	\$ 1,131	\$ (520)	5,819,880	1,566,110	7,385,990

Alternative Scenario: OP-1 Scenario 4

1999

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (246)	\$ 268	\$ 21	578,025	306,629	884,654
\$ (195)	\$ 207	\$ 12	518,109	283,216	801,325
\$ (201)	\$ 271	\$ 71	574,184	362,688	936,873
\$ (337)	\$ 288	\$ (49)	554,449	291,608	846,057
\$ (149)	\$ 159	\$ 10	579,711	256,434	836,145
\$ (24)	\$ 19	\$ (5)	636,798	334,621	971,420
\$ (1,597)	\$ 560	\$ (1,037)	441,527	72,169	513,696
\$ (750)	\$ 290	\$ (459)	438,379	56,729	495,107
\$ (779)	\$ 570	\$ (208)	415,278	52,267	467,545
\$ (180)	\$ 263	\$ 83	412,276	72,937	485,212
\$ 13	\$ (26)	\$ (13)	354,862	58,393	413,255
\$ (340)	\$ 192	\$ (148)	422,383	68,772	491,155
\$ (4,785)	\$ 3,063	\$ (1,722)	5,925,982	2,216,463	8,142,445

1997

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (149)	\$ 297	\$ 148	611,912	386,590	998,503
\$ (24)	\$ 227	\$ 203	528,847	342,642	871,490
\$ 0	\$ 0	\$ 0	544,558	364,137	908,695
\$ (101)	\$ 73	\$ (28)	524,497	275,793	800,289
\$ 0	\$ 1	\$ 1	589,579	308,557	898,136
\$ (2,042)	\$ 796	\$ (1,246)	633,004	334,671	967,675
\$ (1,194)	\$ 591	\$ (603)	531,522	148,468	679,990
\$ (674)	\$ 437	\$ (237)	513,365	85,032	598,397
\$ (176)	\$ 242	\$ 67	570,076	183,569	753,646
\$ 28	\$ (73)	\$ (44)	469,389	182,911	652,299
\$ (137)	\$ 168	\$ 30	345,788	60,592	406,379
\$ (4,468)	\$ 2,758	\$ (1,709)	469,923	97,552	567,475
\$ (6,332,460)	\$ 2,770,515	\$ 9,102,975	\$ (5,170)	\$ 2,740	\$ (2,430)

1999

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (244)	\$ 303	\$ 59	579,536	303,072	882,608
\$ (296)	\$ 294	\$ (2)	518,375	280,426	798,801
\$ (550)	\$ 535	\$ (15)	574,182	362,687	936,869
\$ (481)	\$ 556	\$ 75	554,446	291,607	846,053
\$ (208)	\$ 231	\$ 23	579,063	258,618	837,681
\$ (1)	\$ 7	\$ 5	636,778	334,603	971,381
\$ (542)	\$ 302	\$ (240)	465,560	57,710	523,270
\$ (245)	\$ 78	\$ (167)	451,420	49,018	500,438
\$ (150)	\$ 264	\$ 114	424,262	47,111	471,373
\$ 253	\$ 304	\$ 558	413,857	80,852	494,709
\$ (64)	\$ 163	\$ 99	350,987	68,426	419,413
\$ (135)	\$ 146	\$ 11	433,837	72,609	506,446
\$ (2,663)	\$ 3,184	\$ 521	5,982,303	2,206,737	8,189,040

1997

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (43)	\$ 83	\$ 40	611,912	386,590	998,503
\$ (7)	\$ 73	\$ 67	528,847	342,642	871,490
\$ (0)	\$ (0)	\$ (0)	544,558	364,137	908,695
\$ (0)	\$ (0)	\$ (0)	524,497	275,793	800,289
\$ (127)	\$ 143	\$ 16	589,454	308,587	898,041
\$ (1)	\$ 0	\$ (1)	633,005	334,672	967,676
\$ (140)	\$ 164	\$ 24	556,535	132,134	688,669
\$ (189)	\$ 201	\$ 11	521,404	81,352	602,756
\$ (143)	\$ 188	\$ 46	571,257	180,716	751,973
\$ (84)	\$ 629	\$ 545	471,238	179,707	650,945
\$ (191)	\$ 403	\$ 212	345,514	61,558	407,072
\$ 576	\$ 368	\$ 944	472,697	99,867	572,564
\$ (348)	\$ 2,252	\$ 1,904	6,370,919	2,747,755	9,118,673
\$ (2,241)	\$ 1,714	\$ (527)			

1999

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (244)	\$ 303	\$ 59	579,536	303,072	882,608
\$ (296)	\$ 294	\$ (2)	518,375	280,426	798,801
\$ (204)	\$ 275	\$ 71	574,182	362,687	936,869
\$ (337)	\$ 288	\$ (49)	554,446	291,607	846,053
\$ (149)	\$ 159	\$ 10	579,711	256,431	836,142
\$ (1)	\$ 7	\$ 6	636,798	334,621	971,420
\$ (542)	\$ 302	\$ (240)	465,560	57,710	523,270
\$ (245)	\$ 78	\$ (167)	451,420	49,018	500,438
\$ (150)	\$ 264	\$ 114	424,262	47,111	471,373
\$ 253	\$ 304	\$ 558	413,857	80,852	494,709
\$ (64)	\$ 163	\$ 99	350,987	68,426	419,413
\$ (135)	\$ 146	\$ 11	433,837	72,609	506,446
\$ (2,114)	\$ 2,585	\$ 471	5,982,971	2,204,569	8,187,540

1997

Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (43)	\$ 83	\$ 40	611,912	386,590	998,503
\$ (7)	\$ 73	\$ 67	528,847	342,642	871,490
\$ (0)	\$ (0)	\$ (0)	544,558	364,137	908,695
\$ (0)	\$ (0)	\$ (0)	524,497	275,793	800,289
\$ (101)	\$ 73	\$ (28)	589,579	308,557	898,136
\$ 0	\$ 1	\$ 1	633,004	334,671	967,675
\$ (140)	\$ 164	\$ 24	556,535	132,133	688,669
\$ (189)	\$ 201	\$ 11	521,404	81,352	602,756
\$ (143)	\$ 188	\$ 46	571,257	180,716	751,973
\$ (84)	\$ 629	\$ 545	471,238	179,707	650,945
\$ (191)	\$ 403	\$ 212	345,514	61,558	407,072
\$ 576	\$ 368	\$ 944	472,697	99,867	572,564
\$ (321)	\$ 2,184	\$ 1,863	6,371,043	2,747,724	9,118,768
\$ (2,236)	\$ 1,713	\$ (523)			

