

**Hydrologic, Energy, and
Economic/Financial Analyses and Assumptions**

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Hydrologic and Energy Generation Projections

1.0 Introduction

Reliable hydrologic information and energy generation projection for each hydroelectric option are important in evaluating potential new options as this information is used as the foundation in determining the potential revenue that can be expected at each potential new facility. Section 2 describes the hydroelectric analysis performed as part of the effort to identify hydroelectric opportunities in El Dorado County. Section 3 describes how energy generation projections were developed for each option.

2.0 Hydrologic Analysis

Information representing the flow of water available at each hydroelectric option was collected from purveyors. This information included annual, month, daily and instantaneous flow measurements collected during recent years. This information was used to develop representative information describing flow available for generation at each hydroelectric option under the existing condition. In addition to the existing condition, an evaluation was conducted to investigate the operational benefits to each hydroelectric option of taking advantage of potential additional new water storage capacity that could be added to the conveyance system at key locations to allow efficient timing of flow at each hydroelectric option to take advantage of energy pricing fluctuations throughout the day providing for an increase in project revenue.

2.1 Existing Condition

Flow information representing existing conditions was used to develop the average annual flow and distribution of flow that could be put to use at each hydroelectric option. Flow distribution was evaluated on a monthly and weekly basis as well as the time of day. This detailed level of hydrologic analysis is important to capture the seasonal, daily and time of day flow variations to understand the timing of energy generation as timing is important when estimating revenue of hydroelectric projects.

Flow information available at each hydroelectric option was evaluated based on existing conditions representing the flow available in year 2008. Hydrologic information used to represent water available at each individual hydroelectric option is shown below.

Sly Park Dam - Flow information for 2006, 2007, and 2008 was received from El Dorado Irrigation District (EID) and used to determine annual, seasonal, monthly, and daily flow available to operate the Sly Park hydroelectric option. The following data was used to develop representative information to determine the time-of-day flow distribution.

- Summer Weekday - August 18, 2008 (used to estimate time-of-day for June – September)
- Summer Weekend - August 20, 2008 (used to estimate load shape for June – September)
- Fall - October 1, 2008 (used to estimate load shape for October and November)
- Winter - February 1, 2009 (used to estimate load shape for December – February)
- Spring - May 15, 2008 (used to estimate load shape for March – May)

EDM2 PRS1 - Flow information for 2007 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the EDM2 PRS1 hydroelectric option. The following data was used to develop representative information to determine the time-of-day flow distribution.

- Summer Weekday - September 13, 2008 (used to estimate load shape for June – September)
- Summer Weekend - August 1, 2008 (used to estimate load shape for June – September)
- Fall - October 1, 2008 (used to estimate load shape for October and November)
- Winter - March 1, 2009 (used to estimate load shape for December – February)
- Spring - No information available – no load shaping used for March – May

EDM2 PRS3 - Flow information for 2007 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the EDM2 PRS3 hydroelectric option. The time-of-day flow distribution information developed for EDM2 PRS1 was used for this option.

DSM PRS1 - Flow information for 2007 and 2008 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the DSM PRS1 hydroelectric option. No load shaping was considered as no information was available to determine time-of-day flow distribution for this option.

POM PRS1 @Res B - Flow information for 2007 and 2008 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the POM PRS1 @Res B hydroelectric option. The following data was used to develop representative information to determine the time-of-day flow distribution.

Summer Weekday - August 13, 2008 (used to estimate load shape for June – September)

Summer Weekend - August 2, 2008 (used to estimate load shape for June – September)

Fall - October 1, 2008 (used to estimate load shape for October and November)

Winter - February 1, 2009 (used to estimate load shape for December – February)

Spring - May 15, 2008 (used to estimate load shape for March – May)

POM PRS1 Downstream of Res B - Flow information for 2007 and 2008 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the POM PRS1 Downstream of Res B hydroelectric option. The time-of-day flow distribution information developed for POM PRS1 @Res B was used for this option.

POM PRS1 @Res B + POM PRS1 Downstream of Res B – COMBINED - This option is the combination of POM PRS1 @Res B and POM PRS1 Downstream of Res B.

POM PRS5 @Res 7 - Flow information for 2007 and 2008 was received from EID and used to determine annual, seasonal, monthly, and daily flow available to operate the POM PRS5 @Res 7 hydroelectric option. The time-of-day flow distribution information developed for POM PRS1 @Res B was used for this option.

Oak Ridge Tanks to Bass Lake Tanks Pumped Storage - A representative operation of the Gold Hill Intertie to Oak Ridge Tanks Pumped Storage hydroelectric option was developed. The pumping and generation capacity of 10 cfs was used with the following flow operational information.

Pump	11 hours a day during the months of October through May (8 hours during the Night period and 3 hours during the Shoulder-Peak period)
	6 hours a day during the months of June through September (6 hours during the Night period)
Generate	11 hours a day during the months of October through May (8 hours during the Super-Peak period and 3 hours during the Shoulder-Peak period)
	6 hours a day during the months of June through September (6 hours during the Super-Peak period)

Buffalo Hill Siphon - Representative flow information was received from Georgetown Divide Public Utility District (GDPUD) and used to determine annual, seasonal, monthly, and daily flow available to operate the Buffalo Hill hydroelectric option. No load shaping was considered under existing conditions as flow in the Georgetown Ditch tends to be fairly consistent throughout the day.

Kaiser Siphon - Representative flow information was received from GDPUD and used to determine annual, seasonal, monthly, and daily flow available to operate the Kaiser Siphon hydroelectric option. No load shaping was considered under existing conditions as flow in the Georgetown Ditch tends to be fairly consistent throughout the day.

Sandtrap Siphon - Representative flow information was received from GDPUD and used to determine annual, seasonal, monthly, and daily flow available to operate the Sand Trap Siphon hydroelectric option. No load shaping was considered under existing conditions as flow in the Georgetown Ditch tends to be fairly consistent throughout the day.

2.2 Reoperation

In addition to the existing condition, an evaluation was conducted to investigate the additional project revenue that could be developed at the hydro options along the Georgetown Ditch and Pleasant Oak Main water systems. The simulated reoperation would take advantage of potential additional water storage capacity that could be added to the conveyance system at key locations to allow reoperation of the hydroelectric options to generate more energy during the Super-Peak Period as identified by the State of California Public Utility Commission's Feed-In Tariff program. The Super-Peak period occurs from 12:00 noon – 8:00 pm Monday – Friday (8 hours), except on holidays.

The reoperation scenarios were designed to allow water that under existing conditions passed through the hydroelectric options during Shoulder Peak and Night periods to instead pass through during the Super-Peak period. This doesn't increase the overall

generation amount (in fact commonly produces a slight reduction with the preliminary project designs due to reduced turbine efficiencies), but does provide significantly more energy during the Super-Peak period increasing project revenue significantly.

3.0 Energy Generation Projections

Projected energy generation for each hydroelectric option was developed based on time distribution of flow defined by the Super-Peak, Shoulder-Peak and Night periods of the day as used in the State of California Public Utility Commission's Feed-In Tariff program and is shown below.

2008 Market Price Referent Feed-In Tariff Time of Day Definitions

Period (all year)	Definition
Super Peak	12:00 noon – 8:00 pm Monday – Friday (except holidays)
Shoulder Peak	6:00 am – 12:00 noon, 8:00 pm – 10:00 pm Monday – Friday (except holidays) 6:00 am – 10:00 pm on weekends and holidays
Night	10:00 pm – 6:00 am the following day

Projected energy generation was estimated based on available flow, effective head, efficiency, loss estimates and operation. Energy generation projections were developed for both the existing condition and under the reoperation scenarios.

Generation estimates were developed for year 2008 and escalated by 0.5% per year, where appropriate, to account for future increase in water flow available at certain hydroelectric option sites to reflect an increase in available flow made possible by increasing consumptive demands and water deliveries. Project options are assumed to begin operation during year 2011. Generation was investigated for both 20 and 30 year periods.

The remainder of this appendix contains detailed information on hydrologic flow and energy generation projections for each of the hydrologic options.

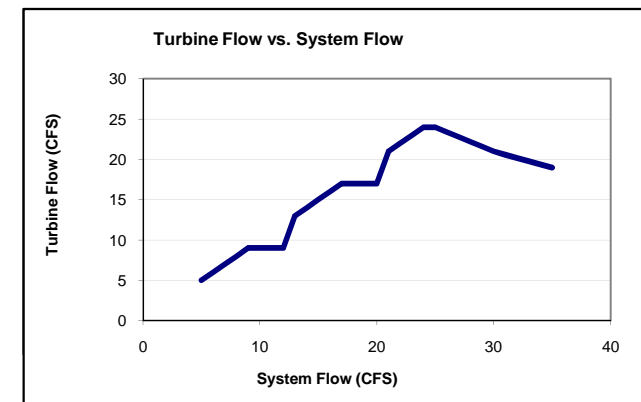
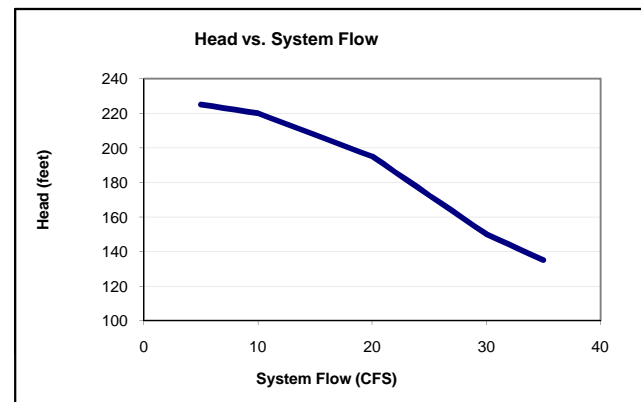
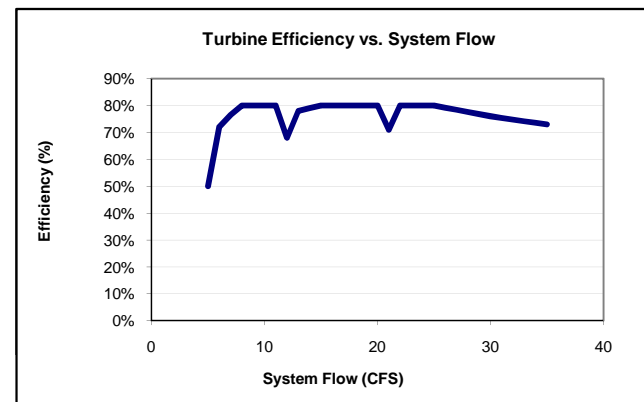
B2.1 El Dorado Main 2 PRS 1 (Tank 3)

	Total System Flow (cfs)	Super Peak Weekday							Shoulder Peak Weekday							Shoulder Peak Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
		Jan	10	10.8	160	9	130	218	80%	22.8	10.1	150	9	130	218	80%	22.8	10.1	120	9	110	220
Feb	10	10.8	140	9	120	218	80%	20.6	10.1	130	9	120	218	80%	20.6	10.1	110	9	100	220	80%	16.7
Mar	12	12.0	180	9	130	215	68%	19.1	12.0	180	9	130	215	68%	19.1	12.0	140	9	110	215	68%	15.3
Apr	15	15.0	210	15	210	208	80%	35.1	15.0	210	15	210	208	80%	35.1	15.0	170	15	170	208	80%	28.1
May	24	24.0	350	24	350	177	80%	49.4	24.0	350	24	350	177	80%	49.4	24.0	280	24	280	177	80%	39.6
Jun	37	35.5	500	24	340	135	73%	33.3	41.8	590	24	340	135	73%	33.3	37.0	420	24	270	135	73%	26.6
Jul	38	36.5	530	24	350	135	73%	34.4	42.9	630	24	350	135	73%	34.4	38.0	450	24	280	135	73%	27.5
Aug	37	35.5	520	24	350	135	73%	34.4	41.8	610	24	350	135	73%	34.4	37.0	430	24	280	135	73%	27.5
Sep	27	25.9	370	24	340	163	78%	43.0	30.5	430	24	340	163	78%	43.0	27.0	310	24	270	163	78%	34.4
Oct	16	15.2	220	16	230	205	80%	38.2	17.0	250	17	250	203	80%	40.2	17.0	200	17.0	200	203	80%	32.1
Nov	14	13.3	190	13.3	190	213	78%	31.1	14.8	210	14.8	210	210	79%	34.7	14.8	170	14.8	170	210	79%	27.7
Dec	8	8.6	130	8	120	222	80%	20.7	8.1	120	8.1	120	222	80%	20.9	8.1	90	8.1	90	222	80%	16.7
Total =	21	20.3	3,500	17	2,860	-	-	380.0	22.3	3,860	17	2,900	-	-	390.0	20.8	2,890	17	2,330	-	-	310.0

	Total System Flow (cfs)	Night														2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend									
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	10	10.1	150	9	130	220	80%	23.0	10.1	60	9	50	220	80%	9.2	102.6	105	96.4
Feb	10	10.1	130	9	120	220	80%	20.8	10.1	50	9	50	220	80%	8.3	92.7	95	87
Mar	12	12.0	180	9	130	215	68%	19.1	12.0	70	9	50	215	68%	7.7	85.6	88	80
Apr	15	15.0	210	15	210	208	80%	35.1	15.0	90	15	90	208	80%	14.1	157.2	161	148
May	24	24.0	350	24	350	177	80%	49.4	24.0	140	24	140	177	80%	19.8	221.1	227	208
Jun	37	31.1	440	24	340	147	75%	37.3	37.0	210	24	140	135	73%	13.3	153.1	157	144
Jul	38	31.9	470	24	350	144	75%	37.7	38.0	220	24	140	135	73%	13.8	157.4	161	148
Aug	37	31.1	460	24	350	147	75%	38.5	37.0	220	24	140	135	73%	13.8	158.2	162	149
Sep	27	22.7	320	22.7	320	182	80%	46.5	27.0	150	24.0	140	163	78%	17.2	195.9	201	184
Oct	16	15.8	230	15.8	230	205	80%	37.8	15.8	90	15.8	90	205	80%	15.1	174.0	178	163
Nov	14	13.9	200	13.9	200	210	79%	32.4	13.9	80	13.9	80	210	79%	13.0	147.8	152	139
Dec	8	8.1	120	8.1	120	222	80%	20.9	8.1	50	8.1	50	222	80%	8.4	93.1	96	87
Total =	21	18.8	3,260	17	2,850	-	-	400.0	20.7	1,430	17	1,160	-	-	150.0	1,740	1,780	1,630

* Assumed at 97% of flow available for generation.

