



277

Department of Energy
Western Area Power Administration
Sacramento Area Office
1825 Bell Street, Suite 105
Sacramento, California 95825

MAR 8 1995

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Dear Sirs:

This letter is to provide the State Water Resources Control Board (SWRCB) with Western Area Power Administration's (Western) comments on the Draft Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

Western is pleased to see that the results of our earlier analysis were included in your Draft Environmental Report, an appendix to the Draft Plan. Table XII-6 and associated text in the appendix, however, seems to be in error. The values that we reported for Restoration Fund Costs and Offset By Surplus Sales Revenues, which result in higher total costs of about \$2 million annually, are included in Attachment 9B to this letter.

We have also included updates to tables and charts provided in Western's report on "Impacts of Bay-Delta Water Quality Standards on CVP Power Production" which was provided to SWRCB in a letter dated November 30, 1994. These updates include the results of our analysis of the SWRCB preferred alternative (Alternative 8). Our analysis was based on information provided to Western by Mr. Thomas Howard of your staff by letter of January 31, 1995. The results indicate that the preferred alternative would cost Western and its customers about \$25 million annually from a long term or regional perspective when compared to D-1485. This is \$5 million more than the other 3 alternatives presented in your Draft Environmental Report.

I wish to reiterate Western's opinion that the determination of Bay-Delta water quality standards should be integrated with the other major water actions being considered within northern California at this time -- Central Valley Project Improvement Act, Trinity River Restoration, San Joaquin Restoration, etc. All of these activities could have direct impacts on the timing and availability of water to meet Bay-Delta requirements. As part of the Trinity River Restoration project, there is talk of increasing the amount of water released to the Trinity River which, in turn, would reduce the amount of water imported to the Sacramento River Basin and delivered to the Delta. One conservative estimate is that an annual average of approximately 300,000 acre-feet would not be imported and, therefore, not available in the Delta.

Western appreciates the opportunity to participate in these proceedings. If you have any questions regarding our comments or our study results, please contact Phil House at (916) 649-4441.

Sincerely,

ORIGINAL SIGNED BY

James C. Feider
Area Manager

Enclosures

cc:

Mr. Thomas Howard
Senior Water Resources Control Engineer
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

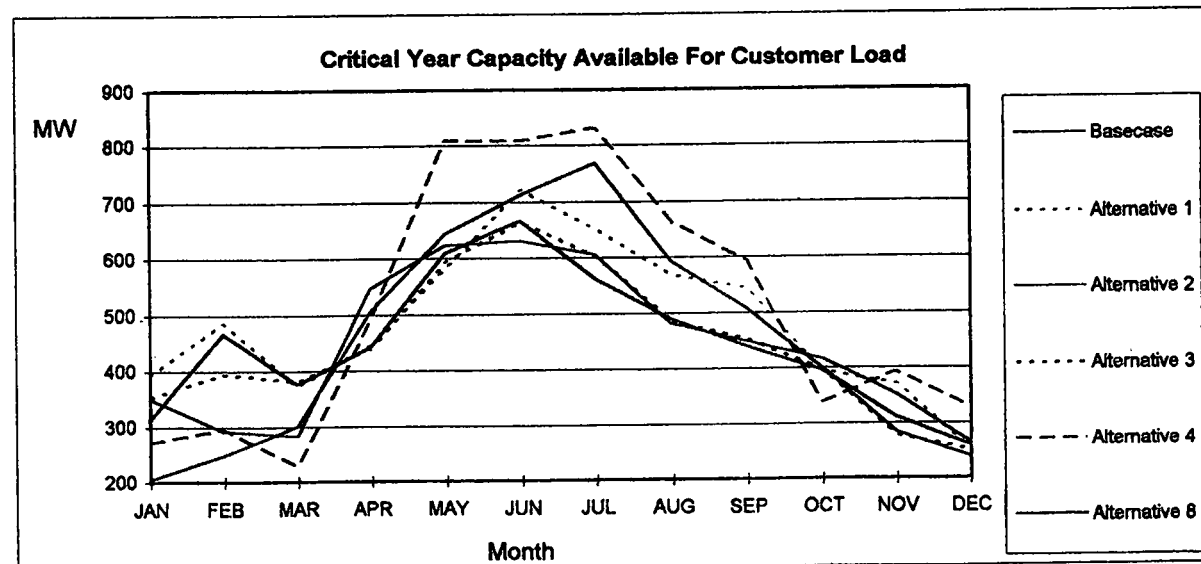
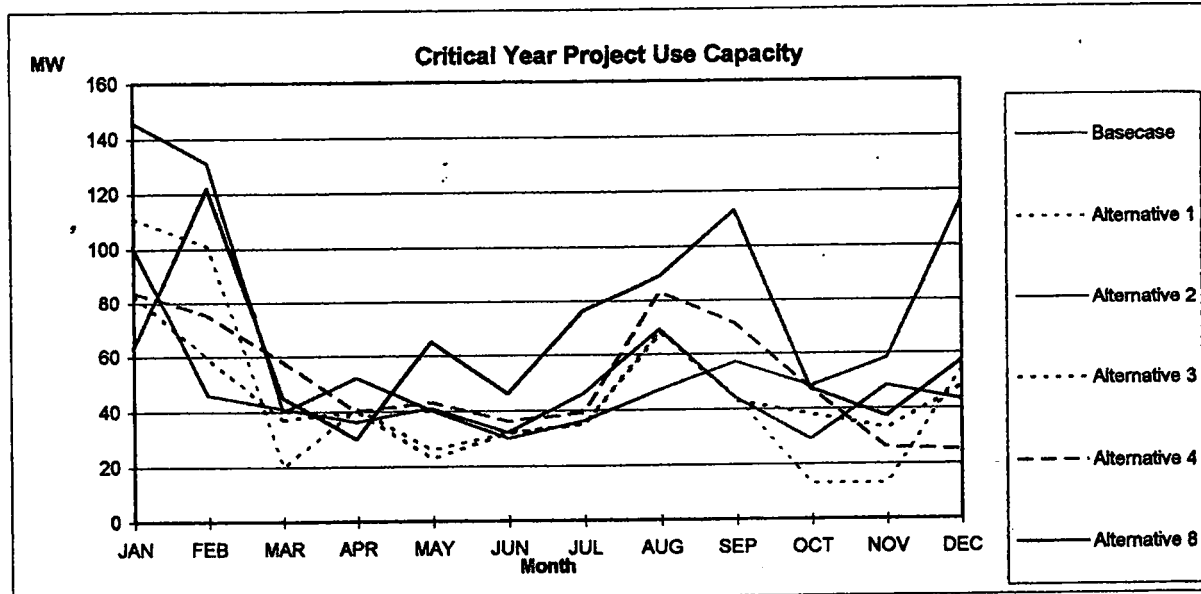
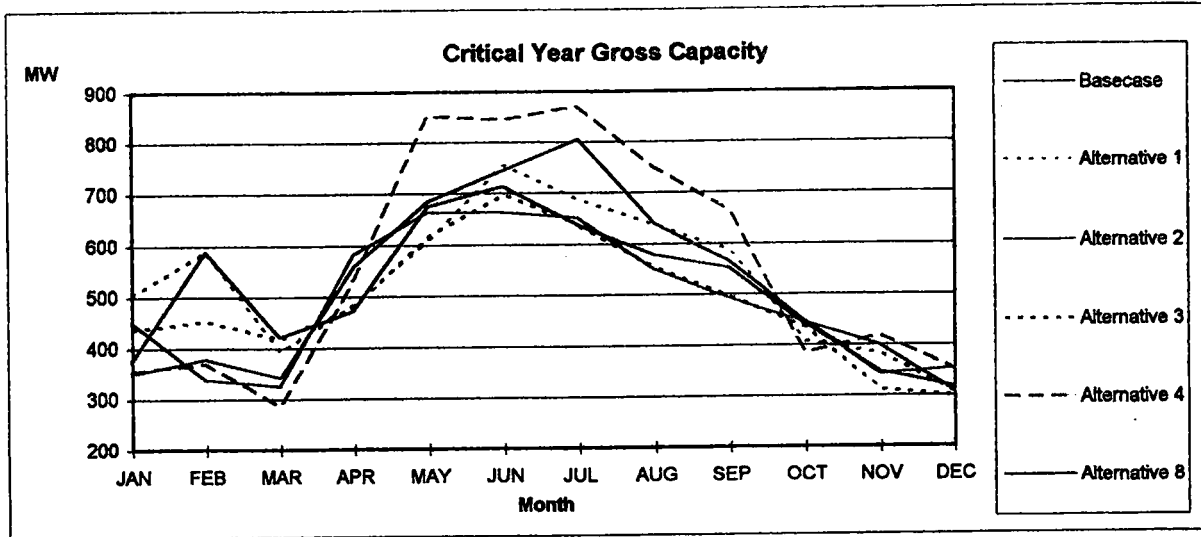
Mr. Stephen Hall
Executive Director
Association of California Water Agencies
910 K Street, Suite 250
Sacramento, CA 95814-3577

