

**Appendix E**

**HYDROPOWER REPLACEMENT  
POWER COST ANALYSIS**

REPLACEMENT POWER COST ANALYSIS  
250/5000 cfs FLOW REGIME  
2001 through 2005

Month			2001		2002		2003		2004		2005	
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	296	11904	\$60.00	\$714,240	\$61.80	\$735,667	\$63.65	\$757,737	\$65.56	\$780,469	\$67.53	\$803,883
February	288	5488	\$60.00	\$329,280	\$61.80	\$339,158	\$63.65	\$349,333	\$65.56	\$359,813	\$67.53	370,608
March	423	3348	\$60.00	\$200,880	\$61.80	\$206,906	\$63.65	\$213,114	\$65.56	\$219,507	\$67.53	\$226,092
April	731	720	\$60.00	\$43,200	\$61.80	\$44,496	\$63.65	\$45,831	\$65.56	\$47,206	\$67.53	\$48,622
May	858	-2232	\$60.00	\$-133,920	\$61.80	\$-137,938	\$63.65	\$-142,076	\$65.56	\$-146,338	\$67.53	\$-150,728
June	845	360	\$60.00	\$21,600	\$61.80	\$22,248	\$63.65	\$22,915	\$65.56	\$23,603	\$67.53	\$24,311
July	384	7440	\$60.00	\$446,400	\$61.80	\$459,792	\$63.65	\$473,586	\$65.56	\$487,793	\$67.53	\$502,427
August	472	7068	\$60.00	\$424,080	\$61.80	\$436,802	\$63.65	\$449,906	\$65.56	\$463,404	\$67.53	\$477,306
September	459	8640	\$60.00	\$518,400	\$61.80	\$533,952	\$63.65	\$549,971	\$65.56	\$566,470	\$67.53	\$583,454
October	388	9300	\$60.00	\$558,000	\$61.80	\$574,740	\$63.65	\$591,982	\$65.56	\$609,742	\$67.53	\$628,034
November	318	12240	\$60.00	\$734,400	\$61.80	\$756,432	\$63.65	\$779,125	\$65.56	\$802,499	\$67.53	\$826,574
December	354	13020	\$60.00	\$781,200	\$61.80	\$804,636	\$63.65	\$828,775	\$65.56	\$853,638	\$67.53	\$879,247
Total		77296		\$4,637,760		\$4,776,893		\$4,920,200		\$5,067,806		\$5,219,840

REPLACEMENT POWER COST ANALYSIS

250/5000FLOW REGIME  
2006 through 2010

Month		2006		2007		2008		2009		2010		
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	296	11904	\$69.56	\$828,000	\$71.64	\$852,840	\$73.79	\$878,425	\$76.01	\$904,778	\$78.29	\$931,921
February	288	5488	\$69.56	\$381,726	\$71.64	\$393,178	\$73.79	\$404,973	\$76.01	\$417,122	\$78.29	\$ 429,636
March	423	3348	\$69.56	\$232,875	\$71.64	\$239,861	\$73.79	\$247,057	\$76.01	\$254,469	\$78.29	\$ 262,103
April	731	720	\$69.56	\$50,081	\$71.64	\$51,583	\$73.79	\$53,131	\$76.01	\$54,724	\$78.29	\$ 56,366
May	858	-2232	\$69.56	\$-155,250	\$71.64	\$-159,907	\$73.79	\$-164,705	\$76.01	\$-169,646	\$78.29	\$-174,735
June	845	360	\$69.56	\$25,040	\$71.64	\$25,792	\$73.79	\$26,565	\$76.01	\$27,362	\$78.29	\$ 28,183
July	384	7440	\$69.56	\$517,500	\$71.64	\$533,025	\$73.79	\$549,016	\$76.01	\$565,486	\$78.29	\$ 582,451
August	472	7068	\$69.56	\$491,625	\$71.64	\$506,374	\$73.79	\$521,586	\$76.01	\$537,212	\$78.29	\$ 553,328
September	459	8640	\$69.56	\$600,968	\$71.64	\$618,997	\$73.79	\$637,567	\$76.01	\$656,694	\$78.29	\$ 676,394
October	388	9300	\$69.56	\$646,875	\$71.64	\$666,281	\$73.79	\$686,270	\$76.01	\$706,858	\$78.29	\$ 728,063
November	318	12240	\$69.56	\$851,371	\$71.64	\$876,912	\$73.79	\$903,219	\$76.01	\$930,316	\$78.29	\$ 958,225
December	354	13020	\$69.56	\$905,825	\$71.64	\$932,794	\$73.79	\$960,777	\$76.01	\$989,601	\$78.29	\$1,019,289