Efficiency			
System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	225	50%
6	6	224	72%
7	7	223	77%
8	8	222	80%
9	9	221	80%
10	9	220	80%
11	9	218	80%
12	9	215	68%
13	13	213	78%
14	14	210	79%
15	15	208	80%
16	16	205	80%
17	17	203	80%
18	17	200	80%
19	17	198	80%
20	17	195	80%
21	21	191	71%
22	22	186	80%
23	23	182	80%
24	24	177	80%
25	24	173	80%
26	23	168	79%
27	23	163	78%
28	22	159	78%
29	22	154	77%
30	21	150	76%
31	21	147	75%
32	20	144	75%
33	20	141	74%
34	19	138	74%
35	19	135	73%



B2.1 El Dorado Main 2 PRS 1 (Tank 3)

Capital Cost	\$ 1,556,000	360	Plant Size (kW)	11.46%	IRR
First Year Annual O&M Costs	\$ 7,058	1,739	Avg. Annual Gen (MWh)	\$ 777,089	NPV
First Year Annual A&I Costs	\$ 5,610	\$ 117.30	Baseline Market Price Referent (\$/MWh)	14	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 3,399	2011	Initial Year of Operation	55%	Capacity Factor
First Year Annual Contingency Costs	\$ 3,213	30	Term of Debt (Years)	1.53	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 118.46	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 895	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Energy (MWh)	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739
Energy Price (\$/MWh)	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46	\$ 118.46
Energy Sales Revenue (\$)	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976	\$ 205,976
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (5,610)	\$ (5,750)	\$ (5,894)	\$ (6,041)	\$ (6,192)	\$ (6,347)	\$ (6,506)	\$ (6,669)	\$ (6,835)	\$ (7,006)	\$ (7,181)	\$ (7,361)	\$ (7,545)	\$ (7,733)	\$ (7,927)	\$ (8,125)	\$ (8,328)	\$ (8,536)	\$ (8,750)	\$ (8,968)
Repair and Replacement	\$ (3,399)	\$ (3,484)	\$ (3,571)	\$ (3,660)	\$ (3,752)	\$ (3,846)	\$ (3,942)	\$ (4,040)	\$ (4,141)	\$ (4,245)	\$ (4,351)	\$ (4,460)	\$ (4,571)	\$ (4,686)	\$ (4,803)	\$ (4,923)	\$ (5,046)	\$ (5,172)	\$ (5,301)	\$ (5,434)
Contingency	\$ (3,213)	\$ (3,293)	\$ (3,376)	\$ (3,460)	\$ (3,547)	\$ (3,635)	\$ (3,726)	\$ (3,819)	\$ (3,915)	\$ (4,013)	\$ (4,113)	\$ (4,216)	\$ (4,321)	\$ (4,429)	\$ (4,540)	\$ (4,653)	\$ (4,770)	\$ (4,889)	\$ (5,011)	\$ (5,136)
Total Cost of Operations (\$)	\$ (19,280)	\$ (19,762)	\$ (20,256)	\$ (20,762)	\$ (21,282)	\$ (21,814)	\$ (22,359)	\$ (22,918)	\$ (23,491)	\$ (24,078)	\$ (24,680)	\$ (25,297)	\$ (25,929)	\$ (26,578)	\$ (27,242)	\$ (27,923)	\$ (28,621)	\$ (29,337)	\$ (30,070)	\$ (30,822)
Operating Income	\$ 186,696	\$ 186,214	\$ 185,720	\$ 185,213	\$ 184,694	\$ 184,162	\$ 183,617	\$ 183,058	\$ 182,485	\$ 181,898	\$ 181,296	\$ 180,679	\$ 180,046	\$ 179,398	\$ 178,734	\$ 178,053	\$ 177,354	\$ 176,639	\$ 175,906	\$ 175,154
Debt Service																				
Principal	\$ (19,977)	\$ (21,176)	\$ (22,446)	\$ (23,793)	\$ (25,220)	\$ (26,734)	\$ (28,338)	\$ (30,038)	\$ (31,840)	\$ (33,751)	\$ (35,776)	\$ (37,922)	\$ (40,198)	\$ (42,609)	\$ (45,166)	\$ (47,876)	\$ (50,748)	\$ (53,793)	\$ (57,021)	\$ (60,442)
Interest	\$ (94,760)	\$ (93,562)	\$ (92,291)	\$ (90,944)	\$ (89,517)	\$ (88,004)	\$ (86,400)	\$ (84,699)	\$ (82,897)	\$ (80,987)	\$ (78,962)	\$ (76,815)	\$ (74,540)	\$ (72,128)	\$ (69,571)	\$ (66,861)	\$ (63,989)	\$ (60,944)	\$ (57,716)	\$ (54,295)
Total Debt Service (\$)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)	\$ (114,737)
Project Revenues	\$ 71,958	\$ 71,476	\$ 70,982	\$ 70,476	\$ 69,957	\$ 69,425	\$ 68,880	\$ 68,321	\$ 67,748	\$ 67,160	\$ 66,558	\$ 65,941	\$ 65,309	\$ 64,661	\$ 63,996	\$ 63,315	\$ 62,617	\$ 61,902	\$ 61,168	\$ 60,416
Cash Flow for IRR Calculation	\$ (1,392,644)	\$ 186,214	\$ 185,720	\$ 185,213	\$ 184,694	\$ 184,162	\$ 183,617	\$ 183,058	\$ 182,485	\$ 181,898	\$ 181,296	\$ 180,679	\$ 180,046	\$ 179,398	\$ 178,734	\$ 178,053	\$ 177,354	\$ 176,639	\$ 175,906	\$ 175,154
Cumulative Repayment	\$ (1,300,709)	\$ (1,208,057)	\$ (1,114,628)	\$ (1,020,360)	\$ (925,182)	\$ (829,024)	\$ (731,807)	\$ (633,448)	\$ (533,860)	\$ (432,949)	\$ (330,615)	\$ (226,752)	\$ (121,245)	\$ (13,975)	\$ 95,187	\$ 206,378	\$ 319,744	\$ 435,439	\$ 553,628	\$ 674,487
Present Value of Cash Flow	\$ 71,958	\$ 67,431	\$ 63,174	\$ 59,173	\$ 55,412	\$ 51,878	\$ 48,557	\$ 45,437	\$ 42,506	\$ 39,752	\$ 37,166	\$ 34,737	\$ 32,457	\$ 30,315	\$ 28,306	\$ 26,419	\$ 24,649	\$ 22,988	\$ 21,430	\$ 19,968
Debt Service Coverage	1.63	1.62	1.62	1.61	1.61	1.61	1.60	1.60	1.59	1.59	1.58	1.57	1.57	1.56	1.56	1.55	1.55	1.54	1.53	1.53
Payback period															14	15	16	17	18	19

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	24.3	22.0	20.4	37.4	52.6	35.5	36.6	36.6	45.7	40.7	33.1	22.0	407.0
Shoulder	43.9	39.7	36.7	67.4	94.8	63.8	66.0	66.0	82.3	77.0	66.4	40.0	744.0
Night	34.4	31.0	28.5	52.4	73.7	53.9	54.8	55.6	67.8	56.3	48.3	31.1	587.9
TOTAL	102.6	92.7	85.6	157.2	221.1	153.1	157.4	158.2	195.9	174.0	147.8	93.1	1,738.8
Revenue													
Super-Peak	\$ 3,109	\$ 2,808	\$ 2,702	\$ 4,960	\$ 6,978	\$ 8,360	\$ 8,639	\$ 8,639	\$ 10,786	\$ 5,197	\$ 4,236	\$ 2,814	\$ 69,228
Shoulder	\$ 4,949	\$ 4,470	\$ 3,701	\$ 6,795	\$ 9,560	\$ 8,535	\$ 8,820	\$ 8,820	\$ 11,011	\$ 8,669	\$ 7,481	\$ 4,506	\$ 87,316
Night	\$ 3,143	\$ 2,839	\$ 2,109	\$ 3,871	\$ 5,447	\$ 4,548	\$ 4,629	\$ 4,700	\$ 5,727	\$ 5,155	\$ 4,416	\$ 2,848	\$ 49,431
TOTAL	\$ 11,201	\$ 10,117	\$ 8,512	\$ 15,626	\$ 21,985	\$ 21,443	\$ 22,088	\$ 22,158	\$ 27,523	\$ 19,022	\$ 16,133	\$ 10,168	\$ 205,976
Weighted Average Price	\$ 109.15	\$ 109.15	\$ 99.43	\$ 99.43	\$ 99.43	\$ 140.03	\$ 140.32	\$ 140.03	\$ 140.50	\$ 109.33	\$ 109.13	\$ 109.16	\$ 118.46

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

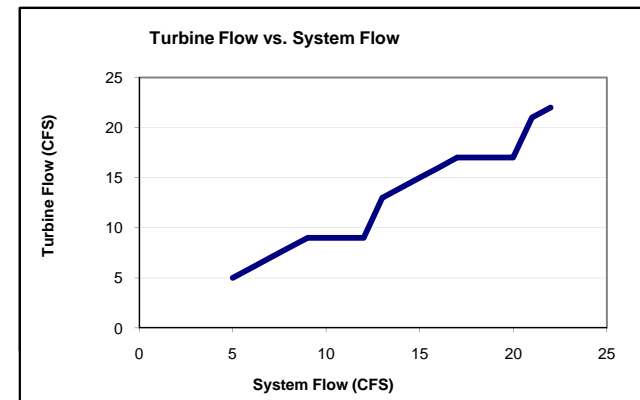
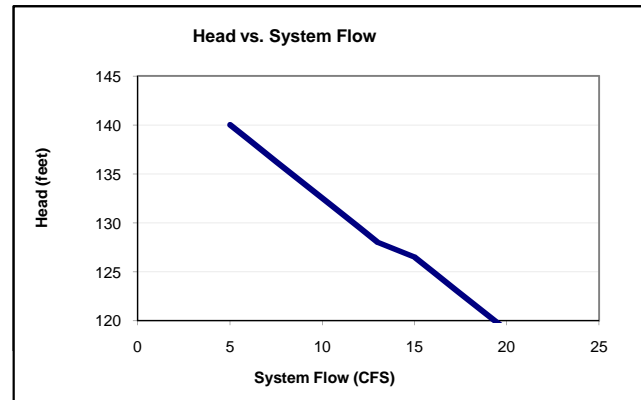
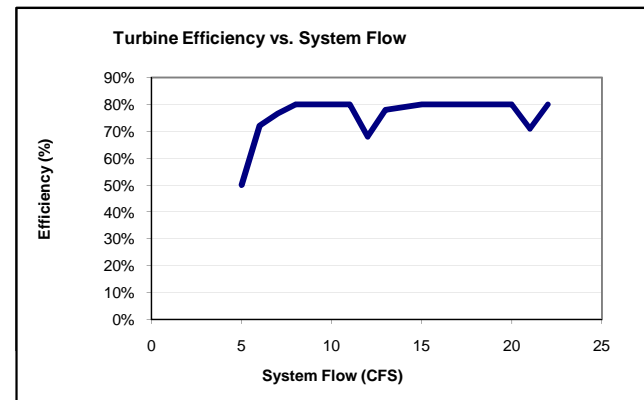
B2.2 El Dorado Main 2 PRS 3

	Total System Flow (cfs)	Shoulder Peak																				
		Super Peak Weekday							Shoulder Peak Weekday							Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
Jan	5	5.4	80	5.4	80	152	50%	6.0	5.1	70	5.1	70	152	50%	5.6	5.1	60	5.1	60	152	50%	4.5
Feb	6	6.5	90	6.5	90	151	72%	9.3	6.1	80	6.1	80	151	72%	8.7	6.1	60	6.1	60	151	72%	6.9
Mar	7	7.0	100	7.0	100	149	77%	11.7	7.0	100	7.0	100	149	77%	11.7	7.0	80	7.0	80	149	77%	9.3
Apr	13	13.0	180	13.0	180	137	78%	19.6	13.0	180	13.0	180	137	78%	19.6	13.0	150	13.0	150	137	78%	15.6
May	19	19.0	280	17	250	118	80%	23.3	19.0	280	17	250	118	80%	23.3	19.0	220	17	200	118	80%	18.7
Jun	25	24.0	340	24	340	99	80%	26.8	28.3	400	22	310	84	78%	20.3	25.0	280	24	270	95	80%	20.5
Jul	27	25.9	380	23.5	340	95	80%	26.0	30.5	450	21	310	73	76%	17.0	27.0	320	23	270	92	79%	19.5
Aug	25	24.0	350	24	350	99	80%	27.7	28.3	410	22	320	84	78%	21.0	25.0	290	24	280	95	80%	21.2
Sep	19	18.2	260	17	240	122	80%	23.4	21.5	300	21.5	300	107	80%	25.9	19.0	220	17	190	118	80%	18.1
Oct	12	11.4	170	9	130	140	68%	12.5	12.7	190	12.7	190	137	78%	19.8	12.7	150	12.7	150	137	78%	15.8
Nov	6	5.7	80	5.7	80	152	50%	6.1	6.4	90	6.4	90	151	72%	9.7	6.4	70	6.4	70	151	72%	7.8
Dec	6	6.5	90	6.5	90	151	72%	10.3	6.1	90	6.1	90	151	72%	9.6	6.1	70	6.1	70	151	72%	7.7
Total =	14	13.9	2,400	13	2,270	-	-	200.0	15.3	2,640	13	2,290	-	-	190.0	14.3	1,970	13	1,850	-	-	170.0

	Total System Flow (cfs)	Night															2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend										
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)				
Jan	5	5.1	70	5.1	70	152	50%	5.6	5.1	30	5.1	30	152	50%	2.2	25	26	24	
Feb	6	6.1	80	6.1	80	151	72%	8.7	6.1	30	6.1	30	151	72%	3.5	39	40	37	
Mar	7	7.0	100	7.0	100	149	77%	11.7	7.0	40	7.0	40	149	77%	4.7	52	54	49	
Apr	13	13.0	180	13.0	180	137	78%	19.6	13.0	70	13.0	70	137	78%	7.8	87	90	82	
May	19	19.0	280	17	250	118	80%	23.3	19.0	110	17	100	118	80%	9.3	104	107	98	
Jun	25	21.0	300	21	300	111	71%	23.3	25.0	140	24	140	95	80%	10.3	108	111	101	
Jul	27	22.7	330	22.7	330	103	80%	27.2	27.0	160	23	130	92	79%	9.7	106	108	99	
Aug	25	21.0	310	21	310	111	71%	24.1	25.0	150	24	140	95	80%	10.6	111	114	105	
Sep	19	16.0	230	16.0	230	130	80%	23.4	19.0	110	17.0	100	118	80%	9.0	106	109	100	
Oct	12	11.9	170	9.0	130	140	68%	12.5	11.9	70	9.0	50	140	68%	5.0	70	72	66	
Nov	6	5.9	80	5.9	80	151	72%	9.1	5.9	30	5.9	30	151	72%	3.6	39	40	36	
Dec	6	6.1	90	6.1	90	151	72%	9.6	6.1	40	6.1	40	151	72%	3.8	44	45	41	
Total =	14	12.9	2,220	12	2,150	-	-	200.0	14.2	980	13	900	-	-	80.0	890	910	840	

* Assumed at 97% of flow available for generation.

Efficiency			
System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	152	50%
6	6	151	72%
7	7	149	77%
8	8	148	80%
9	9	146	80%
10	9	145	80%
11	9	142	80%
12	9	140	68%
13	13	137	78%
15	15	134	80%
16	16	130	80%
17	17	126	80%
18	17	122	80%
19	17	118	80%
20	17	115	80%
21	21	111	71%
22	22	107	80%
23	23	103	80%
24	24	99	80%
25	24	95	80%
30	21	73	76%