Ms. Palma Risler
U.S. Environmental Protection Agency
Bay-Delta Section
75 Hawthorne Street
San Francisco, CA 94105

Alternative Summary Report Critical Year Capacity Breakdown

Critical Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
CAPACITY MW (1)													
Basecase 1931	350	379	341	558	684	743	804	639	564	447	342	354	804
Alternative 1 1977	503	587	392	485	608	754	687	637	587	407	383	307	754
Alternative 2 1977	451	338	324	582	664	663	651	550	492	445	399	308	664
Alternative 3 1977	436	453	418	480	618	697	638	553	496	435	312	299	697
Alternative 4 1934	355	371	286	531	852	844	870	748	666	384	418	353	870
Alternative 8 1977	375	588	420	472	674	713	637	578	552	442	347	316	713
PU CAPACITY MW (2)													
Basecase 1931	146	131	40	52	40	30	36	47	57	48	58	116	146
Alternative 1 1977	111	101	20	41	26	32	35	69	44	13	13	54	111
Alternative 2 1977	101	46	41	36	41	32	46	69	44	29	48	43	101
Alternative 3 1977	83	59	37	40	23	32	35	68	43	38	33	48	83
Alternative 4 1934	84	75	58	40	43	36	39	83	71	47	26	25	84
Alternative 8 1977	63	122	45	30	65	46	76	89	113	47	37	57	122
CAPACITY AVAILABLE For Customer Load													
Basecase 1931	204	248	301	506	644	713	768	592	507	399	284	238	768
Alternative 1 1977	392	486	372	444	582	722	652	568	543	394	370	253	722
Alternative 2 1977	350	292	283	546	623	631	605	481	448	416	351	265	631
Alternative 3 1977	353	394	381	440	595	665	603	485	453	397	279	251	665
Alternative 4 1934	271	296	228	491	809	808	831	665	595	337	392	328	831
Alternative 8 1977	312	466	375	442	609	667	561	489	439	395	310	259	667
DIFFERENCE MW (3)													
Alternative 1	188	238	71	-62	-62	9	-116	-24	36	-5	86	15	-116
Alternative 2	146	44	-18	40	-21	-82	-163	-111	-59	17	67	27	-163
Alternative 3	149	146	80	-66	-49	-48	-165	-107	-54	-2	-5	13	-165
Alternative 4	67	48	-73	-15	165	95	63	73	88	-62	108	90	-73
Alternative 8	108	218	74	-64	-36	-46	-207	-103	-68	-4	26	21	-207

- (1) Firm Load Carrying Capacity supported by project energy.
- (2) Project Use on peak load.
- (3) Relative to base case.



**Alternative Summary Report
Critical Year Capacity Analysis: Institutional Perspective**

Customer Load	MW	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
		1168	1152	1160	1176	1241	1266	1209	1191	1169	1082	1180	1183	
Capacity Available for Customer Load														
Basecase	MW	204	248	301	506	644	713	768	592	507	399	284	238	
Alternative 1	MW	392	486	372	444	582	722	652	568	543	394	370	253	
Alternative 2	MW	350	292	283	546	623	631	605	481	448	416	351	265	
Alternative 3	MW	353	394	381	440	595	665	603	485	453	397	279	251	
Alternative 4	MW	271	296	228	491	809	808	831	665	595	337	392	328	
Alternative 8	MW	312	466	375	442	609	667	561	489	439	395	310	259	
Purchases Needed to Meet Load														
Basecase	MW	964	904	859	670	597	553	441	599	662	683	896	945	
Alternative 1	MW	776	666	788	732	659	544	557	623	626	688	810	930	
Alternative 2	MW	818	860	877	630	618	635	604	710	721	666	829	918	
Alternative 3	MW	815	758	779	736	646	601	606	706	716	685	901	932	
Alternative 4	MW	897	856	932	685	432	458	378	526	574	745	788	855	
Alternative 8	MW	857	686	785	734	633	599	648	702	730	687	870	924	
Annual Purchase														
Basecase	MW	964	964	964	964	964	964	964	964	964	964	964	964	
Alternative 1	MW	930	930	930	930	930	930	930	930	930	930	930	930	
Alternative 2	MW	918	918	918	918	918	918	918	918	918	918	918	918	
Alternative 3	MW	932	932	932	932	932	932	932	932	932	932	932	932	
Alternative 4	MW	897	897	897	897	897	897	897	897	897	897	897	897	
Alternative 8	MW	924	924	924	924	924	924	924	924	924	924	924	924	
Surplus Sales														
Basecase	MW	0	60	105	294	367	411	523	365	302	281	68	19	
Alternative 1	MW	154	264	142	198	271	386	373	307	304	242	120	0	
Alternative 2	MW	100	58	41	288	300	283	314	208	197	252	89	0	
Alternative 3	MW	117	174	153	196	286	331	326	226	216	247	31	0	
Alternative 4	MW	0	41	-35	212	465	439	519	371	323	152	109	42	
Alternative 8	MW	67	238	139	189	291	325	276	222	194	237	54	0	
Cost at \$12/kWmo														
Basecase	\$	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	11,568,000	\$138,816,000
Alternative 1	\$	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	11,160,000	\$133,920,000
Alternative 2	\$	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	11,016,000	\$132,192,000
Alternative 3	\$	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	11,184,000	\$134,208,000
Alternative 4	\$	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	10,764,000	\$129,168,000
Alternative 8	\$	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	11,084,400	\$133,012,800