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (337)	\$ 381	\$ 44	578,374	307,098	885,473	\$ (125)	\$ 325	\$ 200	611,912	386,590	998,503	\$ -	\$ -	\$ -	-	-	-
\$ (337)	\$ 395	\$ 58	518,347	284,005	802,351	\$ (9)	\$ 270	\$ 262	528,847	342,642	871,490	\$ -	\$ -	\$ -	-	-	-
\$ (528)	\$ 531	\$ 4	574,184	362,688	936,873	\$ 0	\$ 0	\$ 0	544,558	364,137	908,695	\$ -	\$ -	\$ -	-	-	-
\$ (481)	\$ 556	\$ 75	554,449	291,608	846,057	\$ 0	\$ 0	\$ 0	524,497	275,793	800,289	\$ -	\$ -	\$ -	-	-	-
\$ (208)	\$ 231	\$ 23	578,974	258,513	837,487	\$ (130)	\$ 139	\$ 9	589,454	308,587	898,041	\$ (4)	\$ 4	\$ (0)	-	-	-
\$ (25)	\$ 19	\$ (6)	636,782	334,601	971,383	\$ (1)	\$ 0	\$ (1)	633,005	334,672	967,676	\$ (0)	\$ 0	\$ (0)	-	-	-
\$ (1,644)	\$ 644	\$ (1,001)	440,826	73,268	514,093	\$ (2,098)	\$ 844	\$ (1,254)	528,257	150,737	678,994	\$ (2,946)	\$ 1,234	\$ (1,712)	-	-	-
\$ (715)	\$ 293	\$ (422)	438,120	57,804	495,924	\$ (1,213)	\$ 645	\$ (568)	510,147	87,781	597,928	\$ (1,863)	\$ 1,089	\$ (774)	-	-	-
\$ (825)	\$ 620	\$ (206)	415,135	53,239	468,374	\$ (682)	\$ 484	\$ (198)	569,667	185,617	755,283	\$ (446)	\$ 584	\$ (137)	-	-	-
\$ (313)	\$ 347	\$ 34	410,644	74,131	484,775	\$ (270)	\$ 300	\$ 30	470,048	183,860	653,908	\$ (62)	\$ 202	\$ 139	-	-	-
\$ (2)	\$ (23)	\$ (25)	354,878	58,457	413,335	\$ 29	\$ (70)	\$ (40)	345,789	60,592	406,381	\$ 66	\$ (181)	\$ (115)	-	-	-
\$ (362)	\$ 346	\$ (16)	420,863	69,974	490,837	\$ (232)	\$ 231	\$ (1)	466,962	99,995	566,957	\$ (595)	\$ 320	\$ (274)	-	-	-
\$ (5,776)	\$ 4,339	\$ (1,437)	5,921,575	2,225,386	8,146,961	\$ (4,731)	\$ 3,169	\$ (1,562)	6,323,142	2,781,004	9,104,146	\$ (5,851)	\$ 3,252	\$ (2,599)	-	-	-

1997

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (244)	\$ 303	\$ 59	579,536	303,072	882,608	\$ (43)	\$ 83	\$ 40	611,912	386,590	998,503	\$ -	\$ -	\$ -	-	-	-
\$ (296)	\$ 294	\$ (2)	518,375	280,426	798,801	\$ (7)	\$ 73	\$ 67	528,847	342,642	871,490	\$ -	\$ -	\$ -	-	-	-
\$ (550)	\$ 535	\$ (15)	574,182	362,687	936,869	\$ (0)	\$ (0)	\$ (0)	544,558	364,137	908,695	\$ -	\$ -	\$ -	-	-	-
\$ (481)	\$ 556	\$ 75	554,446	291,607	846,053	\$ (0)	\$ (0)	\$ (0)	524,497	275,793	800,289	\$ -	\$ -	\$ -	-	-	-
\$ (208)	\$ 231	\$ 23	580,179	253,488	833,667	\$ (82)	\$ (20)	\$ (103)	583,292	296,215	879,507	\$ (250)	\$ (389)	\$ (639)	-	-	-
\$ (20)	\$ 103	\$ 82	633,391	314,102	947,493	\$ (233)	\$ (751)	\$ (984)	633,028	334,668	967,697	\$ 1	\$ (0)	\$ 1	-	-	-
\$ 2,585	\$ 3,534	\$ 6,120	541,448	112,040	653,488	\$ 3,972	\$ 2,538	\$ 6,511	591,344	198,503	789,847	\$ 1,386	\$ 3,321	\$ 4,708	-	-	-
\$ (3,002)	\$ (12)	\$ (3,014)	385,798	46,063	431,861	\$ (5,242)	\$ 51	\$ (5,191)	469,850	59,576	529,426	\$ (4,966)	\$ (338)	\$ (5,304)	-	-	-
\$ (4,372)	\$ (84)	\$ (4,456)	387,619	44,944	432,564	\$ (2,309)	\$ 84	\$ (2,225)	553,054	155,005	708,059	\$ (1,429)	\$ (892)	\$ (2,321)	-	-	-
\$ (2,309)	\$ (528)	\$ (2,837)	397,644	64,697	462,341	\$ (1,027)	\$ (160)	\$ (1,187)	465,630	159,360	624,990	\$ (319)	\$ (994)	\$ (1,314)	-	-	-
\$ (66)	\$ (9)	\$ (75)	354,410	64,286	418,696	\$ 3	\$ 207	\$ 210	345,350	61,706	407,056	\$ 41	\$ (128)	\$ (87)	-	-	-
\$ (249)	\$ (4)	\$ (253)	433,114	71,598	504,712	\$ 531	\$ 316	\$ 846	471,919	99,796	571,715	\$ (286)	\$ 310	\$ 24	-	-	-
\$ (9,212)	\$ 4,919	\$ (4,292)	5,940,142	2,209,009	8,149,152	\$ (4,438)	\$ 2,421	\$ (2,016)	6,323,282	2,733,992	9,057,274	\$ (5,821)	\$ 890	\$ (4,931)	-	-	-