B2.2 El Dorado Main 2 PRS 3

Capital Cost	\$ 1,409,000	195	Plant Size (kW)	2.57%	IRR
First Year Annual O&M Costs	\$ 7,058	892	Avg. Annual Gen (MWh)	\$ (152,982)	NPV
First Year Annual A&I Costs	\$ 2,937	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>20	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 3,075	2011	Initial Year of Operation	52%	Capacity Factor
First Year Annual Contingency Costs	\$ 2,614	30	Term of Debt (Years)	0.81	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 122.95	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 1,580	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Energy (MWh)	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892	892
Energy Price (\$/MWh)	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95	\$ 122.95
Energy Sales Revenue (\$)	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667	\$ 109,667
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (2,937)	\$ (3,010)	\$ (3,086)	\$ (3,163)	\$ (3,242)	\$ (3,323)	\$ (3,406)	\$ (3,491)	\$ (3,578)	\$ (3,668)	\$ (3,760)	\$ (3,854)	\$ (3,950)	\$ (4,049)	\$ (4,150)	\$ (4,254)	\$ (4,360)	\$ (4,469)	\$ (4,581)	\$ (4,695)
Repair and Replacement	\$ (3,075)	\$ (3,152)	\$ (3,231)	\$ (3,311)	\$ (3,394)	\$ (3,479)	\$ (3,566)	\$ (3,655)	\$ (3,747)	\$ (3,840)	\$ (3,936)	\$ (4,035)	\$ (4,136)	\$ (4,239)	\$ (4,345)	\$ (4,454)	\$ (4,565)	\$ (4,679)	\$ (4,796)	\$ (4,916)
Contingency	\$ (2,614)	\$ (2,679)	\$ (2,746)	\$ (2,815)	\$ (2,885)	\$ (2,958)	\$ (3,031)	\$ (3,107)	\$ (3,185)	\$ (3,265)	\$ (3,346)	\$ (3,430)	\$ (3,516)	\$ (3,603)	\$ (3,694)	\$ (3,786)	\$ (3,880)	\$ (3,978)	\$ (4,077)	\$ (4,179)
Total Cost of Operations (\$)	\$ (15,684)	\$ (16,076)	\$ (16,478)	\$ (16,890)	\$ (17,312)	\$ (17,745)	\$ (18,189)	\$ (18,643)	\$ (19,109)	\$ (19,587)	\$ (20,077)	\$ (20,579)	\$ (21,093)	\$ (21,621)	\$ (22,161)	\$ (22,715)	\$ (23,283)	\$ (23,865)	\$ (24,462)	\$ (25,073)
Operating Income	\$ 93,983	\$ 93,591	\$ 93,189	\$ 92,777	\$ 92,355	\$ 91,922	\$ 91,479	\$ 91,024	\$ 90,558	\$ 90,080	\$ 89,591	\$ 89,089	\$ 88,574	\$ 88,047	\$ 87,506	\$ 86,952	\$ 86,384	\$ 85,802	\$ 85,206	\$ 84,594
Debt Service																				
Principal	\$ (18,090)	\$ (19,175)	\$ (20,326)	\$ (21,545)	\$ (22,838)	\$ (24,208)	\$ (25,661)	\$ (27,200)	\$ (28,832)	\$ (30,562)	\$ (32,396)	\$ (34,340)	\$ (36,400)	\$ (38,584)	\$ (40,899)	\$ (43,353)	\$ (45,954)	\$ (48,711)	\$ (51,634)	\$ (54,732)
Interest	\$ (85,808)	\$ (84,723)	\$ (83,572)	\$ (82,353)	\$ (81,060)	\$ (79,690)	\$ (78,237)	\$ (76,698)	\$ (75,066)	\$ (73,336)	\$ (71,502)	\$ (69,558)	\$ (67,498)	\$ (65,314)	\$ (62,999)	\$ (60,545)	\$ (57,944)	\$ (55,186)	\$ (52,264)	\$ (49,166)
Total Debt Service (\$)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)	\$ (103,898)
Project Revenues	\$ (9,914)	\$ (10,306)	\$ (10,708)	\$ (11,120)	\$ (11,543)	\$ (11,975)	\$ (12,419)	\$ (12,874)	\$ (13,340)	\$ (13,817)	\$ (14,307)	\$ (14,809)	\$ (15,324)	\$ (15,851)	\$ (16,391)	\$ (16,945)	\$ (17,513)	\$ (18,095)	\$ (18,692)	\$ (19,304)
Cash Flow for IRR Calculation	\$ (1,336,152)	\$ 93,591	\$ 93,189	\$ 92,777	\$ 92,355	\$ 91,922	\$ 91,479	\$ 91,024	\$ 90,558	\$ 90,080	\$ 89,591	\$ 89,089	\$ 88,574	\$ 88,047	\$ 87,506	\$ 86,952	\$ 86,384	\$ 85,802	\$ 85,206	\$ 84,594
Cumulative Repayment	\$ (1,327,976)	\$ (1,319,108)	\$ (1,309,490)	\$ (1,299,066)	\$ (1,287,770)	\$ (1,275,538)	\$ (1,262,296)	\$ (1,247,970)	\$ (1,232,477)	\$ (1,215,733)	\$ (1,197,644)	\$ (1,178,113)	\$ (1,157,037)	\$ (1,134,304)	\$ (1,109,796)	\$ (1,083,389)	\$ (1,054,948)	\$ (1,024,332)	\$ (991,390)	\$ (955,962)
Present Value of Cash Flow	\$ (9,914)	\$ (9,723)	\$ (9,530)	\$ (9,337)	\$ (9,143)	\$ (8,949)	\$ (8,755)	\$ (8,562)	\$ (8,370)	\$ (8,179)	\$ (7,989)	\$ (7,801)	\$ (7,615)	\$ (7,432)	\$ (7,250)	\$ (7,071)	\$ (6,894)	\$ (6,720)	\$ (6,549)	\$ (6,380)
Debt Service Coverage	0.90	0.90	0.90	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.82	0.81

Payback period

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	6.4	9.9	12.4	20.8	24.9	28.5	27.7	29.4	24.9	13.3	6.5	10.9	215.5
Shoulder	10.7	16.6	22.4	37.5	44.8	43.5	38.8	44.9	46.8	37.9	18.7	18.4	380.9
Night	8.3	12.9	17.4	29.2	34.8	35.8	39.3	36.9	34.6	18.6	13.6	14.3	295.6
TOTAL	25.4	39.4	52.3	87.5	104.4	107.7	105.7	111.3	106.2	69.8	38.7	43.6	892.0
Revenue													
Super-Peak	\$ 813	\$ 1,260	\$ 1,649	\$ 2,761	\$ 3,295	\$ 6,719	\$ 6,523	\$ 6,943	\$ 5,865	\$ 1,697	\$ 830	\$ 1,395	\$ 39,751
Shoulder	\$ 1,205	\$ 1,869	\$ 2,259	\$ 3,782	\$ 4,514	\$ 5,815	\$ 5,184	\$ 6,009	\$ 6,258	\$ 2,101	\$ 2,069	\$ 2,069	\$ 45,333
Night	\$ 762	\$ 1,181	\$ 1,287	\$ 2,155	\$ 2,572	\$ 3,019	\$ 3,320	\$ 3,120	\$ 2,920	\$ 1,700	\$ 1,240	\$ 1,307	\$ 24,583
TOTAL	\$ 2,780	\$ 4,310	\$ 5,195	\$ 8,697	\$ 10,382	\$ 15,553	\$ 15,027	\$ 16,072	\$ 15,043	\$ 7,665	\$ 4,172	\$ 4,772	\$ 109,667
Weighted Average Price	\$ 109.50	\$ 109.50	\$ 99.43	\$ 99.43	\$ 99.43	\$ 144.37	\$ 142.11	\$ 144.37	\$ 141.58	\$ 109.89	\$ 107.77	\$ 109.50	\$ 122.95

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

B2.3 Oak Ridge Tanks to Bass Lake Tanks Pumped Storage

Generation Estimate

Total	Super Peak (generation 6 hours summer and 8 hours non-summer)								Shoulder Peak													
	Weekday								Weekday (generation 3 hours non-summer months)					Weekend (generation 3 hours non-summer months)								
	System Flow (cfs)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Power Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
Jan	10.0	10.0	150	10.0	150	412	80%	48.0	10.0	150	10.0	0.0	412	80%	18.0	10.0	120	10.0	120	412	80%	26.4
Feb	10.0	10.0	130	10.0	130	412	80%	43.3	10.0	130	10.0	0.0	412	80%	16.2	10.0	110	10.0	110	412	80%	23.8
Mar	10.0	10.0	150	10.0	150	412	80%	48.0	10.0	150	10.0	0.0	412	80%	18.0	10.0	120	10.0	120	412	80%	26.4
Apr	10.0	10.0	140	10.0	140	412	80%	46.4	10.0	140	10.0	0.0	412	80%	17.4	10.0	110	10.0	110	412	80%	25.5
May	10.0	10.0	150	10.0	150	412	80%	48.0	10.0	150	10.0	0.0	412	80%	18.0	10.0	120	10.0	120	412	80%	26.4
Jun	10.0	10.0	140	10.0	140	412	80%	34.8	0.0	0	0.0	0.0	412	80%	0.0	10.0	110	10.0	110	412	80%	13.9
Jul	10.0	10.0	150	10.0	150	412	80%	36.0	0.0	0	0.0	0.0	412	80%	0.0	10.0	120	10.0	120	412	80%	14.4
Aug	10.0	10.0	150	10.0	150	412	80%	36.0	0.0	0	0.0	0.0	412	80%	0.0	10.0	120	10.0	120	412	80%	14.4
Sep	10.0	10.0	140	10.0	140	412	80%	34.8	0.0	0	0.0	0.0	412	80%	0.0	10.0	110	10.0	110	412	80%	13.9
Oct	10.0	10.0	150	10.0	150	412	80%	48.0	10.0	150	10.0	0.0	412	80%	18.0	10.0	120	10.0	120	412	80%	26.4
Nov	10.0	10.0	140	10.0	140	412	80%	46.4	10.0	140	10.0	0.0	412	80%	17.4	10.0	110	10.0	110	412	80%	25.5
Dec	10.0	10.0	150	10.0	150	412	80%	48.0	10.0	150	10.0	0.0	412	80%	18.0	10.0	120	10.0	120	412	80%	26.4
Total =	10.0	10.0	1,740	10.0	1,740	-	-	520.0	6.7	1,160	7	0	-	-	140.0	10.0	1,390	10	1,390	-	-	260.0

Total	Night (no generation during night)															2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
	Weekday								Weekend									
	System Flow (cfs)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	92	92	92
Feb	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	83	83	83
Mar	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	92	92	92
Apr	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	89	89	89
May	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	92	92	92
Jun	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	37	31	49
Jul	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	38	32	50
Aug	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	38	32	50
Sep	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	37	31	49
Oct	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	92	92	92
Nov	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	89	89	89
Dec	10.0	0.0	0	0.0	0	412	80%	0.0	0.0	0	0.0	0	412	80%	0.0	92	92	92
Total =	10.0	0.0	0	0	0	-	-	0.0	0.0	0	0	0	-	-	0.0	870	850	920

Assumptions:

Operate once a day, 70% of the days, year around.
10 cfs for 6 hours (about 1.62 million gallons)

Generating

Efficiency = 80%
Head = 412 feet

1 acre-feet = 325,851.429 US gallons

[8.2 million gallons in two tanks](#)

decrease storage as demands increase - if constrained.

Have about 1.6 million gallons available during summer months.

Have more storage available during non-summer months.

Use 10 cfs for 6 hours during the summer (about 1.62 million gallons)

Use 10 cfs for 11 hours during the non-summer months (about 2.96 million gallons)

Reduce generation in the summer as demands grow, reducing available storage.

Maintain non-summer operation for life of project.

B2.3 Oak Ridge Tanks to Bass Lake Tanks Pumped Storage

Capital Cost	\$ 774,000	280	Plant Size (kW)	2.39%	IRR
First Year Annual O&M Costs	\$ 5,183	874	Avg. Annual Gen (MWh)	(74,167)	NPV
First Year Annual A&I Costs	\$ 1,254	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>20	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 1,698	2011	Initial Year of Operation	36%	Capacity Factor
First Year Annual Contingency Costs	\$ 1,627	30	Term of Debt (Years)	0.52	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 134.33	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 886	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Energy (MWh)	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874	874
Energy Price (\$/MWh)	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33	\$ 134.33
Energy Sales Revenue (\$)	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388	\$ 117,388
Cost of Operations																				
Operations & Maintenance	\$ (5,183)	\$ (5,313)	\$ (5,445)	\$ (5,582)	\$ (5,721)	\$ (5,864)	\$ (6,011)	\$ (6,161)	\$ (6,315)	\$ (6,473)	\$ (6,635)	\$ (6,801)	\$ (6,971)	\$ (7,145)	\$ (7,323)	\$ (7,507)	\$ (7,694)	\$ (7,887)	\$ (8,084)	\$ (8,286)
Administration & Insurance	\$ (1,254)	\$ (1,285)	\$ (1,317)	\$ (1,350)	\$ (1,384)	\$ (1,419)	\$ (1,454)	\$ (1,491)	\$ (1,528)	\$ (1,566)	\$ (1,605)	\$ (1,645)	\$ (1,686)	\$ (1,729)	\$ (1,772)	\$ (1,816)	\$ (1,862)	\$ (1,908)	\$ (1,956)	\$ (2,005)
Repair and Replacement	\$ (1,698)	\$ (1,740)	\$ (1,784)	\$ (1,829)	\$ (1,874)	\$ (1,921)	\$ (1,969)	\$ (2,018)	\$ (2,069)	\$ (2,121)	\$ (2,174)	\$ (2,228)	\$ (2,284)	\$ (2,341)	\$ (2,399)	\$ (2,459)	\$ (2,521)	\$ (2,584)	\$ (2,648)	\$ (2,715)
Contingency	\$ (1,627)	\$ (1,668)	\$ (1,709)	\$ (1,752)	\$ (1,796)	\$ (1,841)	\$ (1,887)	\$ (1,934)	\$ (1,982)	\$ (2,032)	\$ (2,083)	\$ (2,135)	\$ (2,188)	\$ (2,243)	\$ (2,299)	\$ (2,356)	\$ (2,415)	\$ (2,476)	\$ (2,538)	\$ (2,601)
Pumping Costs	\$ (45,054)	\$ (46,180)	\$ (47,335)	\$ (48,518)	\$ (49,731)	\$ (50,974)	\$ (52,249)	\$ (53,555)	\$ (54,894)	\$ (56,266)	\$ (57,673)	\$ (59,114)	\$ (60,592)	\$ (62,107)	\$ (63,660)	\$ (65,251)	\$ (66,883)	\$ (68,555)	\$ (70,268)	\$ (72,025)
Total Cost of Operations (\$)	\$ (54,816)	\$ (56,186)	\$ (57,591)	\$ (59,031)	\$ (60,506)	\$ (62,019)	\$ (63,569)	\$ (65,159)	\$ (66,788)	\$ (68,457)	\$ (70,169)	\$ (71,923)	\$ (73,721)	\$ (75,564)	\$ (77,453)	\$ (79,390)	\$ (81,374)	\$ (83,409)	\$ (85,494)	\$ (87,631)
Operating Income	\$ 62,572	\$ 61,202	\$ 59,797	\$ 58,357	\$ 56,882	\$ 55,369	\$ 53,819	\$ 52,229	\$ 50,600	\$ 48,931	\$ 47,219	\$ 45,465	\$ 43,667	\$ 41,824	\$ 39,935	\$ 37,998	\$ 36,014	\$ 33,979	\$ 31,894	\$ 29,757
Debt Service																				
Principal	\$ (9,937)	\$ (10,533)	\$ (11,165)	\$ (11,835)	\$ (12,545)	\$ (13,298)	\$ (14,096)	\$ (14,942)	\$ (15,838)	\$ (16,789)	\$ (17,796)	\$ (18,864)	\$ (19,995)	\$ (21,195)	\$ (22,467)	\$ (23,815)	\$ (25,244)	\$ (26,758)	\$ (28,364)	\$ (30,066)
Interest	\$ (47,137)	\$ (46,540)	\$ (45,908)	\$ (45,238)	\$ (44,528)	\$ (43,776)	\$ (42,978)	\$ (42,132)	\$ (41,235)	\$ (40,285)	\$ (39,278)	\$ (38,210)	\$ (37,078)	\$ (35,879)	\$ (34,607)	\$ (33,259)	\$ (31,830)	\$ (30,315)	\$ (28,710)	\$ (27,008)
Total Debt Service (\$)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)	\$ (57,074)
Project Revenues	\$ 5,499	\$ 4,128	\$ 2,723	\$ 1,284	\$ (192)	\$ (1,705)	\$ (3,255)	\$ (4,844)	\$ (6,473)	\$ (8,143)	\$ (9,855)	\$ (11,609)	\$ (13,407)	\$ (15,250)	\$ (17,139)	\$ (19,075)	\$ (21,060)	\$ (23,094)	\$ (25,180)	\$ (27,317)
Cash Flow for IRR Calculation	\$ (723,038)	\$ 61,202	\$ 59,797	\$ 58,357	\$ 56,882	\$ 55,369	\$ 53,819	\$ 52,229	\$ 50,600	\$ 48,931	\$ 47,219	\$ 45,465	\$ 43,667	\$ 41,824	\$ 39,935	\$ 37,998	\$ 36,014	\$ 33,979	\$ 31,894	\$ 29,757
Cumulative Repayment	\$ (707,602)	\$ (692,941)	\$ (679,052)	\$ (665,933)	\$ (653,580)	\$ (641,986)	\$ (631,145)	\$ (621,048)	\$ (611,683)	\$ (603,038)	\$ (595,096)	\$ (587,842)	\$ (581,253)	\$ (575,308)	\$ (569,980)	\$ (565,240)	\$ (561,056)	\$ (557,392)	\$ (554,208)	\$ (551,459)
Present Value of Cash Flow	\$ 5,499	\$ 3,894	\$ 2,424	\$ 1,078	\$ (152)	\$ (1,274)	\$ (2,295)	\$ (3,222)	\$ (4,061)	\$ (4,820)	\$ (5,503)	\$ (6,115)	\$ (6,663)	\$ (7,150)	\$ (7,581)	\$ (7,959)	\$ (8,290)	\$ (8,576)	\$ (8,822)	\$ (9,029)
Debt Service Coverage	1.10	1.07	1.05	1.02	1.00	0.97	0.94	0.92	0.89	0.86	0.83	0.80	0.77	0.73	0.70	0.67	0.63	0.60	0.56	0.52