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Suplus Sales Revenue													
Price \$/kWMo	\$1.50	\$1.50	\$1.50	\$0.00	\$0.00	\$2.00	\$2.75	\$2.75	\$2.75	\$1.50	\$1.50	\$1.50	
Basecase \$	0	90,000	157,500	0	0	822,000	1,438,250	1,003,750	830,500	421,500	102,000	28,500	\$4,894,000
Alternative 1 \$	231,000	396,000	213,000	0	0	772,000	1,025,750	844,250	836,000	363,000	180,000	0	\$4,861,000
Alternative 2 \$	150,000	87,000	61,500	0	0	566,000	863,500	572,000	541,750	378,000	133,500	0	\$3,363,250
Alternative 3 \$	175,500	261,000	229,500	0	0	662,000	896,500	621,500	594,000	370,500	46,500	0	\$3,867,000
Alternative 4 \$	0	61,500	-52,500	0	0	878,000	1,427,250	1,020,250	888,250	228,000	163,500	63,000	\$4,677,250
Alternative 8 \$	100,800	356,700	208,650	0	0	649,200	758,725	609,675	532,675	355,200	81,000	0	\$3,652,625
Net Cost													
Basecase \$	11,568,000	11,478,000	11,410,500	11,568,000	11,568,000	10,746,000	10,129,750	10,564,250	10,737,500	11,146,500	11,466,000	11,539,500	\$133,922,000
Alternative 1 \$	10,929,000	10,764,000	10,947,000	11,160,000	11,160,000	10,388,000	10,134,250	10,315,750	10,324,000	10,797,000	10,980,000	11,160,000	\$129,059,000
Alternative 2 \$	10,866,000	10,929,000	10,954,500	11,016,000	11,016,000	10,450,000	10,152,500	10,444,000	10,474,250	10,638,000	10,882,500	11,016,000	\$128,838,750
Alternative 3 \$	11,008,500	10,923,000	10,954,500	11,184,000	11,184,000	10,522,000	10,287,500	10,562,500	10,590,000	10,813,500	11,137,500	11,184,000	\$130,351,000
Alternative 4 \$	10,764,000	10,702,500	10,816,500	10,764,000	10,764,000	9,886,000	9,336,750	9,743,750	9,875,750	10,536,000	10,600,500	10,701,000	\$124,490,750
Alternative 8 \$	10,983,600	10,727,700	10,875,750	11,084,400	11,084,400	10,435,200	10,325,675	10,474,725	10,551,725	10,729,200	11,003,400	11,084,400	\$129,360,175
Relative Net Cost (Savings)													
Alternative 1 \$	-639,000	-714,000	-463,500	-408,000	-408,000	-358,000	4,500	-248,500	-413,500	-349,500	-486,000	-379,500	(\$4,863,000)
Alternative 2 \$	-702,000	-549,000	-456,000	-552,000	-552,000	-296,000	22,750	-120,250	-263,250	-508,500	-583,500	-523,500	(\$5,083,250)
Alternative 3 \$	-559,500	-555,000	-456,000	-384,000	-384,000	-224,000	157,750	-1,750	-147,500	-333,000	-328,500	-355,500	(\$3,671,000)
Alternative 4 \$	-804,000	-775,500	-594,000	-804,000	-804,000	-860,000	-793,000	-820,500	-861,750	-610,500	-865,500	-838,500	(\$9,431,250)
Alternative 8 \$	-584,400	-750,300	-534,750	-483,600	-483,600	-310,800	195,925	-89,525	-185,775	-417,300	-462,600	-455,100	(\$4,561,825)

Fig. A

Capacity Analysis: Institutional Perspective

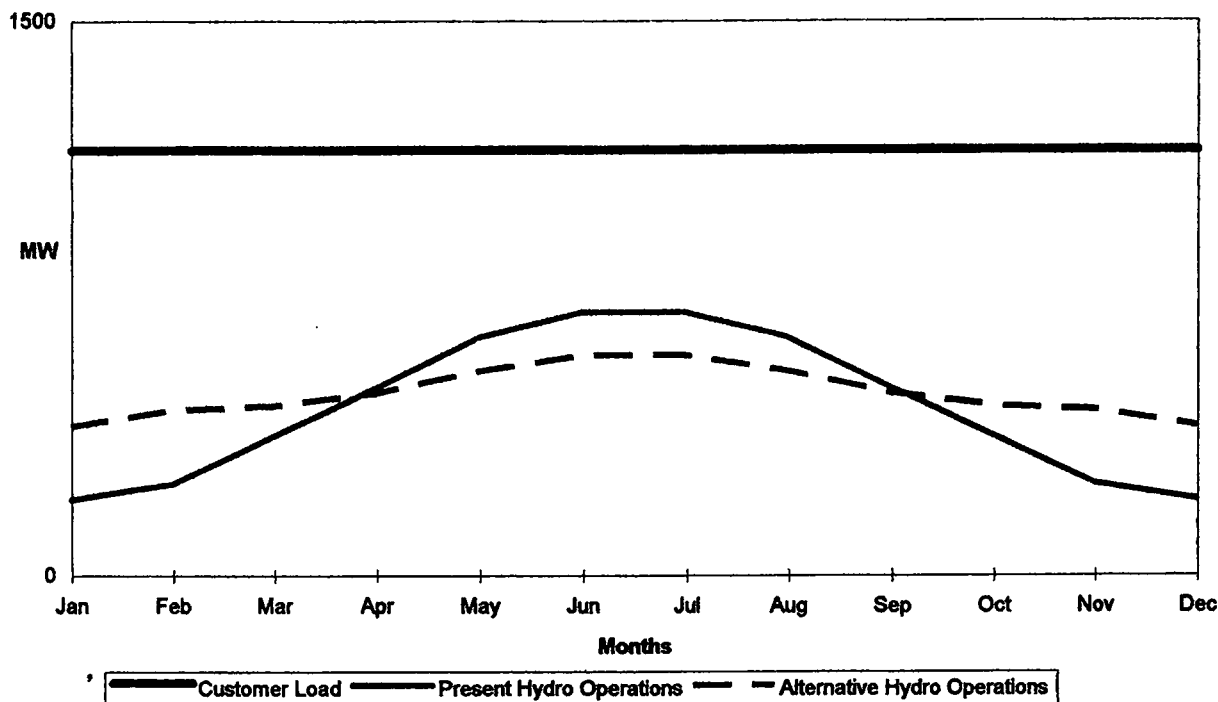
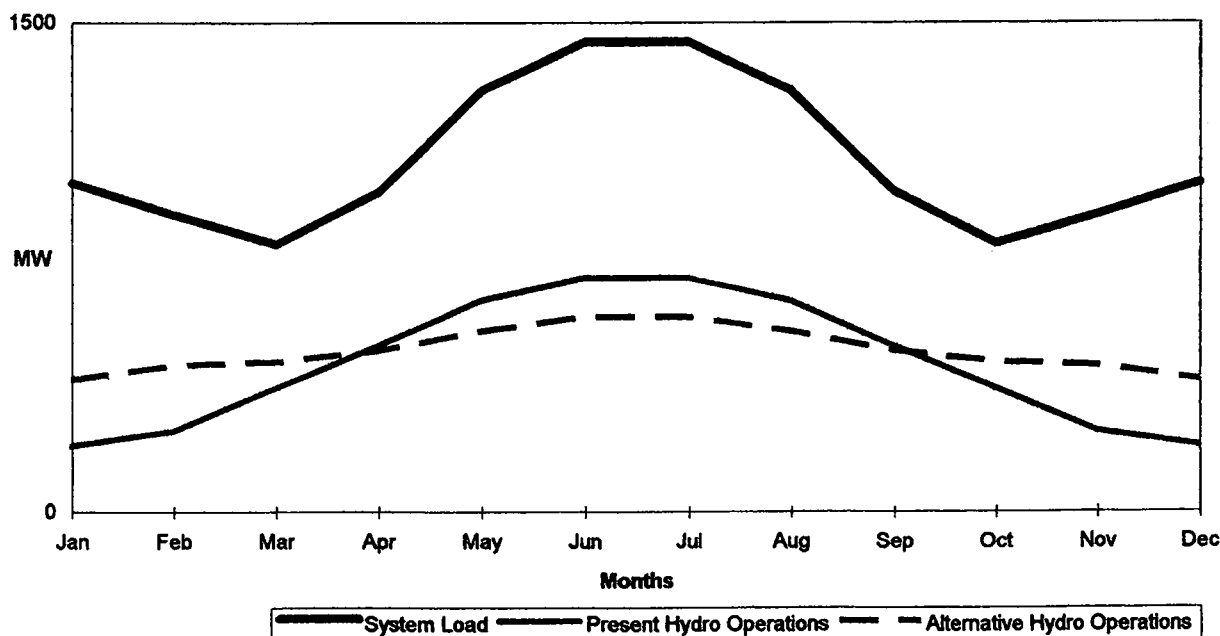