Total		77296		\$5,376,435		\$5,537,728		\$5,703,860		\$5,874,976		\$6,051,225
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REPLACEMENT POWER COST ANALYSIS  
500/5000 cfs FLOW REGIME  
2001 through 2005

Month			2001		2002		2003		2004		2005	
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	486	7440	\$60.00	\$446,400	\$61.80	\$459,792	\$63.65	\$473,586	\$65.56	\$487,793	\$67.53	\$502,427
February	488	336	\$60.00	\$20,160	\$61.80	\$20,765	\$63.65	\$21,388	\$65.56	\$22,029	\$67.53	\$22,690
March	715	-372	\$60.00	\$-22,320	\$61.80	\$-22,990	\$63.65	\$-23,679	\$65.56	\$-24,390	\$67.53	\$-25,121
April	1063	720	\$60.00	\$43,200	\$61.80	\$44,496	\$63.65	\$45,831	\$65.56	\$47,206	\$67.53	\$48,622
May	1795	0	\$60.00	\$0	\$61.80	\$0	\$63.65	\$0	\$65.56	\$0	\$67.53	\$0
June	1660	2160	\$60.00	\$129,600	\$61.80	\$133,488	\$63.65	\$137,493	\$65.56	\$141,617	\$67.53	\$145,866
July	538	2604	\$60.00	\$156,240	\$61.80	\$160,927	\$63.65	\$165,755	\$65.56	\$170,728	\$67.53	\$175,849
August	531	4836	\$60.00	\$290,160	\$61.80	\$298,865	\$63.65	\$307,831	\$65.56	\$317,066	\$67.53	\$326,578
September	517	6840	\$60.00	\$410,400	\$61.80	\$422,712	\$63.65	\$435,393	\$65.56	\$448,455	\$67.53	\$461,909
October	501	5580	\$60.00	\$344,800	\$61.80	\$344,844	\$63.65	\$355,189	\$65.56	\$385,845	\$67.53	\$376,820
November	507	7920	\$60.00	\$475,200	\$61.80	\$489,456	\$63.65	\$504,140	\$65.56	\$519,264	\$67.53	\$534,842
December	544	7812	\$60.00	\$468,720	\$61.80	\$482,782	\$63.65	\$497,265	\$65.56	\$512,183	\$67.53	\$527,548
Total		45876		\$2,752,560		\$2,835,137		\$2,920,191		\$3,007,797		\$3,098,031

REPLACEMENT POWER COST ANALYSIS  
500/5000 cfs FLOW REGIME  
2006 through 2010

Month			2006		2007		2008		2009		2010	
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	486	7440	\$69.56	\$517,500	\$71.64	\$533,025	\$73.79	\$549,016	\$76.01	\$565,486	\$78.29	\$582,451
February	488	336	\$69.56	\$23,371	\$71.64	\$24,072	\$73.79	\$24,794	\$76.01	\$25,538	\$78.29	\$26,304
March	715	-372	\$69.56	\$-25,875	\$71.64	\$-26,651	\$73.79	\$-27,451	\$76.01	\$-28,274	\$78.29	\$-29,123
April	1063	720	\$69.56	\$50,081	\$71.64	\$51,583	\$73.79	\$53,131	\$76.01	\$54,724	\$78.29	\$56,366
May	1795	0	\$69.56	\$0	\$71.64	\$0	\$73.79	\$0	\$76.01	\$0	\$78.29	\$0
June	1660	2160	\$69.56	\$150,242	\$71.64	\$154,749	\$73.79	\$159,392	\$76.01	\$164,173	\$78.29	\$169,099
July	538	2604	\$69.56	\$181,125	\$71.64	\$186,559	\$73.79	\$192,155	\$76.01	\$197,920	\$78.29	\$203,858
August	531	4836	\$69.56	\$336,375	\$71.64	\$346,466	\$73.79	\$356,860	\$76.01	\$367,566	\$78.29	\$378,593
September	517	6840	\$69.56	\$475,766	\$71.64	\$490,039	\$73.79	\$504,740	\$76.01	\$519,882	\$78.29	\$535,479
October	501	5580	\$69.56	\$388,125	\$71.64	\$399,769	\$73.79	\$411,762	\$76.01	\$424,115	\$78.29	\$436,838
November	507	7920	\$69.56	\$550,887	\$71.64	\$567,414	\$73.79	\$584,436	\$76.01	\$601,969	\$78.29	\$620,028
December	544	7812	\$69.56	\$543,375	\$71.64	\$559,676	\$73.79	\$576,466	\$76.01	\$593,760	\$78.29	\$611,573
Total		45876		\$3,190,971		\$3,286,701		\$3,385,302		\$3,486,861		\$3,591,466

REPLACEMENT POWER COSTS  
250/5000 cfs FLOW REGIME  
Unit Unable to Perform  
2001 through 2005