Payback period

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	48.0	43.3	48.0	46.4	48.0	26.4	27.3	27.3	26.4	48.0	46.4	48.0	483.2
Shoulder	44.4	40.1	44.4	42.9	44.4	10.6	10.9	10.9	10.6	44.4	42.9	44.4	390.6
Night	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	92.3	83.4	92.3	89.3	92.3	37.0	38.2	38.2	37.0	92.3	89.3	92.3	873.9
Revenue													
Super-Peak	\$ 6,131	\$ 5,538	\$ 6,356	\$ 6,151	\$ 6,356	\$ 6,223	\$ 6,430	\$ 6,430	\$ 6,223	\$ 6,131	\$ 5,934	\$ 6,131	\$ 74,036
Shoulder	\$ 4,995	\$ 4,512	\$ 4,475	\$ 4,330	\$ 4,475	\$ 1,412	\$ 1,459	\$ 1,459	\$ 1,412	\$ 4,995	\$ 4,834	\$ 4,995	\$ 43,352
Night	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 11,126	\$ 10,050	\$ 10,831	\$ 10,482	\$ 10,831	\$ 7,635	\$ 7,888	\$ 7,888	\$ 7,635	\$ 11,126	\$ 10,768	\$ 11,126	\$ 117,388
Weighted Average Price	\$ 120.53	\$ 120.53	\$ 117.33	\$ 117.33	\$ 117.33	\$ 206.62	\$ 206.62	\$ 206.62	\$ 206.62	\$ 120.53	\$ 120.53	\$ 120.53	\$ 134.33

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

B2.4 Sandtrap Siphon

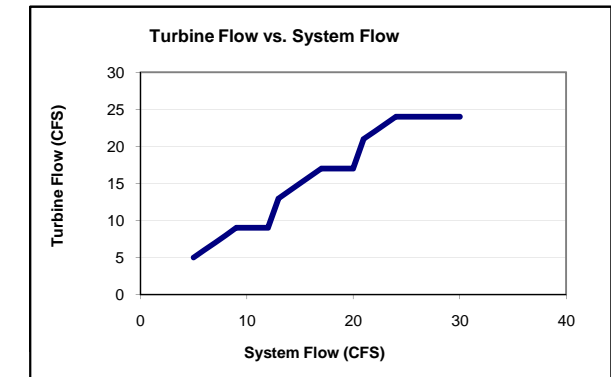
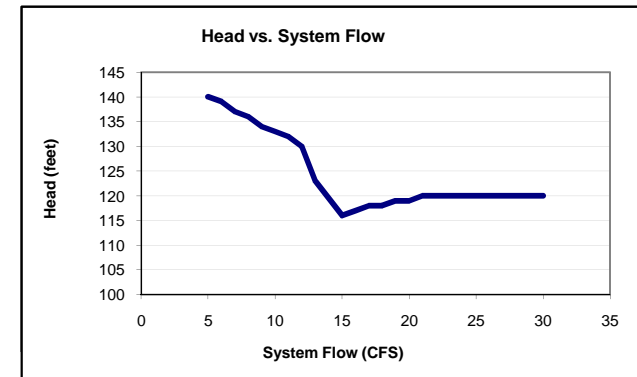
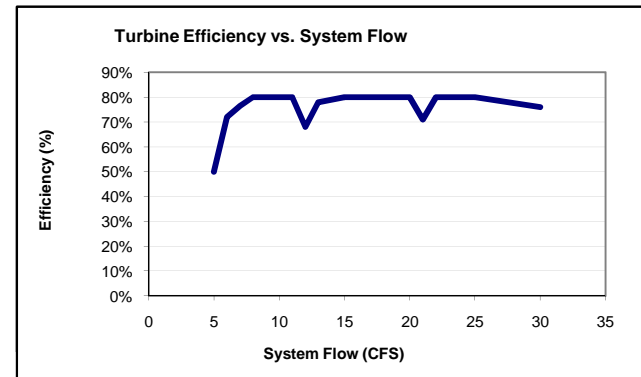
	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Power Generation* (mWh)
Jan	7	400	7	400	137	77%	45
Feb	7	400	7	400	137	77%	41
Mar	7	400	7	400	137	77%	45
Apr	7	400	7	400	137	77%	44
May	30	1,800	30	1,800	120	76%	167
Jun	30	1,800	30	1,800	120	76%	162
Jul	30	1,800	30	1,800	120	76%	167
Aug	30	1,800	30	1,800	120	76%	167
Sep	30	1,800	30	1,800	120	76%	162
Oct	7	400	7	400	137	77%	45
Nov	7	400	7	400	137	77%	44
Dec	7	400	7	400	137	77%	45
Total =	17	11,800	17	11,800	-	-	1,130

* Assumed at 97% of flow available for generation.

Efficiency

Sand Trap

System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	140	50%
6	6	139	72%
7	7	137	77%
8	8	136	80%
9	9	134	80%
10	9	133	80%
11	9	132	80%
12	9	130	68%
13	13	123	78%
15	15	116	80%
16	16	117	80%
17	17	118	80%
18	17	118	80%
19	17	119	80%
20	17	119	80%
21	21	120	71%
22	22	120	80%
23	23	120	80%
24	24	120	80%
25	24	120	80%
30	24	120	76%



B2.4 Sandtrap Siphon

Capital Cost	\$ 1,456,000	232	Plant Size (kW)	5.96%	IRR
First Year Annual O&M Costs	\$ 7,058	1,130	Avg. Annual Gen (MWh)	\$ 158,462	NPV
First Year Annual A&I Costs	\$ 3,201	\$ 117.30	Baseline Market Price Referent (\$/MWh)	25	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 3,129	2011	Initial Year of Operation	56%	Capacity Factor
First Year Annual Contingency Costs	\$ 2,678	30	Term of Debt (Years)	1.07	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 124.56	Average Price Received (\$/MWh)
Cost of Debt	6.00%		Project Physical Life (Years)	\$ 1,288	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		
Term of CREBs/QECBs (if applicable)		70.00%	CREBs/QECB Subsidy		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Energy (MWh)	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130
Energy Price (\$/MWh)	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56	\$ 124.56
Energy Sales Revenue (\$)	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752	\$ 140,752
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (3,201)	\$ (3,281)	\$ (3,363)	\$ (3,447)	\$ (3,533)	\$ (3,622)	\$ (3,712)	\$ (3,805)	\$ (3,900)	\$ (3,998)	\$ (4,098)	\$ (4,200)	\$ (4,305)	\$ (4,413)	\$ (4,523)	\$ (4,636)	\$ (4,752)	\$ (4,871)	\$ (4,992)	\$ (5,117)
Repair and Replacement	\$ (3,129)	\$ (3,207)	\$ (3,287)	\$ (3,370)	\$ (3,454)	\$ (3,540)	\$ (3,629)	\$ (3,719)	\$ (3,812)	\$ (3,908)	\$ (4,005)	\$ (4,106)	\$ (4,208)	\$ (4,313)	\$ (4,421)	\$ (4,532)	\$ (4,645)	\$ (4,761)	\$ (4,880)	\$ (5,002)
Contingency	\$ (2,678)	\$ (2,745)	\$ (2,814)	\$ (2,884)	\$ (2,956)	\$ (3,030)	\$ (3,106)	\$ (3,183)	\$ (3,263)	\$ (3,344)	\$ (3,428)	\$ (3,514)	\$ (3,602)	\$ (3,692)	\$ (3,784)	\$ (3,879)	\$ (3,976)	\$ (4,075)	\$ (4,177)	\$ (4,281)
Total Cost of Operations (\$)	\$ (16,066)	\$ (16,468)	\$ (16,879)	\$ (17,301)	\$ (17,734)	\$ (18,177)	\$ (18,632)	\$ (19,097)	\$ (19,575)	\$ (20,064)	\$ (20,566)	\$ (21,080)	\$ (21,607)	\$ (22,147)	\$ (22,701)	\$ (23,268)	\$ (23,850)	\$ (24,446)	\$ (25,057)	\$ (25,684)
Operating Income	\$ 124,686	\$ 124,284	\$ 123,872	\$ 123,450	\$ 123,018	\$ 122,574	\$ 122,120	\$ 121,654	\$ 121,177	\$ 120,687	\$ 120,186	\$ 119,672	\$ 119,145	\$ 118,604	\$ 118,051	\$ 117,483	\$ 116,902	\$ 116,305	\$ 115,694	\$ 115,068
Debt Service																				
Principal	\$ (18,693)	\$ (19,815)	\$ (21,004)	\$ (22,264)	\$ (23,600)	\$ (25,016)	\$ (26,516)	\$ (28,107)	\$ (29,794)	\$ (31,582)	\$ (33,476)	\$ (35,485)	\$ (37,614)	\$ (39,871)	\$ (42,263)	\$ (44,799)	\$ (47,487)	\$ (50,336)	\$ (53,356)	\$ (56,558)
Interest	\$ (88,670)	\$ (87,549)	\$ (86,360)	\$ (85,100)	\$ (83,764)	\$ (82,348)	\$ (80,847)	\$ (79,256)	\$ (77,570)	\$ (75,782)	\$ (73,887)	\$ (71,878)	\$ (69,749)	\$ (67,492)	\$ (65,100)	\$ (62,564)	\$ (59,877)	\$ (57,027)	\$ (54,007)	\$ (50,806)
CREB/QECB Credit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service (\$)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)	\$ (107,363)
Project Revenues	\$ 17,322	\$ 16,921	\$ 16,509	\$ 16,087	\$ 15,654	\$ 15,211	\$ 14,757	\$ 14,291	\$ 13,813	\$ 13,324	\$ 12,822	\$ 12,308	\$ 11,781	\$ 11,241	\$ 10,687	\$ 10,120	\$ 9,538	\$ 8,942	\$ 8,331	\$ 7,704
Cash Flow for IRR Calculation	\$ (1,353,154)	\$ 124,284	\$ 123,872	\$ 123,450	\$ 123,018	\$ 122,574	\$ 122,120	\$ 121,654	\$ 121,177	\$ 120,687	\$ 120,186	\$ 119,672	\$ 119,145	\$ 118,604	\$ 118,051	\$ 117,483	\$ 116,902	\$ 116,305	\$ 115,694	\$ 115,068
Cumulative Repayment	\$ (1,317,139)	\$ (1,280,404)	\$ (1,242,892)	\$ (1,204,541)	\$ (1,165,287)	\$ (1,125,061)	\$ (1,083,788)	\$ (1,041,390)	\$ (997,782)	\$ (952,877)	\$ (906,578)	\$ (858,785)	\$ (809,390)	\$ (758,278)	\$ (705,327)	\$ (650,408)	\$ (593,383)	\$ (534,105)	\$ (472,418)	\$ (408,156)
Present Value of Cash Flow	\$ 17,322	\$ 15,963	\$ 14,693	\$ 13,507	\$ 12,400	\$ 11,367	\$ 10,403	\$ 9,504	\$ 8,667	\$ 7,886	\$ 7,160	\$ 6,484	\$ 5,855	\$ 5,270	\$ 4,727	\$ 4,223	\$ 3,755	\$ 3,321	\$ 2,919	\$ 2,546
Debt Service Coverage	1.16	1.16	1.15	1.15	1.15	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.11	1.10	1.10	1.09	1.09	1.08	1.08	1.07
Payback period																				

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	1,980.02
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	1,400.56
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	1,016.99
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	10.7	9.7	10.7	10.4	31.8	30.8	31.8	31.8	30.8	10.7	10.4	10.7	230.6
Shoulder	19.3	17.5	19.3	18.7	57.3	55.5	57.3	57.3	55.5	19.3	18.7	19.3	415.2
Night	15.0	13.6	15.0	14.6	44.6	43.1	44.6	44.6	43.1	15.0	14.6	15.0	322.9
TOTAL	45.1	40.8	45.1	43.7	133.8	129.4	133.8	133.8	129.4	45.1	43.7	45.1	968.7
Revenue													
Super-Peak	\$ 1,374	\$ 1,241	\$ 1,424	\$ 1,378	\$ 4,221	\$ 7,266	\$ 7,508	\$ 7,508	\$ 7,266	\$ 1,374	\$ 1,329	\$ 1,374	\$ 43,263
Shoulder	\$ 2,178	\$ 1,967	\$ 1,951	\$ 1,888	\$ 5,783	\$ 7,418	\$ 7,665	\$ 7,665	\$ 7,418	\$ 2,178	\$ 2,107	\$ 2,178	\$ 50,395
Night	\$ 1,376	\$ 1,243	\$ 1,112	\$ 1,076	\$ 3,295	\$ 3,644	\$ 3,765	\$ 3,765	\$ 3,644	\$ 1,376	\$ 1,332	\$ 1,376	\$ 27,004
TOTAL	\$ 4,928	\$ 4,451	\$ 4,486	\$ 4,342	\$ 13,298	\$ 18,328	\$ 18,939	\$ 18,939	\$ 18,328	\$ 4,928	\$ 4,769	\$ 4,928	\$ 120,663
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.60	\$ 141.60	\$ 141.60	\$ 141.60	\$ 109.20	\$ 109.20	\$ 109.20	\$ 124.56

Source: PG&E Advice Letter 3410-E, January 27, 2009

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

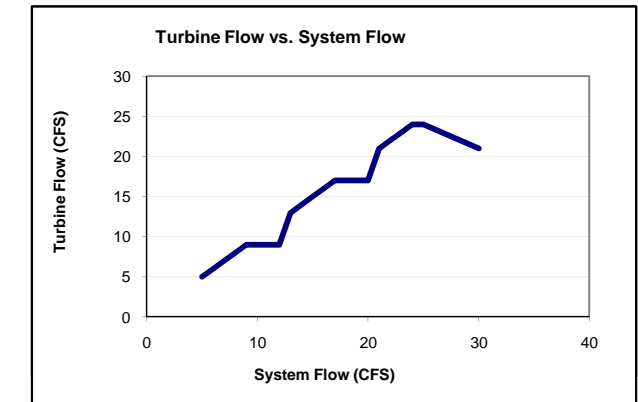
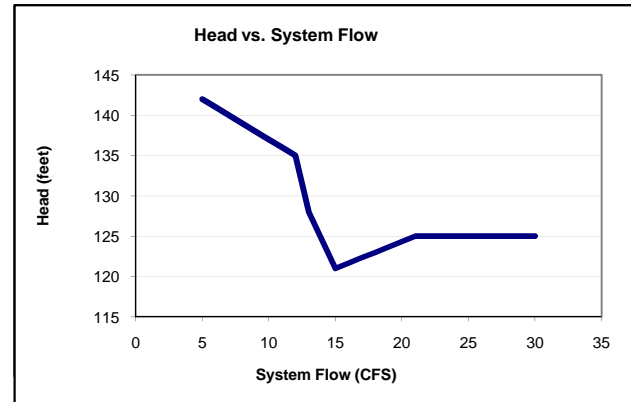
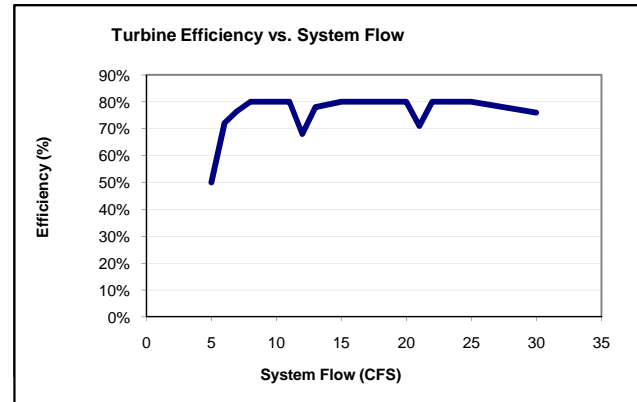
B2.5 Buffalo Hill Siphon

	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Power Generation* (mWh)
Jan	6	400	6	400	141	72%	37
Feb	6	300	6	300	141	72%	34
Mar	6	400	6	400	141	72%	37
Apr	6	400	6	400	141	72%	36
May	20	1,200	20	1,200	124	80%	121
Jun	20	1,200	20	1,200	124	80%	117
Jul	20	1,200	20	1,200	124	80%	121
Aug	20	1,200	20	1,200	124	80%	121
Sep	20	1,200	20	1,200	124	80%	117
Oct	6	400	6	400	141	72%	37
Nov	6	400	6	400	141	72%	36
Dec	6	400	6	400	141	72%	37
Total =	12	8,700	12	8,700	-	-	850

* Assumed at 97% of flow available for generation.