Fig. B

Capacity Analysis: Regional Perspective



Alternative Summary Report Critical Year Capacity Analysis: Regional Perspective

Annual Purchase		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Alternative 1	MW	116	116	116	116	116	116	116	116	116	116	116	116	
Alternative 2	MW	163	163	163	163	163	163	163	163	163	163	163	163	
Alternative 3	MW	165	165	165	165	165	165	165	165	165	165	165	165	
Alternative 4	MW	0	0	0	0	0	0	0	0	0	0	0	0	
Alternative 8	MW	207	207	207	207	207	207	207	207	207	207	207	207	
Surplus Sales														
Alternative 1	MW	304	354	187	54	54	125	0	92	152	111	202	131	
Alternative 2	MW	309	207	145	203	142	81	0	52	104	180	230	190	
Alternative 3	MW	314	311	245	99	116	117	0	58	111	163	160	178	
Alternative 4	MW	67	48	-73	-15	165	95	63	73	88	-62	108	90	
Alternative 8	MW	315	425	281	143	172	161	0	104	139	203	233	228	
Annual Cost at \$12/kWMo														Total
Alternative 1	\$	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	1,392,000	\$16,704,000
Alternative 2	\$	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	\$23,472,000
Alternative 3	\$	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	1,980,000	\$23,760,000
Alternative 4	\$	0	0	0	0	0	0	0	0	0	0	0	0	\$0
Alternative 8	\$	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	2,484,000	\$29,808,000
Suplus Sales Revenue														
Price	\$/kWMo	\$1.50	\$1.50	\$1.50	\$0.00	\$0.00	\$2.00	\$2.75	\$2.75	\$2.75	\$1.50	\$1.50	\$1.50	
Alternative 1	\$	456,000	531,000	280,500	0	0	250,000	0	253,000	418,000	166,500	303,000	196,500	\$2,854,500
Alternative 2	\$	463,500	310,500	217,500	0	0	162,000	0	143,000	286,000	270,000	345,000	285,000	\$2,482,500
Alternative 3	\$	471,000	466,500	367,500	0	0	234,000	0	159,500	305,250	244,500	240,000	267,000	\$2,755,250
Alternative 4	\$	100,500	72,000	-109,500	0	0	190,000	173,250	200,750	242,000	-93,000	162,000	135,000	\$1,073,000
Alternative 8	\$	471,750	637,650	422,100	0	0	321,800	550	286,000	382,250	304,650	349,950	342,450	\$3,519,150
Net Cost														
Alternative 1	\$	936,000	861,000	1,111,500	1,392,000	1,392,000	1,142,000	1,392,000	1,139,000	974,000	1,225,500	1,089,000	1,195,500	\$13,849,500
Alternative 2	\$	1,492,500	1,645,500	1,738,500	1,956,000	1,956,000	1,794,000	1,956,000	1,813,000	1,670,000	1,686,000	1,611,000	1,671,000	\$20,989,500
Alternative 3	\$	1,509,000	1,513,500	1,812,500	1,980,000	1,980,000	1,746,000	1,980,000	1,820,500	1,674,750	1,735,500	1,740,000	1,713,000	\$21,004,750
Alternative 4	\$	-100,500	-72,000	109,500	0	0	-190,000	-173,250	-200,750	-242,000	93,000	-162,000	-135,000	(\$1,073,000)
Alternative 8	\$	2,012,250	1,846,350	2,061,900	2,484,000	2,484,000	2,162,200	2,483,450	2,198,000	2,101,750	2,179,350	2,134,050	2,141,550	\$26,288,850