1997

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ -	\$ -	\$ -	580,151	301,687	881,838	\$ -	\$ -	\$ -	611,912	386,590	998,503	\$ -	\$ -	\$ -	-	-	-
\$ -	\$ -	\$ -	518,479	279,090	797,569	\$ -	\$ -	\$ -	528,847	342,642	871,490	\$ -	\$ -	\$ -	-	-	-
\$ -	\$ -	\$ -	574,183	362,688	936,871	\$ -	\$ -	\$ -	544,558	364,137	908,695	\$ -	\$ -	\$ -	-	-	-
\$ -	\$ -	\$ -	554,449	291,608	846,056	\$ -	\$ -	\$ -	524,497	275,793	800,289	\$ -	\$ -	\$ -	-	-	-
\$ -	\$ -	\$ -	582,248	254,130	836,378	\$ -	\$ -	\$ -	589,564	308,459	898,023	\$ -	\$ -	\$ -	-	-	-
\$ -	\$ -	\$ -	636,793	334,601	971,394	\$ -	\$ -	\$ -	633,005	334,672	967,676	\$ -	\$ -	\$ -	-	-	-
\$ (38)	\$ 3	\$ (35)	467,016	54,175	521,190	\$ (25)	\$ 10	\$ (15)	565,474	122,501	687,975	\$ -	\$ -	\$ -	-	-	-
\$ (227)	\$ 100	\$ (127)	453,934	45,051	498,985	\$ 3	\$ (0)	\$ 3	534,339	66,257	600,595	\$ -	\$ -	\$ -	-	-	-
\$ (22)	\$ 20	\$ (1)	426,415	43,411	469,826	\$ (15)	\$ 10	\$ (5)	577,217	173,512	750,730	\$ -	\$ -	\$ -	-	-	-
\$ 1	\$ (0)	\$ 1	415,293	67,975	483,267	\$ (0)	\$ (0)	\$ (0)	471,120	179,726	650,846	\$ -	\$ -	\$ -	-	-	-
\$ 0	\$ (0)	\$ 0	354,359	59,928	414,286	\$ -	\$ -	\$ -	344,629	64,400	409,028	\$ -	\$ -	\$ -	-	-	-
\$ (34)	\$ 3	\$ (31)	424,591	65,557	490,148	\$ -	\$ -	\$ -	476,513	93,864	570,378	\$ -	\$ -	\$ -	-	-	-
\$ (319)	\$ 125	\$ (194)	5,987,911	2,159,898	8,147,809	\$ (36)	\$ 20	\$ (17)	6,401,675	2,712,553	9,114,228	\$ -	\$ -	\$ -	-	-	-

1997

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (337)	\$ 381	\$ 44	578,374	307,098	885,473	\$ (125)	\$ 325	\$ 200	611,912	386,590	998,503	\$ -	\$ -	\$ -	-	-	-
\$ (337)	\$ 395	\$ 58	518,347	284,005	802,351	\$ (9)	\$ 270	\$ 262	528,847	342,642	871,490	\$ -	\$ -	\$ -	-	-	-
\$ (528)	\$ 531	\$ 4	574,184	362,688	936,873	\$ 0	\$ 0	\$ 0	544,558	364,137	908,695	\$ -	\$ -	\$ -	-	-	-
\$ (481)	\$ 556	\$ 75	554,449	291,608	846,057	\$ 0	\$ 0	\$ 0	524,497	275,793	800,289	\$ -	\$ -	\$ -	-	-	-
\$ (208)	\$ 231	\$ 23	578,974	258,513	837,487	\$ (130)	\$ 139	\$ 9	589,454	308,587	898,041	\$ (4)	\$ 4	\$ (0)	-	4	(0)
\$ (25)	\$ 19	\$ (6)	636,782	334,601	971,383	\$ (1)	\$ 0	\$ (1)	633,005	334,672	967,676	\$ (0)	\$ 0	\$ (0)	-	0	(0)
\$ (1,644)	\$ 644	\$ (1,001)	440,826	73,268	514,093	\$ (2,098)	\$ 844	\$ (1,254)	528,257	150,737	678,994	\$ (2,946)	\$ 1,234	\$ (1,712)	-	-	-
\$ (715)	\$ 293	\$ (422)	438,120	57,804	495,924	\$ (1,213)	\$ 645	\$ (568)	510,147	87,781	597,928	\$ (1,863)	\$ 1,089	\$ (774)	-	-	-
\$ (825)	\$ 620	\$ (206)	415,135	53,239	468,374	\$ (682)	\$ 484	\$ (198)	569,667	185,617	755,283	\$ (446)	\$ 584	\$ 137	-	-	-
\$ (313)	\$ 347	\$ 34	410,644	74,131	484,775	\$ (270)	\$ 300	\$ 30	470,048	183,860	653,908	\$ (62)	\$ 202	\$ 139	-	-	-
\$ (2)	\$ (23)	\$ (25)	354,878	58,457	413,335	\$ 29	\$ (70)	\$ (40)	345,789	60,592	406,381	\$ 66	\$ (181)	\$ (115)	-	-	-
\$ (962)	\$ 346	\$ (616)	420,863	69,974	490,837	\$ (232)	\$ 231	\$ (1)	466,962	99,995	566,957	\$ (595)	\$ 320	\$ (274)	-	-	-
\$ (5,776)	\$ 4,339	\$ (1,437)	5,921,575	2,225,386	8,146,961	\$ (4,731)	\$ 3,169	\$ (1,562)	6,323,142	2,781,004	9,104,146	\$ (5,851)	\$ 3,252	\$ (2,599)	-	-	-

1997

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (15,675)	\$ 2,553	\$ (13,122)	399,432	267,399	666,832	\$ (12,667)	\$ (2,057)	\$ (14,724)	481,017	303,666	784,683	\$ (9,175)	\$ (4,975)	\$ (14,150)	-	-	-
\$ (12,861)	\$ 2,424	\$ (10,437)	373,386	242,491	615,878	\$ (9,322)	\$ (2,013)	\$ (11,335)	427,967	276,914	704,880	\$ (6,482)	\$ (3,615)	\$ (10,097)	-	-	-
\$ (8,748)	\$ 2,536	\$ (6,213)	480,572	303,557	784,129	\$ (5,468)	\$ (2,957)	\$ (8,424)	467,028	312,069	779,097	\$ (4,528)	\$ (2,603)	\$ (7,132)	-	-	-
\$ (7,298)	\$ 2,593	\$ (4,705)	498,607	261,977	760,584	\$ (2,459)	\$ (1,041)	\$ (3,499)	496,037	260,648	756,685	\$ (1,253)	\$ (532)	\$ (1,785)	-	-	-
\$ (4,592)	\$ 367	\$ (4,225)	514,301	273,037	787,339	\$ (2,705)	\$ 601	\$ (2,105)	512,347	270,380	782,727	\$ (3,074)	\$ (1,209)	\$ (4,284)	-	-	-
\$ (9,503)	\$ (2,028)	\$ (11,532)	495,567	260,370	755,937	\$ (9,678)	\$ (2,718)	\$ (12,396)	493,107	260,699	753,805	\$ (9,587)	\$ (2,709)	\$ (12,296)	-	-	-
\$ (16,015)	\$ 3,563	\$ (12,451)	267,686	148,903	416,590	\$ (15,803)	\$ 4,149	\$ (11,654)	338,165	185,841	524,006	\$ (17,994)	\$ 2,768	\$ (15,226)	-	-	-
\$ (13,665)	\$ 3,760	\$ (9,905)	235,351	130,685	366,037	\$ (16,827)	\$ 4,332	\$ (12,495)	292,669	164,757	457,426	\$ (18,609)	\$ 4,983	\$ (13,626)	-	-	-
\$ (12,795)	\$ 3,830	\$ (8,966)	234,750	128,867	363,617	\$ (11,347)	\$ 4,130	\$ (7,217)	353,114	194,707	547,821	\$ (13,250)	\$ 1,022	\$ (12,228)	-	-	-
\$ (10,304)	\$ 4,262	\$ (6,042)	258,572	173,823	432,395	\$ (9,118)	\$ 5,167	\$ (3,951)	357,454	225,648	583,102	\$ (6,613)	\$ 2,242	\$ (4,372)	-	-	-
\$ (4,035)	\$ 4,781	\$ 746	273,726	174,516	448,242	\$ (4,559)	\$ 5,436	\$ 877	297,642	201,412	499,054	\$ (2,657)	\$ 6,500	\$ 3,843	-	-	-
\$ (8,393)	\$ 5,726	\$ (2,668)	291,186	183,640	474,825	\$ (8,308)	\$ 6,170	\$ (2,138)	348,285	219,857	568,143	\$ (7,986)	\$ 6,583	\$ (1,403)	-	-	-
\$ (123,884)	\$ 34,366	\$ (89,517)	4,323,137	2,549,267	6,872,404	\$ (108,262)	\$ 19,199	\$ (89,063)	4,864,833	2,876,596	7,741,429	\$ (101,207)	\$ 8,453	\$ (92,754)	-	-	-