Efficiency

System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	142	50%
6	6	141	72%
7	7	140	77%
8	8	139	80%
9	9	138	80%
10	9	137	80%
11	9	136	80%
12	9	135	68%
13	13	128	78%
15	15	121	80%
16	16	122	80%
17	17	122	80%
18	17	123	80%
19	17	124	80%
20	17	124	80%
21	21	125	71%
22	22	125	80%
23	23	125	80%
24	24	125	80%
25	24	125	80%
30	21	125	76%



B2.5 Buffalo Hill Siphon

Capital Cost	\$ 1,284,000	168	Plant Size (kW)	3.46%	IRR
First Year Annual O&M Costs	\$ 7,058	860	Avg. Annual Gen (MWh)	(69,292)	NPV
First Year Annual A&I Costs	\$ 2,508	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>30	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 2,841	2011	Initial Year of Operation	58%	Capacity Factor
First Year Annual Contingency Costs	\$ 2,481	30	Term of Debt (Years)	0.88	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 124.16	Average Price Received (\$/MWh)
Cost of Debt	6.00%		Project Physical Life (Years)	\$ 1,493	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		
Term of CREBs/QECBs (if applicable)		70.00%	CREBs/QECB Subsidy		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Energy (MWH)	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860	860
Energy Price (\$/MWH)	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16	\$ 124.16
Energy Sales Revenue (\$)	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777	\$ 106,777
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (2,508)	\$ (2,571)	\$ (2,635)	\$ (2,701)	\$ (2,768)	\$ (2,838)	\$ (2,909)	\$ (2,981)	\$ (3,056)	\$ (3,132)	\$ (3,210)	\$ (3,291)	\$ (3,373)	\$ (3,457)	\$ (3,544)	\$ (3,632)	\$ (3,723)	\$ (3,816)	\$ (3,912)	\$ (4,009)
Repair and Replacement	\$ (2,841)	\$ (2,912)	\$ (2,985)	\$ (3,059)	\$ (3,136)	\$ (3,214)	\$ (3,295)	\$ (3,377)	\$ (3,461)	\$ (3,548)	\$ (3,637)	\$ (3,728)	\$ (3,821)	\$ (3,916)	\$ (4,014)	\$ (4,115)	\$ (4,217)	\$ (4,323)	\$ (4,431)	\$ (4,542)
Contingency	\$ (2,481)	\$ (2,543)	\$ (2,607)	\$ (2,672)	\$ (2,739)	\$ (2,807)	\$ (2,877)	\$ (2,949)	\$ (3,023)	\$ (3,098)	\$ (3,176)	\$ (3,255)	\$ (3,337)	\$ (3,420)	\$ (3,506)	\$ (3,593)	\$ (3,683)	\$ (3,775)	\$ (3,870)	\$ (3,966)
Total Cost of Operations (\$)	\$ (14,888)	\$ (15,260)	\$ (15,642)	\$ (16,033)	\$ (16,434)	\$ (16,844)	\$ (17,266)	\$ (17,697)	\$ (18,140)	\$ (18,593)	\$ (19,058)	\$ (19,534)	\$ (20,023)	\$ (20,523)	\$ (21,036)	\$ (21,562)	\$ (22,101)	\$ (22,654)	\$ (23,220)	\$ (23,801)
Operating Income	\$ 91,889	\$ 91,517	\$ 91,135	\$ 90,744	\$ 90,343	\$ 89,932	\$ 89,511	\$ 89,080	\$ 88,637	\$ 88,184	\$ 87,719	\$ 87,243	\$ 86,754	\$ 86,254	\$ 85,740	\$ 85,215	\$ 84,676	\$ 84,123	\$ 83,557	\$ 82,976
Debt Service																				
Principal	\$ (16,485)	\$ (17,474)	\$ (18,522)	\$ (19,634)	\$ (20,812)	\$ (22,060)	\$ (23,384)	\$ (24,787)	\$ (26,274)	\$ (27,851)	\$ (29,522)	\$ (31,293)	\$ (33,171)	\$ (35,161)	\$ (37,271)	\$ (39,507)	\$ (41,877)	\$ (44,390)	\$ (47,053)	\$ (49,876)
Interest	\$ (78,196)	\$ (77,207)	\$ (76,158)	\$ (75,047)	\$ (73,869)	\$ (72,620)	\$ (71,296)	\$ (69,893)	\$ (68,406)	\$ (66,830)	\$ (65,159)	\$ (63,387)	\$ (61,510)	\$ (59,519)	\$ (57,410)	\$ (55,174)	\$ (52,803)	\$ (50,291)	\$ (47,627)	\$ (44,804)
CREB/QECB Credit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service (\$)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)	\$ (94,680)
Project Revenues	\$ (2,792)	\$ (3,164)	\$ (3,545)	\$ (3,936)	\$ (4,337)	\$ (4,748)	\$ (5,169)	\$ (5,601)	\$ (6,043)	\$ (6,497)	\$ (6,961)	\$ (7,438)	\$ (7,926)	\$ (8,427)	\$ (8,940)	\$ (9,466)	\$ (10,005)	\$ (10,557)	\$ (11,124)	\$ (11,704)
Cash Flow for IRR Calculation	\$ (1,211,371)	\$ 91,517	\$ 91,135	\$ 90,744	\$ 90,343	\$ 89,932	\$ 89,511	\$ 89,080	\$ 88,637	\$ 88,184	\$ 87,719	\$ 87,243	\$ 86,754	\$ 86,254	\$ 85,740	\$ 85,215	\$ 84,676	\$ 84,123	\$ 83,557	\$ 82,976
Cumulative Repayment	\$ (1,197,678)	\$ (1,183,368)	\$ (1,168,391)	\$ (1,152,693)	\$ (1,136,219)	\$ (1,118,906)	\$ (1,100,691)	\$ (1,081,505)	\$ (1,061,274)	\$ (1,039,920)	\$ (1,017,359)	\$ (993,504)	\$ (968,260)	\$ (941,526)	\$ (913,195)	\$ (883,154)	\$ (851,282)	\$ (817,449)	\$ (781,520)	\$ (743,348)
Present Value of Cash Flow	\$ (2,792)	\$ (2,985)	\$ (3,155)	\$ (3,305)	\$ (3,435)	\$ (3,548)	\$ (3,644)	\$ (3,725)	\$ (3,792)	\$ (3,845)	\$ (3,887)	\$ (3,918)	\$ (3,939)	\$ (3,951)	\$ (3,954)	\$ (3,950)	\$ (3,938)	\$ (3,921)	\$ (3,897)	\$ (3,868)
Debt Service Coverage	0.97	0.97	0.96	0.96	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.89	0.89	0.88	0.88

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	1,980.02
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	1,400.56
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	1,016.99
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	8.9	8.0	8.9	8.6	24.5	23.7	24.5	24.5	23.7	8.9	8.6	8.9	181.7
Shoulder	16.0	14.4	16.0	15.4	44.2	42.7	44.2	44.2	42.7	16.0	15.4	16.0	327.1
Night	12.4	11.2	12.4	12.0	34.4	33.2	34.4	34.4	33.2	12.4	12.0	12.4	254.4
TOTAL	37.2	33.6	37.2	36.0	103.1	99.7	103.1	103.1	99.7	37.2	36.0	37.2	763.2
Revenue													
Super-Peak	\$ 1,133	\$ 1,023	\$ 1,175	\$ 1,137	\$ 3,252	\$ 5,598	\$ 5,785	\$ 5,785	\$ 5,598	\$ 1,133	\$ 1,097	\$ 1,133	\$ 33,850
Shoulder	\$ 1,796	\$ 1,623	\$ 1,609	\$ 1,557	\$ 4,455	\$ 5,715	\$ 5,906	\$ 5,906	\$ 5,715	\$ 1,796	\$ 1,738	\$ 1,796	\$ 39,614
Night	\$ 1,135	\$ 1,025	\$ 917	\$ 887	\$ 2,538	\$ 2,808	\$ 2,901	\$ 2,901	\$ 2,808	\$ 1,135	\$ 1,099	\$ 1,135	\$ 21,289
TOTAL	\$ 4,065	\$ 3,671	\$ 3,701	\$ 3,581	\$ 10,246	\$ 14,121	\$ 14,592	\$ 14,592	\$ 14,121	\$ 4,065	\$ 3,934	\$ 4,065	\$ 94,753
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.60	\$ 141.60	\$ 141.60	\$ 141.60	\$ 109.20	\$ 109.20	\$ 109.20	\$ 124.16

Source: PG&E Advice Letter 3410-E, January 27, 2009

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

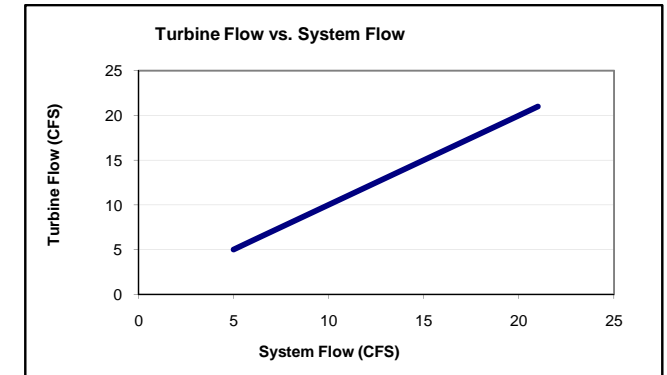
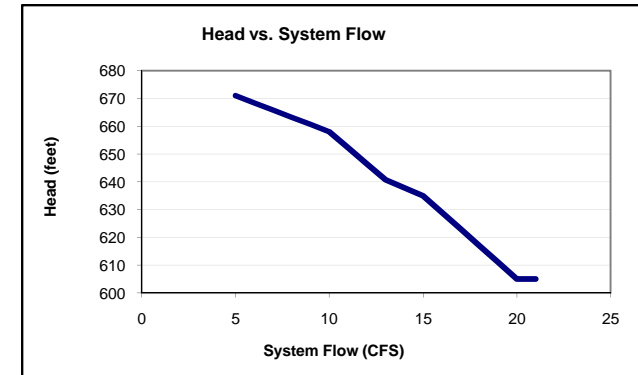
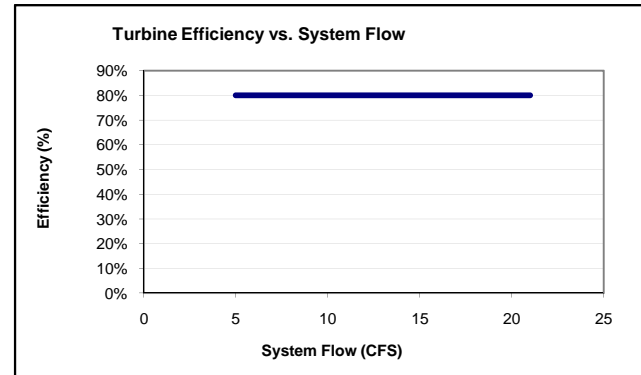
B2.6 Kaiser Siphon

	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Power Generation* (mWh)
Jan	6	400	6	400	668	80%	196
Feb	6	300	6	300	668	80%	177
Mar	6	400	6	400	668	80%	196
Apr	6	400	6	400	668	80%	190
May	15	900	15	900	635	80%	466
Jun	15	900	15	900	635	80%	451
Jul	15	900	15	900	635	80%	466
Aug	15	900	15	900	635	80%	466
Sep	15	900	15	900	635	80%	451
Oct	6	400	6	400	668	80%	196
Nov	6	400	6	400	668	80%	190
Dec	6	400	6	400	668	80%	196
Total =	10	7,200	10	7,200	-	-	3,640

* Assumed at 97% of flow available for generation.

Efficiency

System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	671	80%
6	6	668	80%
7	7	666	80%
8	8	663	80%
9	9	661	80%
10	10	658	80%
11	11	652	80%
12	12	647	80%
13	13	641	80%
15	15	635	80%
16	16	629	80%
17	17	623	80%
18	18	617	80%
19	19	611	80%
20	20	605	80%
21	21	605	80%



Static head = 675'

B2.6 Kaiser Siphon

Capital Cost	\$ 5,172,000	580	Plant Size (kW)	5.34%	IRR
First Year Annual O&M Costs	\$ 6,558	3,638	Avg. Annual Gen (MWh)	\$ 347,616	NPV
First Year Annual A&I Costs	\$ 11,880	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>20	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 6,630	2011	Initial Year of Operation	72%	Capacity Factor
First Year Annual Contingency Costs	\$ 5,014	30	Term of Debt (Years)	1.05	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 123.23	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 1,422	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Energy (MWh)	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638	3,638
Energy Price (\$/MWh)	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23	\$ 123.23
Energy Sales Revenue (\$)	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331	\$ 448,331
Cost of Operations																				
Operations & Maintenance	\$ (6,558)	\$ (6,722)	\$ (6,890)	\$ (7,062)	\$ (7,239)	\$ (7,420)	\$ (7,605)	\$ (7,795)	\$ (7,990)	\$ (8,190)	\$ (8,395)	\$ (8,605)	\$ (8,820)	\$ (9,040)	\$ (9,266)	\$ (9,498)	\$ (9,735)	\$ (9,979)	\$ (10,228)	\$ (10,484)
Administration & Insurance	\$ (11,880)	\$ (12,177)	\$ (12,481)	\$ (12,793)	\$ (13,113)	\$ (13,441)	\$ (13,777)	\$ (14,122)	\$ (14,475)	\$ (14,836)	\$ (15,207)	\$ (15,588)	\$ (15,977)	\$ (16,377)	\$ (16,786)	\$ (17,206)	\$ (17,636)	\$ (18,077)	\$ (18,529)	\$ (18,992)
Repair and Replacement	\$ (6,630)	\$ (6,796)	\$ (6,966)	\$ (7,140)	\$ (7,318)	\$ (7,501)	\$ (7,689)	\$ (7,881)	\$ (8,078)	\$ (8,280)	\$ (8,487)	\$ (8,699)	\$ (8,917)	\$ (9,140)	\$ (9,368)	\$ (9,602)	\$ (9,842)	\$ (10,088)	\$ (10,341)	\$ (10,599)
Contingency	\$ (5,014)	\$ (5,139)	\$ (5,268)	\$ (5,400)	\$ (5,535)	\$ (5,673)	\$ (5,815)	\$ (5,960)	\$ (6,109)	\$ (6,262)	\$ (6,418)	\$ (6,579)	\$ (6,743)	\$ (6,912)	\$ (7,085)	\$ (7,262)	\$ (7,443)	\$ (7,629)	\$ (7,820)	\$ (8,016)
Total Cost of Operations (\$)	\$ (30,082)	\$ (30,834)	\$ (31,605)	\$ (32,395)	\$ (33,205)	\$ (34,035)	\$ (34,886)	\$ (35,758)	\$ (36,652)	\$ (37,568)	\$ (38,508)	\$ (39,470)	\$ (40,457)	\$ (41,468)	\$ (42,505)	\$ (43,568)	\$ (44,657)	\$ (45,773)	\$ (46,918)	\$ (48,091)
Operating Income	\$ 418,249	\$ 417,497	\$ 416,726	\$ 415,936	\$ 415,126	\$ 414,296	\$ 413,445	\$ 412,573	\$ 411,679	\$ 410,763	\$ 409,824	\$ 408,861	\$ 407,874	\$ 406,863	\$ 405,826	\$ 404,763	\$ 403,674	\$ 402,558	\$ 401,413	\$ 400,240
Debt Service																				
Principal	\$ (66,401)	\$ (70,386)	\$ (74,609)	\$ (79,085)	\$ (83,830)	\$ (88,860)	\$ (94,192)	\$ (99,843)	\$ (105,834)	\$ (112,184)	\$ (118,915)	\$ (126,050)	\$ (133,613)	\$ (141,630)	\$ (150,127)	\$ (159,135)	\$ (168,683)	\$ (178,804)	\$ (189,532)	\$ (200,904)
Interest	\$ (314,975)	\$ (310,991)	\$ (306,768)	\$ (302,291)	\$ (297,546)	\$ (292,516)	\$ (287,185)	\$ (281,533)	\$ (275,542)	\$ (269,192)	\$ (262,461)	\$ (255,326)	\$ (247,763)	\$ (239,747)	\$ (231,249)	\$ (222,241)	\$ (212,693)	\$ (202,572)	\$ (191,844)	\$ (180,472)
Total Debt Service (\$)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)	\$ (381,376)
Project Revenues	\$ 36,873	\$ 36,121	\$ 35,350	\$ 34,560	\$ 33,750	\$ 32,920	\$ 32,069	\$ 31,197	\$ 30,303	\$ 29,386	\$ 28,447	\$ 27,485	\$ 26,498	\$ 25,486	\$ 24,450	\$ 23,387	\$ 22,298	\$ 21,181	\$ 20,037	\$ 18,864
Cash Flow for IRR Calculation	\$ (4,831,331)	\$ 417,497	\$ 416,726	\$ 415,936	\$ 415,126	\$ 414,296	\$ 413,445	\$ 412,573	\$ 411,679	\$ 410,763	\$ 409,824	\$ 408,861	\$ 407,874	\$ 406,863	\$ 405,826	\$ 404,763	\$ 403,674	\$ 402,558	\$ 401,413	\$ 400,240
Cumulative Repayment	\$ (4,728,057)	\$ (4,621,550)	\$ (4,511,592)	\$ (4,397,947)	\$ (4,280,367)	\$ (4,158,587)	\$ (4,032,326)	\$ (3,901,286)	\$ (3,765,150)	\$ (3,623,579)	\$ (3,476,217)	\$ (3,322,683)	\$ (3,162,572)	\$ (2,995,456)	\$ (2,820,879)	\$ (2,638,357)	\$ (2,447,376)	\$ (2,247,391)	\$ (2,037,821)	\$ (1,818,053)
Present Value of Cash Flow	\$ 36,873	\$ 34,076	\$ 31,461	\$ 29,017	\$ 26,733	\$ 24,600	\$ 22,607	\$ 20,748	\$ 19,012	\$ 17,394	\$ 15,885	\$ 14,479	\$ 13,169	\$ 11,949	\$ 10,814	\$ 9,759	\$ 8,777	\$ 7,866	\$ 7,020	\$ 6,235
Debt Service Coverage	1.10	1.09	1.09	1.09	1.09	1.09	1.08	1.08	1.08	1.08	1.07	1.07	1.07	1.07	1.06	1.06	1.06	1.06	1.05	1.05
Payback period																				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL							
TOD Factors																				
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	2.010	1.090	1.090	1.090	} Source: PG&E Advice Letter 3410-E, January 27, 2009						
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	0.960							
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	0.780							
TOD Prices																				
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02						
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56						
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99						
TOD Generation																				
Super-Peak	46.7	42.1	46.7	45.1	110.9	107.3	110.9	110.9	110.9	107.3	46.7	45.1	46.7	866.2						
Shoulder	84.0	75.8	84.0	81.3	199.6	193.1	199.6	199.6	199.6	193.1	84.0	81.3	84.0	1,559.2						
Night	65.3	59.0	65.3	63.2	155.2	150.2	155.2	155.2	155.2	150.2	65.3	63.2	65.3	1,212.7						
TOTAL	195.9	177.0	195.9	189.6	465.6	450.6	465.6	465.6	465.6	450.6	195.9	189.6	195.9	3,638.1						
Revenue																				
Super-Peak	\$ 5,965	\$ 5,387	\$ 6,184	\$ 5,984	\$ 14,695	\$ 25,296	\$ 26,139	\$ 26,139	\$ 25,296	\$ 26,139	\$ 5,965	\$ 5,772	\$ 5,965	\$ 158,788						
Shoulder	\$ 9,456	\$ 8,541	\$ 8,471	\$ 8,198	\$ 20,131	\$ 25,825	\$ 26,686	\$ 26,686	\$ 25,825	\$ 26,686	\$ 9,456	\$ 9,151	\$ 9,456	\$ 187,880						
Night	\$ 5,976	\$ 5,397	\$ 4,826	\$ 4,671	\$ 11,470	\$ 12,686	\$ 13,109	\$ 13,109	\$ 12,686	\$ 13,109	\$ 5,976	\$ 5,783	\$ 5,976	\$ 101,663						
TOTAL	\$ 21,396	\$ 19,326	\$ 19,481	\$ 18,853	\$ 46,297	\$ 63,807	\$ 65,934	\$ 65,934	\$ 63,807	\$ 65,934	\$ 21,396	\$ 20,706	\$ 21,396	\$ 448,331						
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.60	\$ 141.60	\$ 141.60	\$ 141.60	\$ 141.60	\$ 109.20	\$ 109.20	\$ 109.20	\$ 123.23						