Alternative Summary Report Average Year Energy Breakdown

Average Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
Energy On-Peak MWh													
Basecase	166,520	173,192	174,691	204,880	261,929	281,935	333,507	333,446	208,190	190,551	157,120	136,148	2,622,108
Alternative 1	160,143	173,624	181,662	217,414	270,567	283,347	324,383	324,766	204,599	184,868	154,286	133,778	2,613,436
Alternative 2	157,336	167,770	170,219	219,551	277,473	279,941	318,141	321,441	206,396	186,816	160,285	137,392	2,602,761
Alternative 3	158,102	174,358	182,708	218,616	271,654	278,954	317,760	317,818	205,299	186,469	159,766	137,991	2,609,495
Alternative 4	165,608	178,735	194,261	202,812	277,836	260,183	299,059	318,881	210,442	188,033	165,502	145,997	2,607,349
Alternative 8	158,891	180,570	188,182	216,497	271,679	273,447	313,635	324,088	207,459	183,607	159,273	134,757	2,612,085
Energy Off-Peak MWh													
Basecase	159,905	172,464	143,665	174,031	219,182	277,034	364,530	303,904	203,579	133,631	132,603	169,201	2,453,729
Alternative 1	164,385	177,337	154,427	190,505	227,123	276,098	348,588	295,755	199,539	128,594	128,101	166,390	2,456,840
Alternative 2	159,456	163,927	140,106	190,858	235,051	273,208	342,093	285,463	206,299	134,485	138,172	174,483	2,443,598
Alternative 3	160,544	172,005	154,147	188,367	228,018	267,522	339,155	281,793	203,434	133,127	136,233	174,706	2,439,051
Alternative 4	160,903	168,798	165,705	164,663	237,105	251,621	313,566	282,292	214,050	132,582	139,966	168,730	2,399,981
Alternative 8	158,579	180,911	156,291	190,204	230,310	260,906	335,205	287,381	212,020	128,912	140,144	168,931	2,449,795
PU On-Peak MWh													
Basecase	55,100	44,200	50,200	57,800	49,100	59,700	85,900	85,500	49,000	44,500	41,800	48,700	671,500
Alternative 1	50,600	39,700	43,700	29,600	32,800	46,800	74,600	83,000	45,000	41,000	39,600	46,100	572,500
Alternative 2	49,500	36,600	42,100	34,100	36,700	52,600	69,800	66,000	47,900	41,700	37,800	44,300	559,100
Alternative 3	49,900	37,300	43,300	32,600	35,900	51,900	69,000	64,800	47,500	42,900	38,200	45,800	559,100
Alternative 4	34,100	22,800	27,100	27,400	28,500	28,100	32,300	45,800	34,900	27,700	26,600	22,300	357,600
Alternative 8	52,800	41,000	45,700	45,300	48,400	60,300	61,300	63,200	45,800	42,600	38,200	47,800	592,400
PU Off-Peak MWh													
Basecase	96,100	77,300	64,700	59,200	51,000	57,400	91,900	83,400	57,500	51,200	76,500	98,100	864,300
Alternative 1	103,200	77,000	63,700	30,000	34,300	44,900	77,200	83,300	54,900	49,500	73,900	96,700	788,600
Alternative 2	100,900	68,100	58,100	34,500	38,200	50,500	74,500	62,500	62,500	54,500	73,700	94,600	772,600
Alternative 3	101,100	68,800	61,300	33,100	37,200	49,800	71,500	62,000	60,900	54,600	72,800	96,900	770,000
Alternative 4	76,800	44,600	41,100	30,400	32,700	28,100	34,700	45,500	52,200	38,400	55,500	45,900	525,900
Alternative 8	98,500	74,900	63,000	46,000	53,900	57,400	63,600	60,100	65,300	54,300	77,700	96,100	810,800

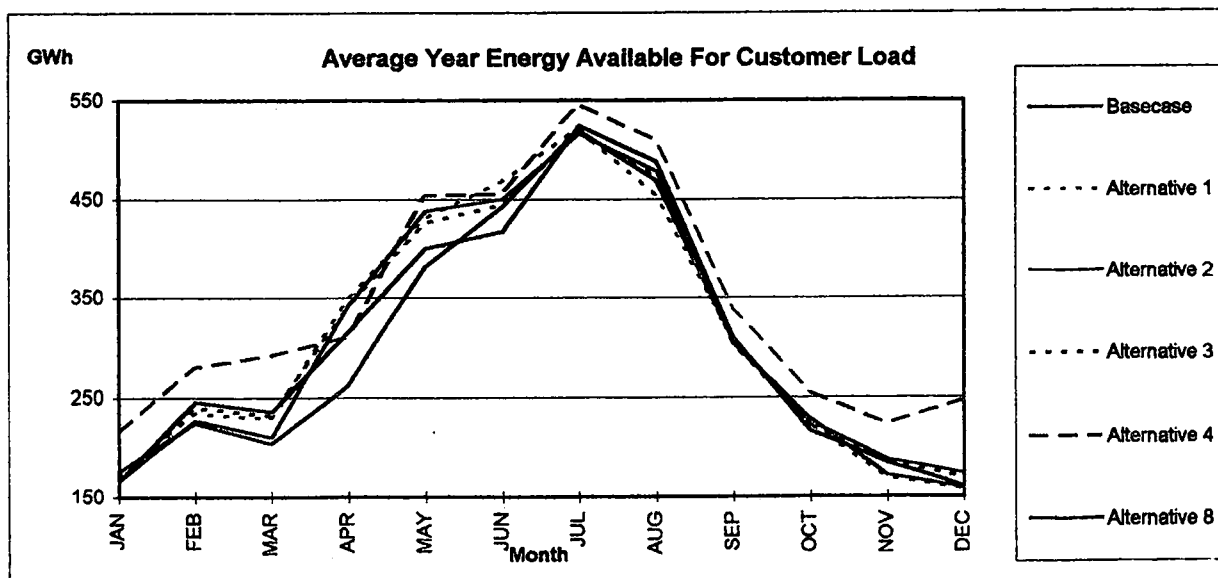
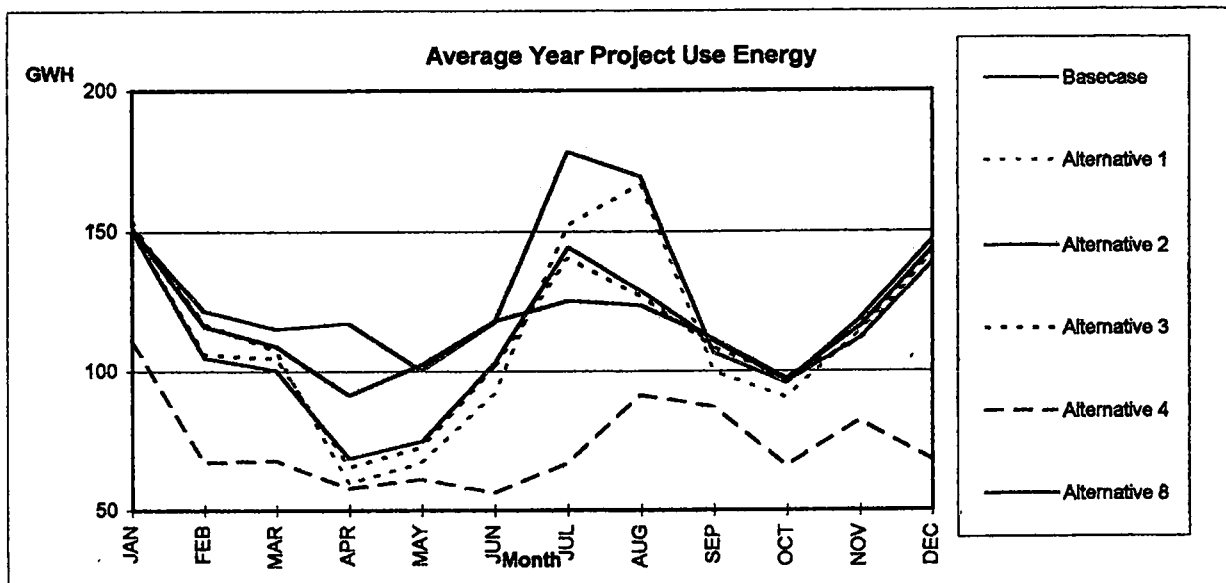
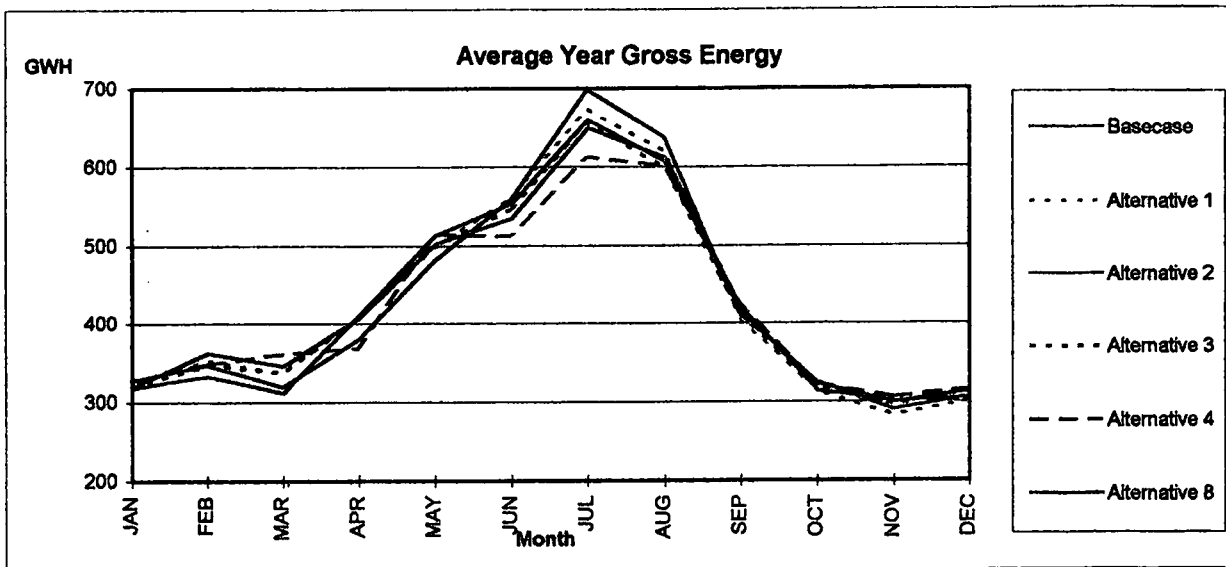
**Alternative Summary Report
 Average Year Energy Breakdown**