1997

1999

Differential Energy Value			Total			Differential Energy Value			Total			Differential Energy Value			Total		
Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (\$1,000)	Light Load (\$1,000)	Total (\$1,000)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
\$ (6,914)	\$ (2,687)	\$ (9,601)	565,060	326,803	891,863	\$ (1,058)	\$ 1,507	\$ 449	603,284	381,448	984,732	\$ (605)	\$ (309)	\$ (913)	-	-	-
\$ (1,335)	\$ 1,612	\$ 277	473,793	287,812	761,605	\$ (2,871)	\$ 480	\$ (2,391)	488,053	317,037	805,089	\$ (2,621)	\$ (1,408)	\$ (4,029)	-	-	-
\$ (3,002)	\$ 118	\$ (2,884)	495,331	312,833	808,165	\$ (4,606)	\$ (2,493)	\$ (7,099)	481,919	322,231	804,151	\$ (3,659)	\$ (2,095)	\$ (5,754)	-	-	-
\$ (3,687)	\$ (829)	\$ (4,516)	502,147	263,835	765,982	\$ (2,303)	\$ (975)	\$ (3,278)	499,993	262,723	762,716	\$ (1,079)	\$ (459)	\$ (1,538)	-	-	-
\$ (2,519)	\$ (1,299)	\$ (3,818)	562,363	251,369	813,731	\$ (792)	\$ (88)	\$ (879)	589,566	308,457	898,022	\$ 0	\$ (0)	\$ (0)	-	-	-
\$ (873)	\$ (1,196)	\$ (2,069)	629,496	309,112	938,608	\$ (500)	\$ (933)	\$ (1,433)	633,005	334,672	967,677	\$ 0	\$ 0	\$ 0	-	-	-
\$ 4,150	\$ 3,125	\$ 7,275	570,312	99,006	669,318	\$ 5,519	\$ 1,969	\$ 7,488	596,088	173,459	769,547	\$ 1,641	\$ 2,227	\$ 3,867	-	-	-
\$ 6,302	\$ 1,045	\$ 7,347	515,628	74,175	589,803	\$ 3,831	\$ 1,473	\$ 5,304	566,717	149,903	716,621	\$ 2,009	\$ 4,231	\$ 6,240	-	-	-
\$ (772)	\$ 555	\$ (217)	439,677	59,414	499,091	\$ 769	\$ 781	\$ 1,550	512,906	177,173	690,079	\$ (3,802)	\$ 176	\$ (3,626)	-	-	-
\$ (7,721)	\$ (347)	\$ (8,068)	306,551	61,622	368,174	\$ (6,327)	\$ (310)	\$ (6,637)	390,372	109,386	499,758	\$ (4,698)	\$ (3,434)	\$ (8,131)	-	-	-
\$ (5,522)	\$ (572)	\$ (6,094)	267,137	47,795	314,933	\$ (4,932)	\$ (576)	\$ (5,507)	319,588	61,888	381,476	\$ (1,416)	\$ (119)	\$ (1,535)	-	-	-
\$ (6,236)	\$ (717)	\$ (6,953)	301,884	46,260	348,144	\$ (7,642)	\$ (1,008)	\$ (8,650)	410,382	81,907	492,289	\$ (4,119)	\$ (625)	\$ (4,743)	-	-	-
\$ (28,128)	\$ (1,193)	\$ (29,321)	5,629,379	2,140,037	7,769,415	\$ (20,911)	\$ (173)	\$ (21,084)	6,091,873	2,680,283	8,772,157	\$ (18,349)	\$ (1,814)	\$ (20,163)	-	-	-

1997

Annual Cost of Ramping Controls @ Hells Canyon
Power Economics AIR

Year	Carrying Costs	O&M	Prop Taxes & Insurance	Total Rev Rqmt
1	355,945	68,000	9,805	433,750
2	335,862	69,714	10,050	415,626
3	319,201	71,470	10,301	400,973
4	302,848	73,271	10,559	386,678
5	286,780	75,118	10,823	372,720
6	270,974	77,011	11,093	359,078
7	255,412	78,952	11,371	345,734
8	240,076	80,941	11,655	332,672
9	224,547	82,981	11,946	319,474
10	208,971	85,072	12,245	306,288
Total	2,800,618	762,530	109,847	3,672,994
NPV	2,123,392	553,583	79,755	2,756,730
Levelized Cost	298,144	77,728	11,198	387,071

Assumptions:

Capital Cost	\$1,600,000
Construction Period	6 Months
AFUDC Rate	7.24%
Useful Life	10 Years
O&M Cost (1st Year)	\$68,000
Discount Rate	7.20%
Composite Tax Rate	39.10%
Property Tax Rate (% of Invest)	0.53%
Insurance Prem Rate (% of Invest)	0.07%
Annual O&M, Prop Tax, Insurance Escalation Rate	2.52%

**1994 70TH PERCENTILE HYDROLOGY
FOR JULY IN CONFORMANCE WITH THE IRP**

Capacity Value: \$ 114.00 /kW per year
Reserves 7%

Scenario	Brownlee	Oxbow	Hells Canyon	Total Capacity Deficiency (MW)	Lost Reserves (MW)	Capacity Value (\$1,000)	Reserves Value (\$1,000)	Total Value (\$1,000)
	Capacity Difference from Proposed Ops (MW)	Capacity Difference from Proposed Ops (MW)	Capacity Difference from Proposed Ops (MW)					
Proposed Operations	728	220	330					
OP - 1 Scenario 1a	0	0	-186	-186	-13	\$ (21,198)	\$ (1,484)	\$ (22,682)
OP - 1 Scenario 1b	0	0	-151	-151	-11	\$ (17,237)	\$ (1,207)	\$ (18,444)
OP - 1 Scenario 1c	0	0	-94	-94	-7	\$ (10,679)	\$ (748)	\$ (11,426)
OP - 1 Scenario 1d	0	0	-51	-51	-4	\$ (5,786)	\$ (405)	\$ (6,191)
OP - 1 Scenario 1e	0	0	-51	-51	-4	\$ (5,786)	\$ (405)	\$ (6,191)
OP - 1 Scenario 1f	0	0	-120	-120	-8	\$ (13,666)	\$ (957)	\$ (14,623)
OP - 1 Scenario 2	-71	0	9	-62	-4	\$ (7,120)	\$ (498)	\$ (7,619)
OP - 1 Scenario 3	0	0	-100	-100	-7	\$ (11,438)	\$ (801)	\$ (12,238)
OP - 1 Scenario 4	0	0	-120	-120	-8	\$ (13,666)	\$ (957)	\$ (14,623)
OP - 1 Scenario 5	-508	-151	-191	-850	-59	\$ (96,874)	\$ (6,781)	\$ (103,655)
OP - 1 Scenario 6	-99	0	9	-90	-6	\$ (10,237)	\$ (717)	\$ (10,954)