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

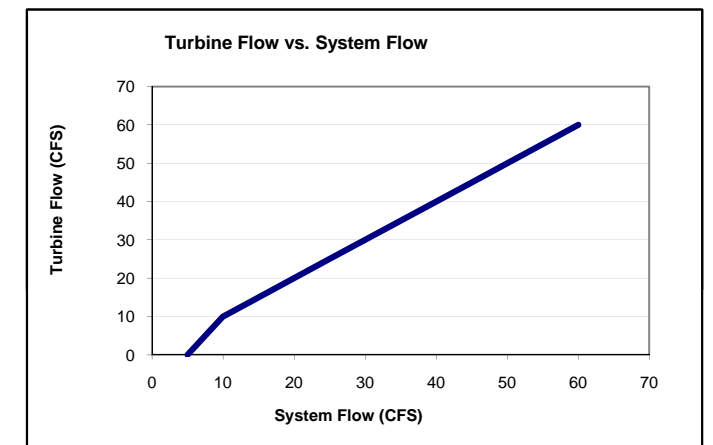
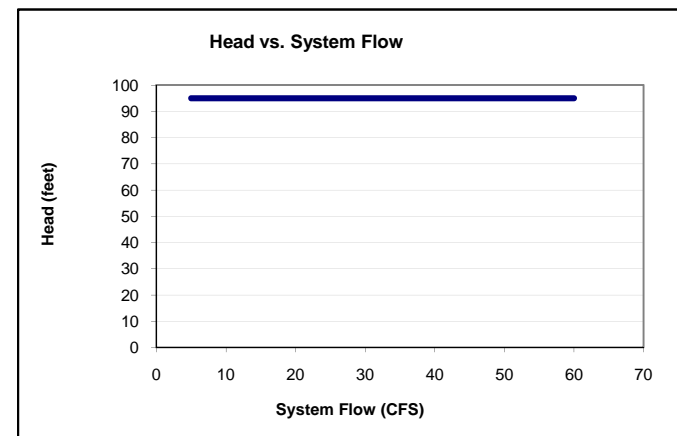
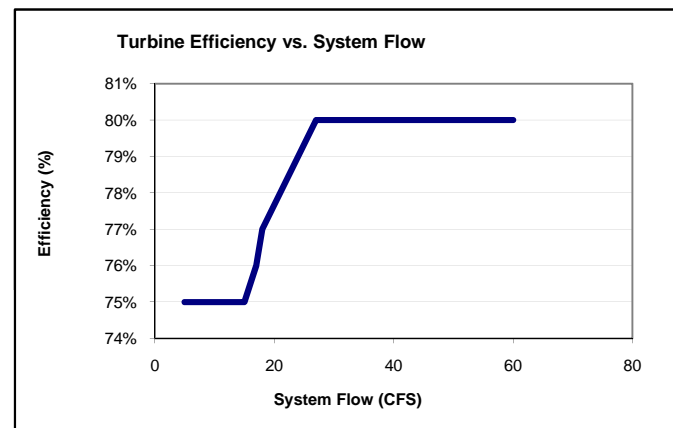
B2.7 Sly Park Dam

	Total System Flow (cfs)	Super Peak Weekday							Shoulder Peak													
		Weekday							Weekday							Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
Jan	14	11.9	170	11.9	170	95	75%	12.3	15.0	220	15.0	220	95	75%	15.5	15.0	180	15.0	180	95	75%	12.4
Feb	15	12.75	170	12.8	170	95	75%	11.9	16.1	210	16.1	210	95	75%	15.0	16.1	170	16.1	170	95	75%	12.0
Mar	15	15.9	230	15.9	230	95	75%	16.5	15.8	230	15.8	230	95	75%	16.3	15.8	180	15.8	180	95	75%	13.1
Apr	18	19.08	270	19.1	270	95	77%	19.7	18.9	270	18.9	270	95	77%	19.5	18.9	210	18.9	210	95	77%	15.6
May	43	45.58	670	45.6	670	95	80%	50.4	45.2	660	45.2	660	95	80%	49.9	45.2	530	45.2	530	95	80%	39.9
Jun	51	52.53	740	52.5	740	95	80%	56.2	52.5	740	52.5	740	95	80%	56.2	51.0	580	51.0	580	95	80%	43.7
Jul	27	27.81	410	27.8	410	95	80%	30.8	27.8	410	27.8	410	95	80%	30.8	27.0	320	27.0	320	95	80%	23.9
Aug	55	56.65	830	56.7	830	95	80%	62.6	56.7	830	56.7	830	95	80%	62.6	55.0	640	55.0	640	95	80%	48.7
Sep	52	53.56	760	53.6	760	95	80%	57.3	53.6	760	53.6	760	95	80%	57.3	52.0	590	52.0	590	95	80%	44.5
Oct	48	57.6	840	57.6	840	95	80%	63.7	46.1	670	46.1	670	95	80%	51.0	46.1	540	46.1	540	95	80%	40.8
Nov	27	32.4	460	32.4	460	95	80%	34.7	25.9	370	25.9	370	95	80%	27.7	25.9	290	25.9	290	95	80%	22.2
Dec	17	14.45	210	14.5	210	95	76%	15.2	18.2	270	18.2	270	95	76%	19.1	18.2	210	18.2	210	95	76%	15.3
Total =	32	33.4	5,760	33.4	5,760	-	-	430.0	33	5,640	32.6	5,640	-	-	420.0	32	4,440	32.2	4,440	-	-	330.0

	Total System Flow (cfs)	Night														2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend									
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	14	15.1	220	15.1	220	95	75%	15.7	15.1	90	15.1	90	95	75%	6.3	66	68	62
Feb	15	16.2	210	16.2	210	95	75%	15.2	16.2	90	16.2	90	95	75%	6.1	64	66	60
Mar	15	13.4	200	13.4	200	95	75%	13.8	13.4	80	13.4	80	95	75%	5.5	69	71	65
Apr	18	16.0	230	16.0	230	95	77%	16.5	16.0	90	16.0	90	95	77%	6.6	83	85	78
May	43	38.3	560	38.3	560	95	80%	42.3	38.3	220	38.3	220	95	80%	16.9	212	218	200
Jun	51	47.9	680	47.9	680	95	80%	51.3	51.0	290	51.0	290	95	80%	21.8	244	250	229
Jul	27	25.4	370	25.4	370	95	80%	28.1	27.0	160	27.0	160	95	80%	11.9	134	137	125
Aug	55	51.7	760	51.7	760	95	80%	57.2	55.0	320	55.0	320	95	80%	24.3	272	279	255
Sep	52	48.9	690	48.9	690	95	80%	52.3	52.0	290	52.0	290	95	80%	22.3	249	255	234
Oct	48	40.3	590	40.3	590	95	80%	44.6	40.3	240	40.3	240	95	80%	17.8	232	238	218
Nov	27	22.7	320	22.7	320	95	80%	24.3	22.7	130	22.7	130	95	80%	9.7	126	130	119
Dec	17	18.4	270	18.4	270	95	76%	19.3	18.4	110	18.4	110	95	76%	7.7	82	84	77
Total =	32	30	5,100	29.5	5,100	-	-	380.0	30	2,110	30.4	2,110	-	-	160.0	1,830	1,880	1,720

* Assumed at 97% of flow available for generation.

System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	0	95	75%
10	10	95	75%
14	14	95	75%
15	15	95	75%
17	17	95	76%
18	18	95	77%
27	27	95	80%
43	43	95	80%
48	48	95	80%
51	51	95	80%
52	52	95	80%
55	55	95	80%
60	60	95	80%



B2.7 Sly Park Dam

Capital Cost	\$ 2,571,000	400	Plant Size (kW)	5.04%	IRR
First Year Annual O&M Costs	\$ 7,411	1,833	Avg. Annual Gen (MWh)	\$ 121,711	NPV
First Year Annual A&I Costs	\$ 5,940	\$ 117.30	Baseline Market Price Referent (\$/MWh)	27	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 5,655	2011	Initial Year of Operation	52%	Capacity Factor
First Year Annual Contingency Costs	\$ 3,801	30	Term of Debt (Years)	1.01	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 124.36	Average Price Received (\$/MWh)
Cost of Debt	6.00%		Project Physical Life (Years)	\$ 1,402	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		
Term of CREBs/QECBs (if applicable)		70.00%	CREBs/QECB Subsidy		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Energy (MWh)	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833
Energy Price (\$/MWh)	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36	\$ 124.36
Energy Sales Revenue (\$)	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978	\$ 227,978
Cost of Operations																				
Operations & Maintenance	\$ (7,411)	\$ (7,596)	\$ (7,786)	\$ (7,981)	\$ (8,180)	\$ (8,385)	\$ (8,594)	\$ (8,809)	\$ (9,030)	\$ (9,255)	\$ (9,487)	\$ (9,724)	\$ (9,967)	\$ (10,216)	\$ (10,472)	\$ (10,733)	\$ (11,002)	\$ (11,277)	\$ (11,559)	\$ (11,848)
Administration & Insurance	\$ (5,940)	\$ (6,089)	\$ (6,241)	\$ (6,397)	\$ (6,557)	\$ (6,721)	\$ (6,889)	\$ (7,061)	\$ (7,237)	\$ (7,418)	\$ (7,604)	\$ (7,794)	\$ (7,989)	\$ (8,188)	\$ (8,393)	\$ (8,603)	\$ (8,818)	\$ (9,038)	\$ (9,264)	\$ (9,496)
Repair and Replacement	\$ (5,655)	\$ (5,796)	\$ (5,941)	\$ (6,090)	\$ (6,242)	\$ (6,398)	\$ (6,558)	\$ (6,722)	\$ (6,890)	\$ (7,062)	\$ (7,239)	\$ (7,420)	\$ (7,605)	\$ (7,795)	\$ (7,990)	\$ (8,190)	\$ (8,395)	\$ (8,605)	\$ (8,820)	\$ (9,040)
Contingency	\$ (3,801)	\$ (3,896)	\$ (3,993)	\$ (4,093)	\$ (4,196)	\$ (4,300)	\$ (4,408)	\$ (4,518)	\$ (4,631)	\$ (4,747)	\$ (4,866)	\$ (4,987)	\$ (5,112)	\$ (5,240)	\$ (5,371)	\$ (5,505)	\$ (5,643)	\$ (5,784)	\$ (5,928)	\$ (6,076)
Total Cost of Operations (\$)	\$ (22,807)	\$ (23,377)	\$ (23,962)	\$ (24,561)	\$ (25,175)	\$ (25,804)	\$ (26,449)	\$ (27,110)	\$ (27,788)	\$ (28,483)	\$ (29,195)	\$ (29,925)	\$ (30,673)	\$ (31,440)	\$ (32,226)	\$ (33,031)	\$ (33,857)	\$ (34,704)	\$ (35,571)	\$ (36,460)
Operating Income	\$ 205,171	\$ 204,601	\$ 204,017	\$ 203,418	\$ 202,804	\$ 202,174	\$ 201,529	\$ 200,868	\$ 200,190	\$ 199,496	\$ 198,784	\$ 198,054	\$ 197,306	\$ 196,539	\$ 195,753	\$ 194,947	\$ 194,121	\$ 193,275	\$ 192,407	\$ 191,518
Debt Service																				
Principal	\$ (33,008)	\$ (34,989)	\$ (37,088)	\$ (39,313)	\$ (41,672)	\$ (44,172)	\$ (46,823)	\$ (49,632)	\$ (52,610)	\$ (55,767)	\$ (59,113)	\$ (62,659)	\$ (66,419)	\$ (70,404)	\$ (74,628)	\$ (79,106)	\$ (83,852)	\$ (88,883)	\$ (94,216)	\$ (99,869)
Interest	\$ (156,574)	\$ (154,593)	\$ (152,494)	\$ (150,269)	\$ (147,910)	\$ (145,410)	\$ (142,759)	\$ (139,950)	\$ (136,972)	\$ (133,815)	\$ (130,469)	\$ (126,923)	\$ (123,163)	\$ (119,178)	\$ (114,954)	\$ (110,476)	\$ (105,730)	\$ (100,699)	\$ (95,366)	\$ (89,713)
CREB/QECB Credit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service (\$)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)	\$ (189,582)
Project Revenues	\$ 15,589	\$ 15,019	\$ 14,435	\$ 13,836	\$ 13,222	\$ 12,592	\$ 11,947	\$ 11,286	\$ 10,608	\$ 9,914	\$ 9,202	\$ 8,472	\$ 7,724	\$ 6,957	\$ 6,171	\$ 5,365	\$ 4,539	\$ 3,693	\$ 2,825	\$ 1,936
Cash Flow for IRR Calculation	\$ (2,404,394)	\$ 204,601	\$ 204,017	\$ 203,418	\$ 202,804	\$ 202,174	\$ 201,529	\$ 200,868	\$ 200,190	\$ 199,496	\$ 198,784	\$ 198,054	\$ 197,306	\$ 196,539	\$ 195,753	\$ 194,947	\$ 194,121	\$ 193,275	\$ 192,407	\$ 191,518
Cumulative Repayment	\$ (2,355,796)	\$ (2,305,788)	\$ (2,254,265)	\$ (2,201,116)	\$ (2,146,222)	\$ (2,089,458)	\$ (2,030,688)	\$ (1,969,769)	\$ (1,906,551)	\$ (1,840,871)	\$ (1,772,557)	\$ (1,701,426)	\$ (1,627,283)	\$ (1,549,922)	\$ (1,469,123)	\$ (1,384,652)	\$ (1,296,261)	\$ (1,203,684)	\$ (1,106,643)	\$ (1,004,837)
Present Value of Cash Flow	\$ 15,589	\$ 14,169	\$ 12,847	\$ 11,617	\$ 10,473	\$ 9,410	\$ 8,422	\$ 7,506	\$ 6,656	\$ 5,868	\$ 5,138	\$ 4,463	\$ 3,838	\$ 3,262	\$ 2,729	\$ 2,239	\$ 1,787	\$ 1,371	\$ 990	\$ 640
Debt Service Coverage	1.08	1.08	1.08	1.07	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.01
Payback period																				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL							
TOD Factors																				
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009							
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960								
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780								
TOD Prices																				
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02							
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56							
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99							
TOD Generation																				
Super-Peak	13.1	12.7	17.6	20.9	53.7	59.9	32.7	66.7	61.0	67.8	36.9	16.2	459.2							
Shoulder	29.8	28.8	31.3	37.3	95.7	106.3	58.2	118.5	108.4	97.7	53.2	36.6	801.7							
Night	23.4	22.6	20.6	24.6	63.1	77.9	42.6	86.8	79.4	66.5	36.2	28.8	572.3							
TOTAL	66.3	64.1	69.5	82.8	212.4	244.1	133.5	272.0	248.8	231.9	126.3	81.5	1,833.2							
Revenue																				
Super-Peak	\$ 1,679	\$ 1,625	\$ 2,326	\$ 2,774	\$ 7,113	\$ 14,112	\$ 7,720	\$ 15,726	\$ 14,388	\$ 8,671	\$ 4,720	\$ 2,066	\$ 82,920							
Shoulder	\$ 3,352	\$ 3,243	\$ 3,157	\$ 3,764	\$ 9,653	\$ 14,220	\$ 7,779	\$ 15,846	\$ 14,499	\$ 10,997	\$ 5,986	\$ 4,124	\$ 96,619							
Night	\$ 2,138	\$ 2,069	\$ 1,525	\$ 1,818	\$ 4,662	\$ 6,576	\$ 3,598	\$ 7,328	\$ 6,705	\$ 6,081	\$ 3,310	\$ 2,630	\$ 48,439							
TOTAL	\$ 7,169	\$ 6,937	\$ 7,008	\$ 8,355	\$ 21,427	\$ 34,908	\$ 19,097	\$ 38,901	\$ 35,592	\$ 25,748	\$ 14,016	\$ 8,821	\$ 227,978							
Weighted Average Price	\$ 108.19	\$ 108.19	\$ 100.87	\$ 100.87	\$ 100.87	\$ 143.03	\$ 143.03	\$ 143.03	\$ 143.03	\$ 111.02	\$ 111.02	\$ 108.19	\$ 124.36							