Average Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
Net On-Peak MWh													
Basecase	111,420	128,992	124,491	147,080	212,829	222,235	247,607	247,946	159,190	146,051	115,320	87,448	1,950,608
Alternative 1	109,543	133,924	137,962	187,814	237,767	236,547	249,783	241,766	159,599	143,868	114,686	87,678	2,040,936
Alternative 2	107,836	131,170	128,119	185,451	240,773	227,341	248,341	255,441	158,496	145,116	122,485	93,092	2,043,661
Alternative 3	108,202	137,058	139,408	186,016	235,754	227,054	248,760	253,018	157,799	143,569	121,566	92,191	2,050,395
Alternative 4	131,508	155,935	167,161	175,412	249,336	232,083	266,759	273,081	175,542	160,333	138,902	123,697	2,249,749
Alternative 8	106,091	139,570	142,482	171,197	223,279	213,147	252,335	260,888	161,659	141,007	121,073	86,957	2,019,685
Net Off-Peak MWh													
Basecase	63,805	95,164	78,965	114,831	168,182	219,634	272,630	220,504	146,079	82,431	56,103	71,101	1,589,429
Alternative 1	61,185	100,337	90,727	160,505	192,823	231,198	271,388	212,455	144,639	79,094	54,201	69,690	1,668,240
Alternative 2	58,556	95,827	82,006	156,358	196,851	222,708	267,593	222,963	143,799	79,985	64,472	79,883	1,670,998
Alternative 3	59,444	103,205	92,847	155,267	190,818	217,722	267,655	219,793	142,534	78,527	63,433	77,806	1,669,051
Alternative 4	84,103	124,198	124,605	134,263	204,405	223,521	278,866	236,792	161,850	94,182	84,466	122,830	1,874,081
Alternative 8	60,079	106,011	93,291	144,204	176,410	203,506	271,605	227,281	146,720	74,612	62,444	72,831	1,638,995
Net Difference On-Peak MWh													
Alternative 1	-1,877	4,932	13,471	40,734	24,939	14,313	2,176	-6,180	409	-2,184	-633	230	90,329
Alternative 2	-3,584	2,178	3,628	38,371	27,944	5,107	734	7,494	-693	-935	7,166	5,644	93,053
Alternative 3	-3,218	8,066	14,918	38,936	22,926	4,819	1,152	5,072	-1,391	-2,482	6,247	4,743	99,787
Alternative 4	20,088	26,943	42,671	28,331	36,507	9,848	19,151	25,135	16,353	14,282	23,582	36,249	299,141
Alternative 8	-5,330	10,578	17,992	24,117	10,450	-9,087	4,728	12,942	2,469	-5,045	5,753	-490	69,077
Net Difference Off-Peak MWh													
Alternative 1	-2,620	5,173	11,761	45,674	24,641	11,564	-1,242	-8,049	-1,440	-3,337	-1,902	-1,411	78,811
Alternative 2	-5,249	663	3,040	41,526	28,669	3,074	-5,037	2,459	-2,280	-2,446	8,369	8,781	81,569
Alternative 3	-4,361	8,041	13,882	40,436	22,636	-1,912	-4,975	-711	-3,545	-3,904	7,330	6,705	79,622
Alternative 4	20,298	29,034	45,639	19,432	36,222	3,887	6,236	16,288	15,771	11,751	28,364	51,729	284,652
Alternative 8	-3,726	10,847	14,326	29,373	8,228	-16,128	-1,025	6,777	641	-7,819	6,342	1,730	49,566