Month			2001		2002		2003		2004		2005	
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	296	18484	\$60.00	\$1,109,040	\$61.80	\$1,142,311	\$63.65	\$1,176,581	\$65.56	\$1,211,878	\$67.53	\$1,248,234
February	288	9408	\$60.00	\$564,480	\$61.80	\$581,414	\$63.65	\$598,857	\$65.56	\$616,823	\$67.53	\$635,327
March	423	2976	\$60.00	\$178,560	\$61.80	\$183,917	\$63.65	\$189,434	\$65.56	\$195,117	\$67.53	\$200,971
April	731	720	\$60.00	\$43,200	\$61.80	\$44,496	\$63.65	\$45,831	\$65.56	\$47,206	\$67.53	\$48,622
May	858	-1860	\$60.00	\$-111,600	\$61.80	\$-114,948	\$63.65	\$-118,396	\$65.56	\$-121,948	\$67.53	\$-125,607
June	845	360	\$60.00	\$21,600	\$61.80	\$22,248	\$63.65	\$22,915	\$65.56	\$23,603	\$67.53	\$24,311
July	384	10044	\$60.00	\$602,640	\$61.80	\$620,719	\$63.65	\$639,341	\$65.56	\$658,521	\$67.53	\$678,277
August	472	9300	\$60.00	\$558,000	\$61.80	\$574,740	\$63.65	\$591,982	\$65.56	\$609,742	\$67.53	\$628,034
September	459	9720	\$60.00	\$583,200	\$61.80	\$600,696	\$63.65	\$618,717	\$65.56	\$637,278	\$67.53	\$656,397
October	388	11532	\$60.00	\$691,920	\$61.80	\$712,678	\$63.65	\$734,058	\$65.56	\$756,080	\$67.53	\$778,762
November	318	18000	\$60.00	\$1,080,000	\$61.80	\$1,112,400	\$63.65	\$1,145,772	\$65.56	\$1,180,145	\$67.53	\$1,215,550
December	354	13764	\$60.00	\$825,840	\$61.80	\$850,615	\$63.65	\$876,134	\$65.56	\$902,418	\$67.53	\$929,490
Total		102448		\$6,146,880		\$6,331,286		\$6,521,225		\$6,716,862		\$6,918,368

REPLACEMENT POWER COSTS  
 250/5000 cfs FLOW REGIME  
 Unit Unable to Perform  
 2006 through 2010

Month		2006		2007		2008		2009		2010		
	Flow	mw loss	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost	cost/mw	cost
January	296	18484	\$69.56	\$1,285,681	\$71.64	\$1,324,252	\$73.79	\$1,363,979	\$76.01	\$1,404,899	\$78.29	\$1,447,046
February	288	9408	\$69.56	\$654,387	\$71.64	\$674,019	\$73.79	\$694,239	\$76.01	\$715,066	\$78.29	\$736,518
March	423	2976	\$69.56	\$207,000	\$71.64	\$213,210	\$73.79	\$219,606	\$76.01	\$226,194	\$78.29	\$232,980
April	731	720	\$69.56	\$50,081	\$71.64	\$51,583	\$73.79	\$53,131	\$76.01	\$54,724	\$78.29	\$56,366
May	858	-1860	\$69.56	\$-129,375	\$71.64	\$-133,256	\$73.79	\$-137,254	\$76.01	\$-141,372	\$78.29	\$-145,613
June	845	360	\$69.56	\$25,040	\$71.64	\$25,792	\$73.79	\$26,565	\$76.01	\$27,362	\$78.29	\$28,183
July	384	10044	\$69.56	\$698,625	\$71.64	\$719,584	\$73.79	\$741,171	\$76.01	\$763,406	\$78.29	\$786,309
August	472	9300	\$69.56	\$646,875	\$71.64	\$666,281	\$73.79	\$686,270	\$76.01	\$706,858	\$78.29	\$728,063
September	459	9720	\$69.56	\$676,089	\$71.64	\$696,371	\$73.79	\$717,262	\$76.01	\$738,780	\$78.29	\$760,944
October	388	11532	\$69.56	\$802,125	\$71.64	\$826,189	\$73.79	\$850,974	\$76.01	\$876,504	\$78.29	\$902,799
November	318	18000	\$69.56	\$1,252,016	\$71.64	\$1,289,576	\$73.79	\$1,328,264	\$76.01	\$1,368,112	\$78.29	\$1,409,155
December	354	13764	\$69.56	\$957,375	\$71.64	\$986,096	\$73.79	\$1,015,679	\$76.01	\$1,046,149	\$78.29	\$1,077,534

Total		102448		\$7,125,919		\$7,339,696		\$7,559,887		\$7,786,684		\$8,020,284
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