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

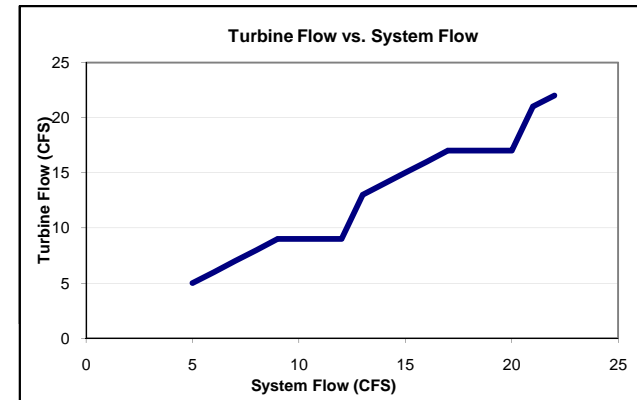
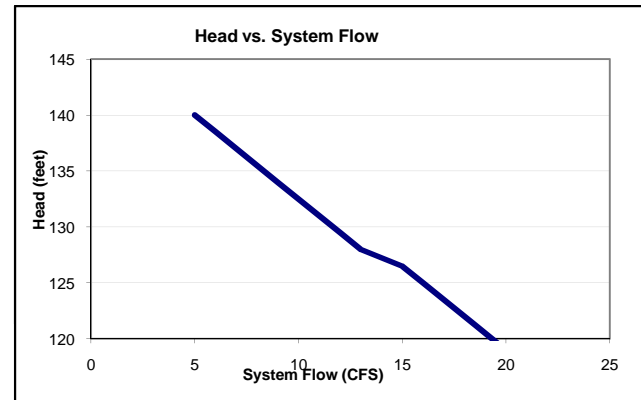
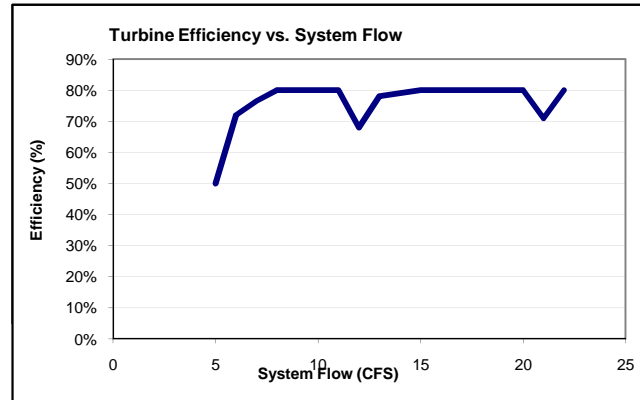
B2.8 Pleasant Oak Main (Reservoir B)

	Total System Flow (cfs)	Super Peak Weekday							Shoulder Peak Weekday							Shoulder Peak Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
		Jan	6	6.3	90	6.0	90	139	72%	8.7	6.3	90	6.0	90	139	72%	8.7	6.3	70	6	70	139
Feb	6	6.4	80	6.0	80	139	72%	7.9	6.4	80	6.0	80	139	72%	7.9	6.4	70	6	60	139	72%	6.3
Mar	10	10.5	150	9.0	130	133	80%	13.9	10.5	150	9.0	130	133	80%	13.9	10.5	120	9	110	133	80%	11.1
Apr	15	15.1	210	15.0	210	127	80%	21.5	15.1	210	15.0	210	127	80%	21.5	15.1	170	15	170	127	80%	17.2
May	19	19.2	280	17.0	250	121	80%	23.9	19.2	280	17.0	250	121	80%	23.9	19.2	220	17	200	121	80%	19.2
Jun	25	25.2	360	24.0	340	112	80%	30.3	25.5	360	24.0	340	112	80%	30.3	25.7	290	24	270	112	80%	24.2
Jul	28	27.7	410	24.0	350	104	77%	28.0	28.0	410	24.0	350	104	77%	28.0	28.3	330	24	280	104	77%	22.4
Aug	27	26.9	390	24.0	350	101	77%	27.2	27.2	400	24.0	350	101	77%	27.2	27.4	320	24	280	101	77%	21.7
Sep	23	22.9	330	23.0	330	115	80%	29.8	23.2	330	23.2	330	115	80%	30.0	23.4	270	23.4	270	115	80%	24.3
Oct	13	13.2	190	13.0	190	128	78%	18.9	13	190	13.0	190	128	78%	18.9	13.5	160	13.5	160	128	78%	15.7
Nov	9	8.6	120	9.0	130	134	80%	13.6	9	130	9.0	130	134	80%	13.6	8.8	100	9	100	134	80%	10.9
Dec	7	7.1	100	7.0	100	137	77%	10.7	7.1	100	7.0	100	137	77%	10.7	7.1	80	7.1	80	137	77%	8.7
Total =	16	16	2,710	14.8	2,550	-	-	230.0	16	2,730	14.8	2,550	-	-	230.0	16	2,200	15	2,050	-	-	190.0

	Total System Flow (cfs)	Night														2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend									
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	6	6.3	90	6.0	90	139	72%	8.7	6.3	40	6	40	139	72%	3.5	39	40	37
Feb	6	6.4	80	6.0	80	139	72%	7.9	6.4	30	6	30	139	72%	3.2	35	36	33
Mar	10	10.5	150	9.0	130	133	80%	13.9	10.5	60	9	50	133	80%	5.6	62	64	59
Apr	15	15.1	210	15.0	210	127	80%	21.5	15.1	90	15	90	127	80%	8.6	96	98	90
May	19	19.2	280	17.0	250	121	80%	23.9	19.2	110	17	100	121	80%	9.6	107	110	101
Jun	25	25.5	360	24.0	340	112	80%	30.3	24.7	140	24	140	112	80%	12.1	135	139	127
Jul	28	28.0	410	24.0	350	104	77%	28.0	27.2	160	24	140	104	77%	11.2	125	128	117
Aug	27	27.2	400	24.0	350	101	77%	27.2	26.4	150	24	140	101	77%	10.9	121	125	114
Sep	23	23.2	330	23.2	330	115	80%	30.0	22.5	130	22.5	130	115	80%	11.6	134	137	126
Oct	13	13.5	200	13.5	200	128	78%	19.6	13.0	80	13.0	80	128	78%	7.5	86	88	81
Nov	9	8.8	120	9.0	130	134	80%	13.6	8.5	50	9	50	134	80%	5.4	61	62	57
Dec	7	7.1	100	7.1	100	137	77%	10.9	7.1	40	7.1	40	137	77%	4.3	48	50	45
Total =	16	16	2,730	14.8	2,560	-	-	240.0	16	1,080	15	1,030	-	-	90.0	1,050	1,080	990

* Assumed at 97% of flow available for generation.

Efficiency			
System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	140	50%
6	6	139	72%
7	7	137	77%
8	8	136	80%
9	9	134	80%
10	9	133	80%
11	9	131	80%
12	9	130	68%
13	13	128	78%
15	15	127	80%
16	16	125	80%
17	17	124	80%
18	17	122	80%
19	17	121	80%
20	17	119	80%
21	21	118	71%
22	22	116	80%
23	23	115	80%
24	24	113	80%
25	24	112	80%
30	24	95	76%



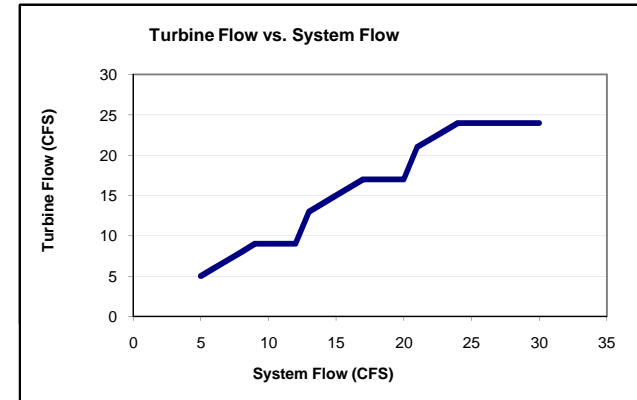
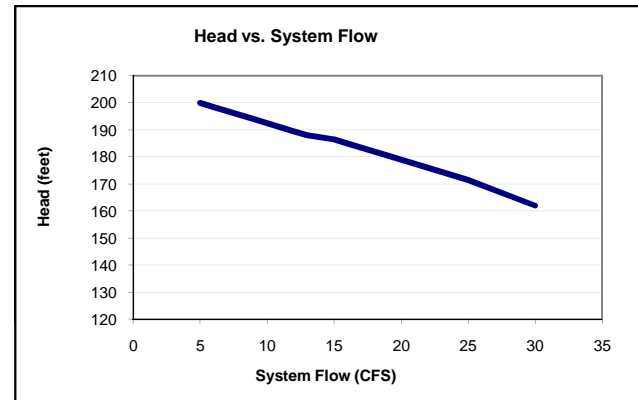
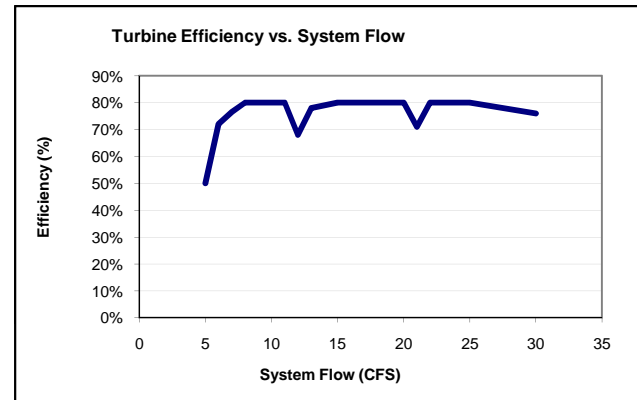
B2.8 Pleasant Oak Main (Reservoir B Downstream)

	Total System Flow (cfs)	Super Peak Weekday							Shoulder Peak													
		Weekday							Weekday							Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
Jan	6	6.3	90	6.3	90	199	72%	13.1	6.3	90	6.3	90	199	72%	13.1	6.3	70	6.3	70	199	72%	10.5
Feb	6	6.4	80	6.4	80	199	72%	12.0	6.4	80	6.4	80	199	72%	12.0	6.4	70	6.4	70	199	72%	9.6
Mar	10	10.5	150	9.0	130	193	80%	20.2	10.5	150	9.0	130	193	80%	20.2	9.0	110	9.0	110	193	80%	16.2
Apr	15	15.1	210	15.1	210	187	80%	31.8	15.1	210	15.1	210	187	80%	31.8	15.1	170	15.1	170	187	80%	25.4
May	19	19.2	280	17	250	181	80%	35.8	19.2	280	17	250	181	80%	35.8	17	200	17	200	181	80%	28.7
Jun	25	25.2	360	24	340	172	80%	46.5	25.5	360	24	340	172	80%	46.5	24	270	24	270	173	80%	37.4
Jul	28	27.7	410	24	350	168	78%	45.8	28.0	410	24	350	168	78%	45.8	28.3	330	24	280	168	78%	36.6
Aug	27	26.9	390	24	350	167	78%	45.5	27.2	400	24	350	167	78%	45.5	27.4	320	24	280	167	78%	36.4
Sep	23	22.9	330	23	330	175	80%	45.2	23.2	330	23.2	330	175	80%	45.7	23.4	270	23.4	270	175	80%	36.9
Oct	13	13.2	190	13	190	188	78%	28.2	13	190	13	190	188	78%	27.7	13.5	160	13.5	160	188	78%	23.0
Nov	9	8.6	120	9	120	194	80%	18.9	9	130	9	130	194	80%	19.7	8.8	100	8.8	100	194	80%	15.4
Dec	7	7.1	100	7.1	100	197	77%	15.6	7.1	100	7.1	100	197	77%	15.6	7.1	80	7.1	80	197	77%	12.5
Total =	16	16	2,710	15	2,540	-	-	360.0	16	2,730	15	2,550	-	-	360.0	16	2,150	15	2,060	-	-	290.0

	Total System Flow (cfs)	Night														2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend									
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	6	6.3	90	6.3	90	199	72%	13.1	6.3	40	6.3	40	199	72%	5.3	59	60	55
Feb	6	6.4	80	6.4	80	199	72%	12.0	6.4	30	6.4	30	199	72%	4.8	54	55	50
Mar	10	10.5	150	9.0	130	193	80%	20.2	10.5	60	9.0	50	193	80%	8.1	90	93	85
Apr	15	15.1	210	15.1	210	187	80%	31.8	15.1	90	15.1	90	187	80%	12.7	142	146	133
May	19	19.2	280	17	250	181	80%	35.8	19.2	110	17	100	181	80%	14.3	160	164	150
Jun	25	25.5	360	24	340	172	80%	46.5	24.7	140	24	140	172	80%	18.6	208	214	196
Jul	28	28.0	410	24	350	168	78%	45.8	27.2	160	24	140	167	78%	18.2	205	210	192
Aug	27	27.2	400	24	350	167	78%	45.5	26.4	150	24	140	167	78%	18.2	203	209	191
Sep	23	23.2	330	23.2	330	175	80%	45.7	22.5	130	22.5	130	175	80%	17.7	204	209	191
Oct	13	13.5	200	13.5	200	188	78%	28.8	13.0	80	13.0	80	188	78%	11.1	127	130	119
Nov	9	8.8	120	8.8	120	194	80%	19.3	8.5	50	8.5	50	195	80%	7.4	86	88	81
Dec	7	7.1	100	7.1	100	197	77%	15.6	7.1	40	7.1	40	197	77%	6.2	70	72	66
Total =	16	16	2,730	15	2,550	-	-	360.0	16	1,080	15	1,030	-	-	140.0	1,610	1,650	1,510

* Assumed at 97% of flow available for generation.