Scenario

	Proposed Ops	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1	OP-1
		Scenario 1a	Scenario 1b	Scenario 1c	Scenario 1d	Scenario 1e	Scenario 1f	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
7/1/1994	2076.13	2076.13	2076.13	2076.13	2076.13	2076.13	2076.13	2071.19	2076.13	2076.13	1976.00	2075.53
7/2/1994	2076.15	2076.15	2076.15	2076.15	2076.15	2076.15	2076.15	2070.87	2076.15	2076.15	1976.00	2074.84
7/3/1994	2076.11	2076.11	2076.11	2076.11	2076.11	2076.11	2076.11	2070.35	2076.10	2076.10	1976.00	2074.07
7/4/1994	2076.07	2076.07	2076.07	2076.07	2076.07	2076.07	2076.07	2069.77	2076.07	2076.07	1976.00	2073.00
7/5/1994	2076.00	2076.00	2076.00	2076.00	2076.00	2076.00	2076.00	2069.09	2076.00	2076.00	1976.00	2072.09
7/6/1994	2075.93	2075.93	2075.93	2075.93	2075.93	2075.93	2075.93	2068.36	2075.93	2075.93	1976.00	2071.01
7/7/1994	2075.97	2075.97	2075.97	2075.97	2075.97	2075.97	2075.97	2067.73	2075.97	2075.97	1976.00	2070.00
7/8/1994	2076.06	2076.06	2076.06	2076.06	2076.06	2076.06	2076.06	2067.14	2076.06	2076.06	1976.00	2069.08
7/9/1994	2076.17	2076.17	2076.17	2076.17	2076.17	2076.17	2076.17	2066.52	2076.17	2076.17	1976.00	2068.07
7/10/1994	2076.11	2076.11	2076.11	2076.11	2076.11	2076.11	2076.11	2065.81	2076.11	2076.11	1976.00	2067.03
7/11/1994	2075.93	2075.93	2075.93	2075.93	2075.93	2075.93	2075.93	2064.97	2075.93	2075.93	1976.00	2065.93
7/12/1994	2075.91	2075.91	2075.91	2075.91	2075.91	2075.91	2075.91	2064.27	2075.91	2075.91	1976.00	2064.89
7/13/1994	2075.91	2075.91	2075.91	2075.91	2075.91	2075.91	2075.91	2063.59	2075.91	2075.91	1976.00	2063.89
7/14/1994	2075.83	2075.83	2075.83	2075.83	2075.83	2075.83	2075.83	2062.82	2075.83	2075.83	1976.00	2062.81
7/15/1994	2075.74	2075.74	2075.74	2075.74	2075.74	2075.74	2075.74	2062.03	2075.74	2075.74	1976.00	2061.61
7/16/1994	2075.71	2075.71	2075.71	2075.71	2075.71	2075.71	2075.71	2061.30	2075.71	2075.71	1976.00	2060.66
7/17/1994	2075.69	2075.69	2075.69	2075.69	2075.69	2075.69	2075.69	2060.60	2075.69	2075.69	1976.00	2059.63
7/18/1994	2075.49	2075.49	2075.49	2075.49	2075.49	2075.49	2075.49	2059.69	2075.49	2075.49	1976.00	2058.32
7/19/1994	2075.26	2075.26	2075.26	2075.26	2075.26	2075.26	2075.26	2058.75	2075.26	2075.26	1976.00	2057.13
7/20/1994	2075.25	2075.25	2075.25	2075.25	2075.25	2075.25	2075.25	2058.04	2075.25	2075.25	1976.00	2056.03
7/21/1994	2075.36	2075.36	2075.36	2075.36	2075.36	2075.36	2075.36	2057.48	2075.36	2075.36	1976.00	2055.17
7/22/1994	2075.31	2075.31	2075.31	2075.31	2075.31	2075.31	2075.31	2056.74	2075.31	2075.31	1976.00	2054.12
7/23/1994	2075.14	2075.14	2075.14	2075.14	2075.14	2075.14	2075.14	2055.87	2075.14	2075.14	1976.00	2053.03
7/24/1994	2075.06	2075.06	2075.06	2075.06	2075.06	2075.06	2075.06	2055.09	2075.06	2075.06	1976.00	2051.93
7/25/1994	2075.05	2075.05	2075.05	2075.05	2075.05	2075.05	2075.05	2054.39	2075.05	2075.05	1976.00	2050.85
7/26/1994	2074.94	2074.94	2074.94	2074.94	2074.94	2074.94	2074.94	2053.61	2074.94	2074.94	1976.00	2049.72
7/27/1994	2074.79	2074.79	2074.79	2074.79	2074.79	2074.79	2074.79	2052.75	2074.79	2074.79	1976.00	2048.54
7/28/1994	2074.71	2074.71	2074.71	2074.71	2074.71	2074.71	2074.71	2051.98	2074.71	2074.71	1976.00	2047.46
7/29/1994	2074.69	2074.69	2074.69	2074.69	2074.69	2074.69	2074.69	2051.28	2074.69	2074.69	1976.00	2046.44
7/30/1994	2074.61	2074.61	2074.61	2074.61	2074.61	2074.61	2074.61	2050.65	2074.61	2074.61	1976.00	2045.42
7/31/1994	2074.51	2074.51	2074.51	2074.51	2074.51	2074.51	2074.51	2050.21	2074.51	2074.51	1976.00	2044.30
AVERAGE	2075.53	2075.53	2075.53	2075.53	2075.53	2075.53	2075.53	2061.06	2075.53	2075.53	1976.00	2060.41
MINIMUM	2074.51	2074.51	2074.51	2074.51	2074.51	2074.51	2074.51	2050.21	2074.51	2074.51	1976.00	2044.30

AVAILABLE CAPACITY	728.0	728.0	728.0	728.0	728.0	728.0	728.0	656.5	728.0	728.0	220.0	629.2
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OP-1 Scenario 5

1994 Average July Flow

9,118 cfs

k-factor

0.00762 MW/cfs

Average July Generation:

69 MW

MODEL OUTPUT: DAILY AVERAGE FLOW

Scenario	OP-1 Proposed Ops	OP-1 Scenario 1a	OP-1 Scenario 1b	OP-1 Scenario 1c	OP-1 Scenario 1d	OP-1 Scenario 1e	OP-1 Scenario 1f	OP-1 Scenario 2	OP-1 Scenario 3	OP-1 Scenario 4	OP-1 Scenario 5	OP-1 Scenario 6
7/1/1994	7,729	7,711	7714	7,836	7840	7839	7881	10809	7301	7090	8171	11960
7/2/1994	8,175	8,061	7926	7,911	7866	7867	7867	10424	8211	8240	7918	12909
7/3/1994	8,360	8,306	8305	8,296	8478	8479	8294	11421	8248	8225	7788	14146
7/4/1994	9,062	8,745	8924	9,074	9471	9471	9063	13447	8788	9095	8762	15501
7/5/1994	9,778	9,477	9523	9,517	9482	9482	9519	13734	9718	9670	8800	16056
7/6/1994	9,986	9,889	9927	9,952	10091	10092	9928	14503	9805	9865	9659	16683
7/7/1994	10,071	10,035	10040	10,046	10024	10025	10049	14520	10121	10084	10951	16807
7/8/1994	10,417	10,260	10274	10,285	10301	10301	10273	14757	10332	10352	10636	17003
7/9/1994	9,885	10,267	9992	9,843	9597	9596	9883	13673	10159	9844	9830	16376
7/10/1994	10,795	10,513	10521	10,519	10566	10565	10519	14958	10649	10551	10201	17060
7/11/1994	10,669	10,442	10753	10,929	11187	11187	10870	15945	10455	10869	9786	17452
7/12/1994	9,847	10,223	10175	10,140	10061	10060	10177	14403	10105	10092	10509	16578
7/13/1994	10,301	10,104	10099	10,098	10112	10111	10094	14404	10103	10115	9798	16415
7/14/1994	9,899	10,079	10079	10,076	10074	10073	10078	14348	10067	10052	9279	16354
7/15/1994	9,846	9,877	9870	9,852	9839	9839	9852	14104	9764	9701	9358	16090
7/16/1994	9,057	9,469	9207	9,055	8629	8628	9086	12710	9340	9081	9530	15111
7/17/1994	9,657	9,453	9466	9,474	9704	9703	9472	13692	9493	9632	8969	15590
7/18/1994	10,651	10,063	10337	10,522	10796	10797	10483	15350	10371	10578	8149	16686
7/19/1994	9,737	10,157	10144	10,122	10050	10049	10134	14177	10044	10014	8913	16244
7/20/1994	9,860	9,801	9785	9,759	9692	9692	9757	13923	9665	9595	10776	15862
7/21/1994	9,094	9,429	9370	9,378	9164	9164	9396	13550	9315	9309	9839	15396
7/22/1994	9,909	9,558	9595	9,589	9912	9911	9580	13739	9677	9776	8590	15486
7/23/1994	9,067	9,512	9281	9,132	8672	8671	9155	12707	9434	9066	8181	14903
7/24/1994	9,333	9,244	9242	9,250	9466	9465	9249	13398	9187	9324	9313	15041
7/25/1994	9,236	9,174	9371	9,543	9719	9719	9520	14215	9141	9335	8916	15383
7/26/1994	9,462	9,356	9356	9,325	9015	9015	9335	13269	9444	9378	8198	15026
7/27/1994	9,479	9,472	9498	9,484	9885	9884	9491	13502	9485	9537	8528	15111
7/28/1994	9,121	9,281	9251	9,262	8758	8757	9254	13228	9196	9101	9219	14865
7/29/1994	9,567	9,375	9383	9,385	9902	9902	9392	13314	9451	9567	9204	14946
7/30/1994	9,124	9,401	9202	9,050	8505	8504	9062	10905	9391	9064	8393	14476
7/31/1994	9,541	9,399	9409	9,417	9691	9691	9417	10863	9402	9557	9061	14943
AVERAGE	9,572	9,553	9,549	9,552	9,566	9,566	9,552	13,484	9,544	9,541	9,201	15,563

k-factor = 0.01506 MW/cfs
CAPACITY

Scenario	July average discharge	Maximum generation	DEFICIENCY(MW)
Proposed Ops	9,572	330	
OP-1 Scenario 1a	9,553	144	186
OP-1 Scenario 1b	9,549	179	151
OP-1 Scenario 1c	9,552	236	94
OP-1 Scenario 1d	9,566	279	51
OP-1 Scenario 1e	9,566	279	51
OP-1 Scenario 1f	9,552	210	120
OP-1 Scenario 2	13,484	339	(9)
OP-1 Scenario 3	9,544	229	100
OP-1 Scenario 4	9,541	210	120
OP-1 Scenario 5	9,201	139	191
OP-1 Scenario 6	15,563	339	(9)