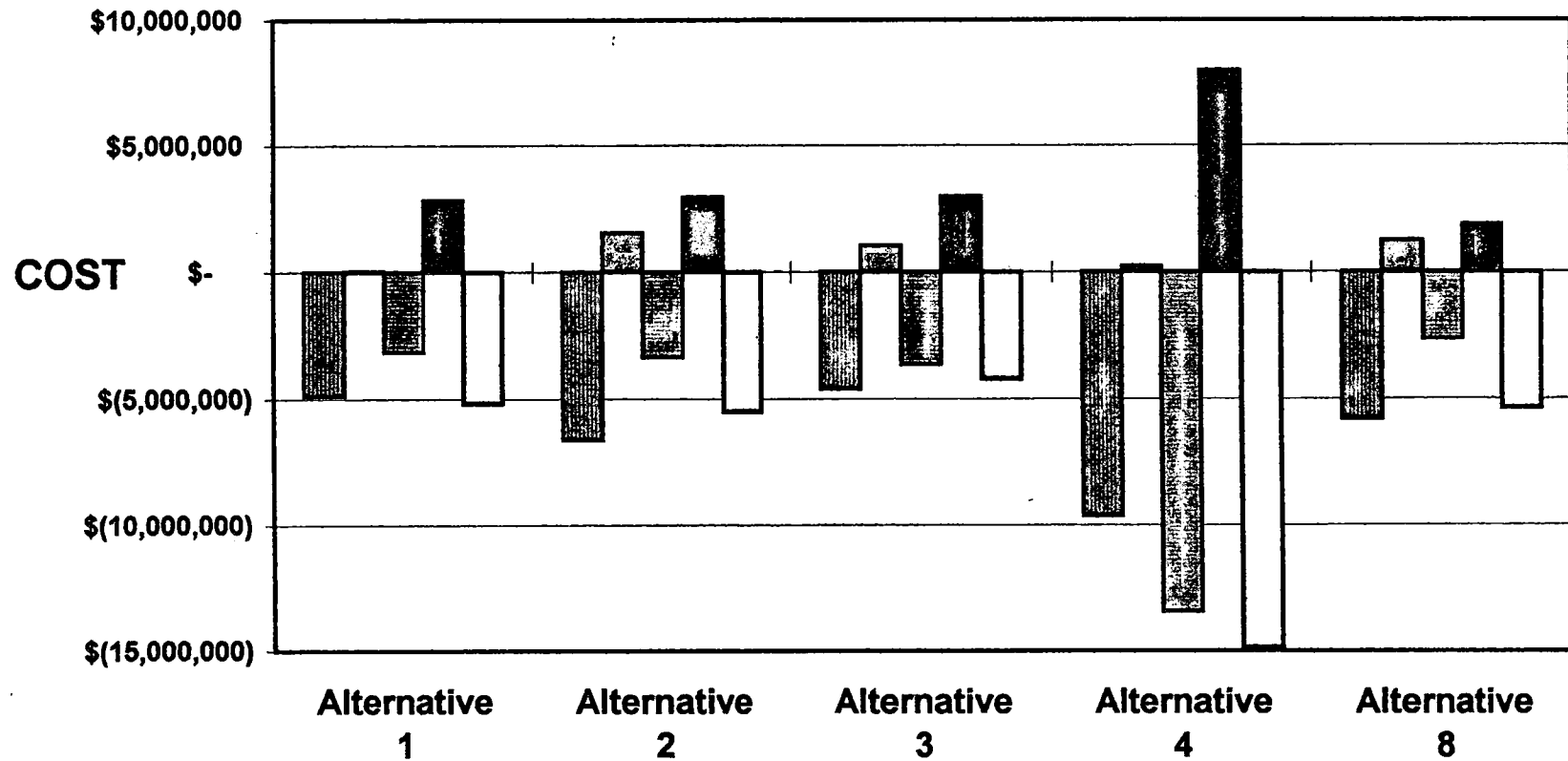
Alternative Summary Report Average Year Energy Breakdown

Average Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
Cost On-Peak (\$)													
Alternative 1	52,562	-138,082	-377,196	-855,412	-523,709	-300,567	-56,563	160,680	-10,634	56,771	17,727	-6,437	-1,980,860
Alternative 2	100,352	-60,976	-101,595	-805,795	-586,820	-107,245	-19,079	-194,854	18,023	24,313	-200,642	-158,024	-2,092,342
Alternative 3	90,104	-225,834	-417,693	-817,650	-481,436	-101,203	-29,955	-131,877	36,156	64,532	-174,908	-132,807	-2,322,570
Alternative 4	-562,456	-754,412	-1,194,780	-594,959	-766,655	-206,808	-497,934	-653,518	-425,170	-371,322	-660,304	-1,014,972	-7,703,290
Alternative 8	149,226	-296,184	-503,768	-506,447	-219,454	190,835	-122,915	-336,500	-64,202	131,157	-161,084	13,731	-1,725,603
Cost Off-Peak (\$)													
Alternative 1	57,636	-113,797	-258,746	-685,103	-369,611	-173,463	24,842	160,986	28,806	66,738	41,837	31,035	-1,188,839
Alternative 2	115,482	-14,577	-66,884	-622,896	-430,037	-46,110	100,742	-49,180	45,594	48,928	-184,118	-193,191	-1,296,247
Alternative 3	95,942	-176,904	-305,406	-606,542	-339,533	28,680	99,504	14,214	70,902	78,074	-161,262	-147,501	-1,349,832
Alternative 4	-446,552	-638,746	-1,004,065	-291,476	-543,335	-58,307	-124,726	-325,766	-315,426	-235,014	-624,006	-1,138,038	-5,745,454
Alternative 8	81,961	-238,636	-315,168	-440,588	-123,422	241,917	20,498	-135,544	-12,814	156,384	-139,522	-38,053	-942,986
Total Energy Cost (\$)													
Alternative 1	110,197	-251,879	-635,943	-1,540,514	-893,319	-474,030	-31,721	321,666	18,172	123,509	59,564	24,598	-3,169,700
Alternative 2	215,834	-75,553	-168,480	-1,428,691	-1,016,856	-153,355	81,663	-244,034	63,617	73,241	-384,760	-351,214	-3,388,589
Alternative 3	186,046	-402,738	-723,099	-1,424,191	-820,968	-72,523	69,549	-117,663	107,058	142,606	-336,170	-280,308	-3,672,402
Alternative 4	-1,009,007	-1,393,158	-2,198,844	-886,435	-1,309,990	-265,115	-622,660	-979,284	-740,596	-606,336	-1,284,310	-2,153,010	-13,448,745
Alternative 8	231,187	-534,820	-818,935	-947,034	-342,876	432,752	-102,417	-472,044	-77,016	287,541	-300,606	-24,322	-2,668,589
Cost Assumptions:													
On-Peak Energy	Jan-Mar	\$28/MWh		Off-Peak Energy	Jan-Mar	\$22/MWh							
	Apr-Jun	\$21/MWh			Apr-Jun	\$15/MWh							
	Jul-Oct	\$26/MWh			Jul-Oct	\$20/MWh							
	Nov-Dec	\$28/MWh			Nov-Dec	\$22/MWh							

* Project-Use load does not include new water transfers, new groundwater pumping, expanded cooperation between SWP/CVP pumping, or any impact of new third-party sharing of environmental water obligations.