1. MW generation based on k-factor

shaping flows	Prop Ops 1a	1b	1c	1d	1e	1f - (a)	1f - (b)	2 - (a)	2 - (b)	3	4 - (a)	4 - (b)	5	6 - (a)	6 - (b)	
	Johnson Bar	HC	HC	HC	HC	HC	HC	HC	HC	Johnson Bar	HC		HC	Johnson Bar	Johnson Bar	
Gauge																
HOURL 1	6,500	9,553	7,488	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 2	6,500	9,553	7,884	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 3	6,500	9,553	7,884	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 4	6,500	9,553	8,289	6,500	6,500	6,500	8,453	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 5	6,500	9,553	8,703	7,449	6,500	6,500	10,640	9,200	6,500	8,453	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 6	6,500	9,553	9,127	8,453	6,500	6,500	10,640	9,200	8,453	10,640	8,500	8,500	9,200	9,201	6,500	9,046
HOURL 7	6,500	9,553	9,559	9,516	8,453	8,453	10,640	9,200	10,640	13,050	8,500	8,500	9,200	9,201	6,500	12,295
HOURL 8	9,046	9,553	10,000	10,640	10,640	10,640	10,640	9,200	13,050	15,680	8,500	8,500	9,200	9,201	9,046	15,920
HOURL 9	12,295	9,553	10,450	11,810	13,050	13,050	10,640	9,200	15,680	18,530	8,500	10,680	9,200	9,201	12,295	19,811
HOURL 10	15,920	9,553	10,910	13,050	15,680	15,680	10,640	9,200	18,530	21,600	11,669	13,100	9,200	9,201	15,920	23,864
HOURL 11	17,900	9,553	11,380	14,330	15,680	15,680	10,640	11,450	21,600	24,890	15,238	13,100	11,450	9,201	19,811	28,030
HOURL 12	21,900	9,553	11,860	15,680	18,530	18,530	10,640	13,940	22,500	28,380	15,238	13,100	13,940	9,201	22,500	30,000
HOURL 13	17,900	9,553	11,860	14,330	15,680	15,680	10,640	11,450	21,600	24,890	15,238	13,100	11,450	9,201	19,811	28,030
HOURL 14	15,920	9,553	11,380	13,050	15,680	15,680	10,640	9,200	18,530	21,600	11,669	10,680	9,200	9,201	15,920	23,864
HOURL 15	12,295	9,553	10,910	11,810	13,050	13,050	10,640	9,200	15,680	18,530	8,500	10,680	9,200	9,201	12,295	19,811
HOURL 16	9,046	9,553	10,450	10,640	10,640	10,640	10,640	9,200	13,050	18,530	8,500	8,500	9,200	9,201	9,046	15,920
HOURL 17	6,500	9,553	10,450	10,640	8,453	8,453	10,640	9,200	10,640	15,680	8,500	8,500	9,200	9,201	6,500	12,295
HOURL 18	6,500	9,553	10,000	9,516	6,500	6,500	10,640	9,200	8,453	13,050	8,500	8,500	9,200	9,201	6,500	9,046
HOURL 19	6,500	9,553	9,559	8,453	6,500	6,500	10,640	9,200	6,500	10,640	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 20	6,500	9,553	9,127	7,449	6,500	6,500	10,640	9,200	6,500	8,453	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 21	6,500	9,553	8,703	6,500	6,500	6,500	10,640	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 22	6,500	9,553	8,289	6,500	6,500	6,500	8,453	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 23	6,500	9,553	7,884	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
HOURL 24	6,500	9,553	7,488	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
Average Flow	9,572	9,553	9,568	9,534	9,585	9,585	9,595	9,585	11,246	13,525	9,606	9,539	9,585	9,201	9,756	13,310
Minimum Flow	6,500	9,553	7,488	6,500	6,500	6,500	6,500	9,200	6,500	6,500	8,500	8,500	9,200	9,201	6,500	6,500
Maximum Flow	21,900	9,553	11,860	15,680	18,530	18,530	10,640	13,940	22,500	28,380	15,238	13,100	13,940	9,201	22,500	30,000
Daily Difference	15,400	-	4,372	9,180	12,030	12,030	4,140	4,740	16,000	21,880	6,738	4,600	4,740	-	16,000	23,500
using k-factor																
MINIMUM CAPACITY:	98	144	113	98	98	98	98	139	98	98	128	128	139	139	98	98
MAXIMUM CAPACITY:	330	144	179	236	279	279	160	210	339	427	229	197	210	139	339	452
DIFFERENCE:	232	-	66	138	181	181	62	71	241	330	101	69	71	-	241	354
LOST CAPACITY ABSOLUTE:		186	151	94	51	51	170	120	(9)	(98)	100	133	120	191	(9)	(122)

dated: 10/22/04

Mid C

	HL	LL
Jan-05	70.09	60.00
Feb-05	64.25	55.00
Mar-05	58.41	50.00
Apr-05	44.03	35.12
May-05	39.81	31.76
Jun-05	45.90	36.62
Jul-05	53.59	43.70
Aug-05	62.04	50.59
Sep-05	59.12	48.21
Oct-05	58.18	48.81
Nov-05	56.54	47.44
Dec-05	62.28	52.25

Palo Verde HL as of 10/29/2004:

					<u>Mona cost</u>
Jun-05	\$63.53	+	\$5.00	=	\$68.53
Jul-05	\$74.16	+	\$5.00	=	\$79.16
Aug-05	\$72.00	+	\$5.00	=	\$77.00

Alternative Scenario: OP-1 Scenario 4

Month	1992			1994			1995			1999			1997		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	334,084	46,198	380,282	386,071	60,809	446,881	485,593	138,032	623,624	578,374	307,098	885,473	611,912	386,590	998,503
February	345,132	53,991	399,124	323,318	48,385	371,702	477,865	145,995	623,861	518,347	284,005	802,351	528,847	342,642	871,490
March	327,774	51,899	379,673	408,529	71,234	479,763	503,396	191,039	694,435	574,184	362,688	936,873	544,558	364,137	908,695
April	271,426	35,798	307,224	390,003	51,313	441,317	536,361	145,456	681,817	554,449	291,608	846,057	524,497	275,793	800,289
May	264,561	36,095	300,656	437,302	60,099	497,401	620,331	263,504	883,835	578,974	258,513	837,487	589,454	308,587	898,041
June	178,701	24,986	203,687	281,279	35,662	316,941	634,848	316,820	951,667	636,782	334,601	971,383	633,005	334,672	967,676
July	197,248	28,470	225,717	289,122	37,315	326,437	491,166	107,871	599,037	440,826	73,268	514,093	528,257	150,737	678,994
August	177,436	23,487	200,923	258,404	35,041	293,444	369,911	42,152	412,062	438,120	57,804	495,924	510,147	87,781	597,928
September	232,967	29,962	262,928	293,203	36,455	329,658	426,544	57,877	483,421	415,135	53,239	468,374	568,667	185,617	755,283
October	277,004	41,546	318,550	335,780	50,810	386,590	403,681	70,761	474,441	410,644	74,131	484,775	470,048	183,860	653,908
November	256,527	41,217	297,744	256,351	40,445	296,795	310,265	50,513	360,778	354,878	58,457	413,335	345,789	60,592	406,381
December	298,638	42,627	341,265	303,323	44,531	347,854	474,411	127,984	602,395	420,863	69,974	490,837	466,962	99,995	566,957
TOTALS	3,161,398	456,275	3,617,673	3,964,683	571,380	4,536,063	5,733,369	1,658,004	7,391,373	5,921,575	2,225,386	8,146,961	6,323,142	2,781,004	9,104,146

Alternative Scenario: OP-1 Scenario 5

Month	1992			1994			1995			1999			1997		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	201,074	126,656	327,730	233,441	155,442	388,883	266,759	174,238	440,997	399,432	267,399	666,832	481,017	303,666	784,683
February	207,404	138,213	345,618	193,974	126,851	320,826	282,932	182,887	465,818	373,386	242,491	615,878	427,967	276,914	704,880
March	197,979	128,436	326,415	256,240	162,253	418,493	362,653	231,125	593,779	480,572	303,557	784,129	467,028	312,069	779,097
April	163,948	86,217	250,166	237,777	125,565	363,341	381,536	203,442	584,978	498,607	281,977	780,584	496,037	260,648	756,685
May	148,123	78,546	226,669	270,875	142,768	413,642	510,227	267,784	778,010	514,301	273,037	787,339	512,347	270,380	782,727
June	113,562	59,661	173,223	169,452	88,995	258,447	496,539	260,917	757,456	467,586	260,370	727,956	493,107	260,699	753,805
July	118,729	65,376	184,105	165,390	92,811	258,200	309,630	174,681	484,312	267,686	148,903	416,590	338,165	185,841	524,006
August	97,972	55,084	153,056	147,586	81,088	228,674	201,733	110,689	312,422	235,351	130,685	366,037	292,669	164,757	457,426
September	122,567	67,526	190,092	150,883	83,283	234,167	223,088	124,455	347,542	234,750	128,867	363,617	353,114	194,707	547,821
October	154,273	100,144	254,418	186,052	123,727	309,778	231,966	150,970	382,935	258,572	173,823	432,395	357,454	225,648	583,102
November	169,058	110,628	279,687	178,127	113,206	291,333	238,827	151,795	390,622	273,726	174,516	448,242	297,642	201,412	499,054
December	182,052	115,412	297,464	191,236	124,000	315,236	345,458	220,938	566,395	291,186	183,640	474,825	348,285	219,857	568,143
TOTALS	1,876,743	1,131,899	3,008,642	2,381,032	1,419,989	3,801,021	3,851,447	2,263,920	6,115,367	4,323,137	2,549,267	6,872,404	4,864,833	2,876,596	7,741,429

Alternative Scenario: OP-1 Scenario 6

Month	1992			1994			1995			1999			1997		
	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)	Heavy Load (MWh)	Light Load (MWh)	Total (MWh)
January	241,803	40,384	282,188	233,462	41,845	275,307	391,755	86,902	478,657	565,060	326,803	891,863	603,284	381,448	984,732
February	237,255	39,113	276,368	222,704	37,062	259,767	462,323	168,116	630,439	473,793	287,812	761,605	488,053	317,037	805,090
March	309,859	43,696	353,555	346,645	46,966	393,611	461,038	162,767	623,805	495,331	312,833	808,165	481,919	322,231	804,151
April	274,983	34,835	309,818	397,693	38,336	436,029	463,540	106,021	569,561	502,147	263,835	765,982	499,993	262,723	762,716
May	269,127	36,148	305,275	452,271	43,136	495,408	562,290	215,316	777,614	562,363	251,369	813,731	589,566	308,457	898,022
June	174,139	23,736	197,875	290,188	29,544	319,732	622,470	283,660	906,131	628,496	309,112	938,608	633,005	334,672	967,676
July	379,908	50,591	430,499	467,089	48,526	515,615	589,376	164,654	754,030	570,312	99,006	669,318	596,088	173,459	769,547
August	294,169	45,053	339,223	382,286	41,709	423,995	480,787	57,018	537,805	515,628	74,175	589,803	566,717	149,903	716,621
September	280,775	35,339	316,114	324,100	37,724	361,824	426,446	56,540	482,987	439,677	59,414	499,091	512,906	177,173	690,079
October	198,177	40,844	239,021	279,899	47,029	326,928	276,358	56,544	332,902	306,551	61,622	368,174	390,372	109,386	499,758
November	201,527	39,716	241,243	205,873	39,075	244,949	212,636	38,936	251,572	267,137	47,795	314,933	319,588	61,888	381,476
December	220,741	40,239	260,981	225,136	41,048	266,185	380,094	107,632	487,726	301,894	46,260	348,144	410,382	81,907	492,289
TOTALS	3,082,463	469,696	3,552,159	3,785,346	492,001	4,277,349	5,329,123	1,524,105	6,853,229	5,629,379	2,140,037	7,769,415	6,091,873	2,680,283	8,772,157

WHEELING COSTS WHEN IMPORTING ENERGY TO IDAHO

If we go to market to replace the capacity and energy lost due to restricted ramping capability at Hells Canyon, we'd use our interconnections with Avista and PacifiCorp during the months September through May (our BPA interconnection at LaGrande is fully utilized). To import using the Avista and PacifiCorp interconnections, we will need a BPA wheel to get from Mid-C to PacifiCorp or Avista and then an Avista or PacifiCorp wheel to get to Idaho. Assume hourly transmission rates.

Hourly Transmission September through May Mid-C to Idaho		
	\$/mwhr	Losses
BPA (Mid-C to Avista or Pac)	2.92	1.90%
Avista to Lolo	3.00	3%
PacifiCorp to Enterprise	5.84	4.48%
Average	4.42	3.74%
Total Wheel Cost From Mid-C	7.34	5.64%

need to be imported from the east side of the system. Assume that we are able to buy at Mona and use a PacifiCorp wheel to get the energy to Idaho. Mona summer prices are estimated to be Palo Verde price plus \$5.

Hourly Transmission June through August Mona to Idaho		
	\$/mwhr	Losses
PacifiCorp (Mona to Borah)	5.84	4.48%

WHEELING COSTS WHEN EXPORTING ENERGY TO MID-C

Restricted ramping capability at Hells Canyon will cause IPC to export more shoulder hour and light load energy. Experience has shown that we can export year round directly to Mid-C using our three Northwest interconnections to the Northwest.

Hourly Transmission - Idaho to MidC		
	\$/mwhr	Losses
BPA to Mid-C	2.92	1.90%
Avista to Mid-C	3.00	3%
PacifiCorp to Mid-C	5.84	4.48%
Average	3.92	3.13%
Total Wheel Cost To Mid-C	3.92	3.13%

EXAMPLE IN APPLYING LOSS CHARGES

Example: If you are buying energy at Mid-C for \$50, then the total delivered price would be \$60.16/mwhr, (50 + 7.34 + (50 x .0564))

LOSS OF RESERVES CAPABILITY AT HELLS CANYON

Canyon. Even though a CT will be constructed to replace lost Hells Canyon capacity, the CT will not replace our current ability to utilize an additional 30 MW of reserve capability by quickly ramping up Hells Canyon generation. In this analysis, we have assumed that the current 1"/hr ramp rate at Hells Canyon will create 30 MW of additional reserves that can be utilized internally or sold (a 6"/hr ramp rate will allow us to claim 15 MW). This capability is currently not available during the Fall Chinook spawning period (2 months - early Oct through early Dec). It is also not available during the hours of the day that we are ramping Hells Canyon generation up to follow load, because we've already used our 1' increase for the hour. We assume that when the CT is not being used to supply peak needs, it will not be operated in a manner that will allow it to be counted as reserves.

Hells Canyon Ramp Rate	Amount of Reserve Lost (MW)	Tariff Price (\$/kw-mo)	Months lost	Value	Percent of time not ramping HC up	Annual Value	Scenario
2"/hr	30	6.53	10	1,959,000	0.75	1,469,250	1a, 1b, 5, 6
2"/hr	30	6.53	3	587,700	0.75	440,775	1d, 2
6"/hr	15	6.53	10	979,500	0.75	734,625	1c
6"/hr	15	6.53	7	685,650	0.75	514,238	
6"/hr	15	6.53	3	293,850	0.75	220,388	1e
2"/hr for 3 mo. And 6"/hour for 6 mo	30 for 3 months and 15 for 6 months			1,273,350	0.75	955,013	1f, 4

OTHER

The CHEOPS model didn't reflect any loss of capacity at Oxbow or Brownlee. I don't believe this is accurate. We would not operate as aggressive as we do today if we had a 2"/hr HC ramp rate. For instance, we would keep the HC pond lower to give us better operational flexibility (results in additional head losses), we probably would not fill Brownlee to 2077' (additional head losses), etc. We would be very conservative in our longer range planning to meet flood control elevations, fall chinook flows, warm water fish targets, etc. We will not fill or draft as aggressive as we do today.