Impacts of Bay-Delta Water Quality Standards Institutional Perspective



- Change in Capacity Cost
- Change in Surplus Sale Revenue
- Change in Energy Cost
- Change in Restoration Fund Contributions
- Total

Alternative Summary: Institutional Perspective

Annual Capacity Savings

Alternative 1	\$	4,896,000
Alternative 2	\$	6,624,000
Alternative 3	\$	4,608,000
Alternative 4	\$	9,648,000
Alternative 8	\$	5,803,200

Surplus Sales Revenue

Alternative 1	\$	(33,000)
Alternative 2	\$	(1,540,750)
Alternative 3	\$	(1,037,000)
Alternative 4	\$	(216,750)
Alternative 8	\$	(1,241,375)

Energy Savings

Alternative 1	\$	3,169,700
Alternative 2	\$	3,388,589
Alternative 3	\$	3,672,402
Alternative 4	\$	13,448,745
Alternative 8	\$	2,668,589

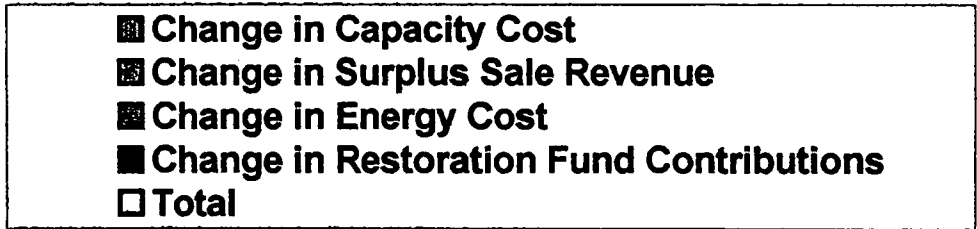
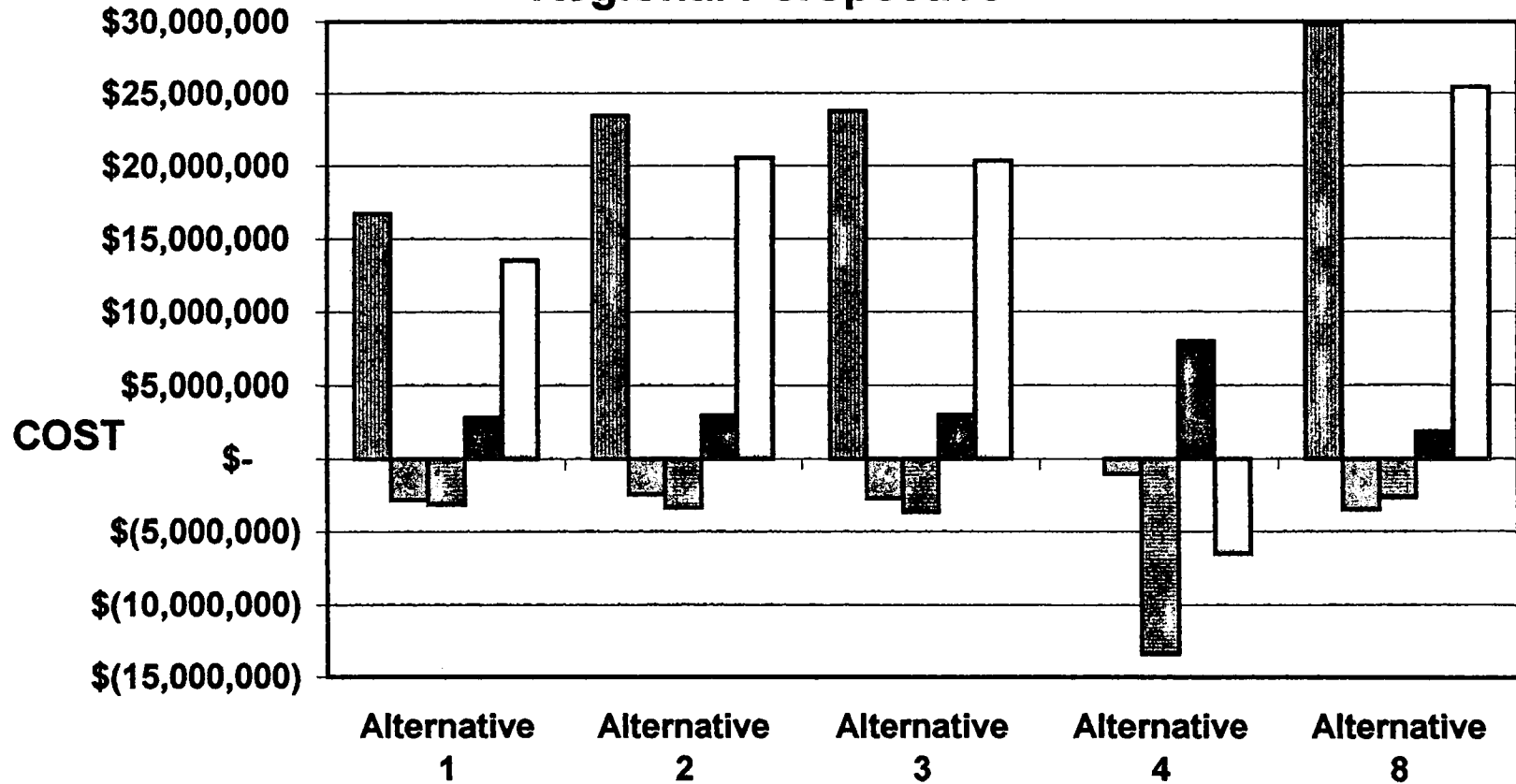
Restoration Fund Costs

Alternative 1	\$	2,832,000
Alternative 2	\$	2,951,000
Alternative 3	\$	2,984,000
Alternative 4	\$	7,979,000
Alternative 8	\$	1,853,000

Total Savings

Alternative 1	\$	5,200,700
Alternative 2	\$	5,520,839
Alternative 3	\$	4,259,402
Alternative 4	\$	14,900,995
Alternative 8	\$	5,377,414

Impacts of Bay-Delta Water Quality Standards Regional Perspective



Alternative Summary: Regional Perspective

Annual Capacity Costs

Alternative 1	\$	16,704,000
Alternative 2	\$	23,472,000
Alternative 3	\$	23,760,000
Alternative 4	\$	-
Alternative 8	\$	29,808,000

Surplus Sales Revenue

Alternative 1	\$	2,854,500
Alternative 2	\$	2,482,500
Alternative 3	\$	2,755,250
Alternative 4	\$	1,073,000
Alternative 8	\$	3,519,150

Energy Savings

Alternative 1	\$	3,169,700
Alternative 2	\$	3,388,589
Alternative 3	\$	3,672,402
Alternative 4	\$	13,448,745
Alternative 8	\$	2,668,589

Restoration Fund Costs

Alternative 1	\$	2,832,000
Alternative 2	\$	2,951,000
Alternative 3	\$	2,984,000
Alternative 4	\$	7,979,000
Alternative 8	\$	1,853,000

Total Cost

Alternative 1	\$	13,511,801
Alternative 2	\$	20,551,911
Alternative 3	\$	20,316,348
Alternative 4	\$	(6,542,745)
Alternative 8	\$	25,473,261