Efficiency			
System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	200	50%
6	6	199	72%
7	7	197	77%
8	8	196	80%
9	9	194	80%
10	9	193	80%
11	9	191	80%
12	9	190	68%
13	13	188	78%
15	15	187	80%
16	16	185	80%
17	17	184	80%
18	17	182	80%
19	17	181	80%
20	17	179	80%
21	21	178	71%
22	22	176	80%
23	23	175	80%
24	24	173	80%
25	24	172	80%
30	24	162	76%



B2.8 Pleasant Oak Main (Reservoir B)

Capital Cost	\$ 3,591,000	450	Plant Size (kW)	5.66%	IRR
First Year Annual O&M Costs	\$ 7,058	2,657	Avg. Annual Gen (MWh)	\$ 319,690	NPV
First Year Annual A&I Costs	\$ 8,580	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>20	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 7,833	2011	Initial Year of Operation	67%	Capacity Factor
First Year Annual Contingency Costs	\$ 4,694	30	Term of Debt (Years)	1.06	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 123.05	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 1,351	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Energy (MWh)	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657	2,657
Energy Price (\$/MWh)	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05	\$ 123.05
Energy Sales Revenue (\$)	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980	\$ 326,980
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (8,580)	\$ (8,795)	\$ (9,014)	\$ (9,240)	\$ (9,471)	\$ (9,707)	\$ (9,950)	\$ (10,199)	\$ (10,454)	\$ (10,715)	\$ (10,983)	\$ (11,258)	\$ (11,539)	\$ (11,828)	\$ (12,123)	\$ (12,426)	\$ (12,737)	\$ (13,055)	\$ (13,382)	\$ (13,716)
Repair and Replacement	\$ (7,833)	\$ (8,029)	\$ (8,230)	\$ (8,435)	\$ (8,646)	\$ (8,862)	\$ (9,084)	\$ (9,311)	\$ (9,544)	\$ (9,782)	\$ (10,027)	\$ (10,278)	\$ (10,535)	\$ (10,798)	\$ (11,068)	\$ (11,345)	\$ (11,628)	\$ (11,919)	\$ (12,217)	\$ (12,522)
Contingency	\$ (4,694)	\$ (4,811)	\$ (4,932)	\$ (5,055)	\$ (5,181)	\$ (5,311)	\$ (5,444)	\$ (5,580)	\$ (5,719)	\$ (5,862)	\$ (6,009)	\$ (6,159)	\$ (6,313)	\$ (6,471)	\$ (6,632)	\$ (6,798)	\$ (6,968)	\$ (7,142)	\$ (7,321)	\$ (7,504)
Total Cost of Operations (\$)	\$ (28,165)	\$ (28,869)	\$ (29,591)	\$ (30,331)	\$ (31,089)	\$ (31,866)	\$ (32,663)	\$ (33,479)	\$ (34,316)	\$ (35,174)	\$ (36,054)	\$ (36,955)	\$ (37,879)	\$ (38,826)	\$ (39,796)	\$ (40,791)	\$ (41,811)	\$ (42,856)	\$ (43,928)	\$ (45,026)
Operating Income	\$ 298,815	\$ 298,111	\$ 297,389	\$ 296,650	\$ 295,891	\$ 295,114	\$ 294,317	\$ 293,501	\$ 292,664	\$ 291,806	\$ 290,927	\$ 290,025	\$ 289,101	\$ 288,154	\$ 287,184	\$ 286,189	\$ 285,169	\$ 284,124	\$ 283,052	\$ 281,954
Debt Service																				
Principal	\$ (46,104)	\$ (48,870)	\$ (51,802)	\$ (54,910)	\$ (58,205)	\$ (61,697)	\$ (65,399)	\$ (69,323)	\$ (73,482)	\$ (77,891)	\$ (82,564)	\$ (87,518)	\$ (92,769)	\$ (98,336)	\$ (104,236)	\$ (110,490)	\$ (117,119)	\$ (124,146)	\$ (131,595)	\$ (139,491)
Interest	\$ (218,692)	\$ (215,926)	\$ (212,993)	\$ (209,885)	\$ (206,591)	\$ (203,098)	\$ (199,397)	\$ (195,473)	\$ (191,313)	\$ (186,904)	\$ (182,231)	\$ (177,277)	\$ (172,026)	\$ (166,460)	\$ (160,560)	\$ (154,306)	\$ (147,676)	\$ (140,649)	\$ (133,200)	\$ (125,305)
Total Debt Service (\$)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)	\$ (264,795)
Project Revenues	\$ 34,020	\$ 33,316	\$ 32,594	\$ 31,854	\$ 31,096	\$ 30,319	\$ 29,522	\$ 28,705	\$ 27,868	\$ 27,010	\$ 26,131	\$ 25,230	\$ 24,306	\$ 23,359	\$ 22,388	\$ 21,393	\$ 20,374	\$ 19,328	\$ 18,257	\$ 17,159
Cash Flow for IRR Calculation	\$ (3,346,050)	\$ 298,111	\$ 297,389	\$ 296,650	\$ 295,891	\$ 295,114	\$ 294,317	\$ 293,501	\$ 292,664	\$ 291,806	\$ 290,927	\$ 290,025	\$ 289,101	\$ 288,154	\$ 287,184	\$ 286,189	\$ 285,169	\$ 284,124	\$ 283,052	\$ 281,954
Cumulative Repayment	\$ (3,265,927)	\$ (3,183,741)	\$ (3,099,345)	\$ (3,012,581)	\$ (2,923,281)	\$ (2,831,265)	\$ (2,736,345)	\$ (2,638,317)	\$ (2,536,966)	\$ (2,432,065)	\$ (2,323,369)	\$ (2,210,621)	\$ (2,093,546)	\$ (1,971,851)	\$ (1,845,227)	\$ (1,713,344)	\$ (1,575,851)	\$ (1,432,376)	\$ (1,282,524)	\$ (1,125,875)
Present Value of Cash Flow	\$ 34,020	\$ 31,430	\$ 29,008	\$ 26,745	\$ 24,631	\$ 22,656	\$ 20,812	\$ 19,091	\$ 17,485	\$ 15,987	\$ 14,591	\$ 13,291	\$ 12,079	\$ 10,952	\$ 9,902	\$ 8,927	\$ 8,020	\$ 7,178	\$ 6,396	\$ 5,671
Debt Service Coverage	1.13	1.13	1.12	1.12	1.12	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.09	1.09	1.08	1.08	1.08	1.07	1.07	1.06
Payback period																				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL							
TOD Factors																				
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009							
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960								
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780								
TOD Prices																				
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02							
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56							
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99							
TOD Generation																				
Super-Peak	23.3	21.2	36.4	56.7	63.6	81.7	78.5	77.3	79.9	50.2	34.6	28.1	631.4							
Shoulder	41.9	38.1	65.5	102.0	114.5	147.4	141.3	139.2	145.7	90.9	63.4	50.6	1,140.5							
Night	32.6	29.7	50.9	79.3	89.1	114.4	109.8	108.3	111.9	71.3	48.7	39.4	885.4							
TOTAL	97.8	89.0	152.7	238.0	267.2	343.6	329.6	324.9	337.5	212.4	146.7	118.1	2,657.3							
Revenue																				
Super-Peak	\$ 2,977	\$ 2,709	\$ 4,820	\$ 7,511	\$ 8,434	\$ 19,274	\$ 18,507	\$ 18,236	\$ 18,833	\$ 6,414	\$ 4,421	\$ 3,588	\$ 115,723							
Shoulder	\$ 4,719	\$ 4,294	\$ 6,603	\$ 10,290	\$ 11,554	\$ 19,708	\$ 18,894	\$ 18,617	\$ 19,485	\$ 10,232	\$ 7,138	\$ 5,698	\$ 137,231							
Night	\$ 2,982	\$ 2,714	\$ 3,762	\$ 5,863	\$ 6,583	\$ 9,666	\$ 9,271	\$ 9,145	\$ 9,449	\$ 6,527	\$ 4,455	\$ 3,609	\$ 74,026							
TOTAL	\$ 10,679	\$ 9,716	\$ 15,184	\$ 23,664	\$ 26,570	\$ 48,648	\$ 46,672	\$ 45,999	\$ 47,766	\$ 23,173	\$ 16,014	\$ 12,895	\$ 326,980							
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.59	\$ 141.62	\$ 141.60	\$ 141.54	\$ 109.12	\$ 109.19	\$ 109.18	\$ 123.05							

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

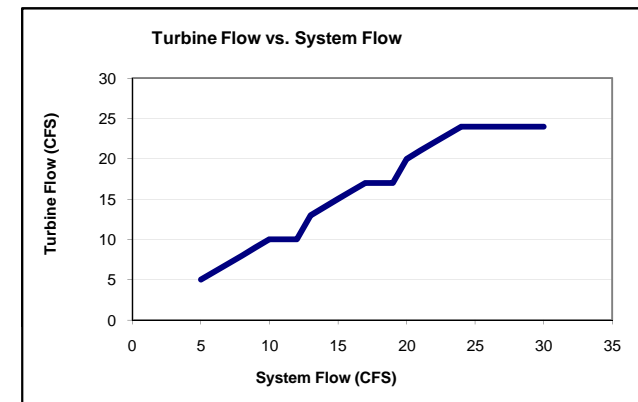
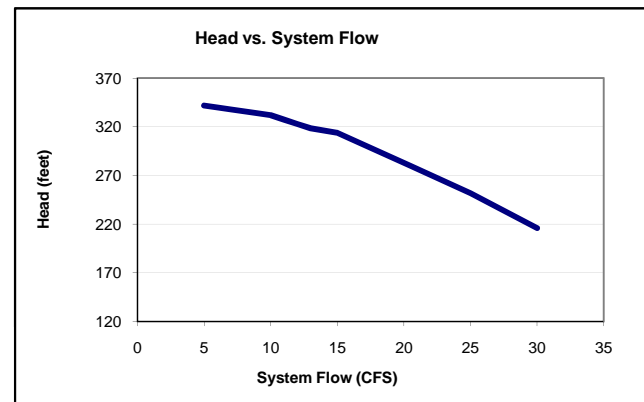
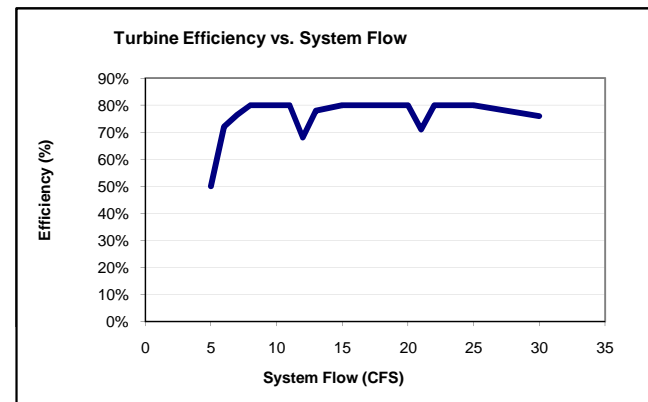
B2.9 Pleasant Oak Main PRS 5 (Reservoir 7)

	Total System Flow (cfs)	Super Peak Weekday							Shoulder Peak Weekday							Shoulder Peak Weekend						
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)
		Jan	6	5.7	80	6	90	340	72%	21.4	5.7	80	6	90	340	72%	21.4	5.7	70	6	70	340
Feb	6	5.9	80	6	80	340	72%	19.3	5.9	80	6	80	340	72%	19.3	5.9	60	6	60	340	72%	15.4
Mar	8	8.4	120	8	120	336	80%	31.3	8.4	120	8	120	336	80%	31.3	8.4	100	8	90	336	80%	25.0
Apr	12	12.1	170	10	140	323	68%	30.9	12.1	170	10	140	323	68%	30.9	12.1	140	10	110	323	68%	24.7
May	17	16.9	250	17	250	302	80%	59.8	16.9	250	17	250	302	80%	59.8	16.9	200	17	200	302	80%	47.8
Jun	22	22.1	310	22	310	271	80%	67.2	22.3	320	22.3	320	271	80%	68.0	22.5	260	22.5	260	271	80%	55.0
Jul	24	24.3	360	24	350	258	80%	72.1	24.5	360	24.0	350	258	80%	72.1	24.7	290	24	280	258	80%	57.7
Aug	24	23.5	340	24	350	258	80%	72.1	23.8	350	24.0	350	258	80%	72.1	24.0	280	24	280	258	80%	57.7
Sep	21	20.6	290	21	300	277	71%	58.2	20.8	290	20.8	290	277	71%	57.7	21.0	240	21.0	240	277	71%	46.6
Oct	12	12.0	180	10	150	323	68%	32.0	13	190	10	150	323	68%	32.0	12.3	140	12.3	140	323	68%	31.4
Nov	8	7.8	110	8	110	336	80%	30.3	9	130	8	110	336	80%	30.3	7.9	90	7.9	90	336	80%	24.0
Dec	6	6.4	90	6	90	340	72%	21.4	6.0	90	6	90	340	72%	21.4	6.0	70	6.0	70	340	72%	17.1
Total =	14	14	2,380	14	2,340	-	-	520.0	14	2,430	14	2,340	-	-	520.0	14	1,940	14	1,890	-	-	420.0

	Total System Flow (cfs)	Night														2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
		Weekday							Weekend									
		System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	Generation* (mWh)			
Jan	6	5.7	80	6	90	340	72%	21.4	5.7	30	6	40	340	72%	8.5	96	98	90
Feb	6	5.9	80	6	80	340	72%	19.3	5.9	30	6	30	340	72%	7.7	86	89	81
Mar	8	8.4	120	8	120	336	80%	31.3	8.4	50	8	50	336	80%	12.5	140	144	131
Apr	12	12.1	170	10	140	323	68%	30.9	12.1	70	10	60	323	68%	12.4	138	142	130
May	17	16.9	250	17	250	302	80%	59.8	16.9	100	17	100	302	80%	23.9	267	274	251
Jun	22	22.3	320	22.3	320	271	80%	68.0	21.6	120	21.6	120	271	80%	26.4	303	311	285
Jul	24	24.5	360	24	350	258	80%	72.1	23.8	140	23.8	140	258	80%	28.6	322	330	302
Aug	24	23.8	350	24	350	258	80%	72.1	23.1	140	23.1	140	258	80%	27.7	321	329	302
Sep	21	20.8	290	20.8	290	277	71%	57.7	20.2	110	20.2	110	277	71%	22.4	258	265	242
Oct	12	12.3	180	12.3	180	323	68%	39.2	11.8	70	11.8	70	323	68%	15.1	159	163	150
Nov	8	7.9	110	7.9	110	336	80%	29.9	7.6	40	7.6	40	336	80%	11.5	134	138	126
Dec	6	6.4	90	6.0	90	340	72%	21.4	6.4	40	6.0	40	340	72%	8.5	96	98	90
Total =	14	14	2,400	14	2,370	-	-	520.0	14	940	13	940	-	-	210.0	2,320	2,380	2,180

* Assumed at 97% of flow available for generation.

Efficiency			
System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	342	50%
6	6	340	72%
7	7	338	77%
8	8	336	80%
9	9	334	80%
10	10	332	80%
11	10	328	80%
12	10	323	68%
13	13	319	78%
15	15	314	80%
16	16	308	80%
17	17	302	80%
18	17	295	80%
19	17	289	80%
20	20	283	80%
21	21	277	71%
22	22	271	80%
23	23	264	80%
24	24	258	80%
25	24	252	80%
30	24	216	76%



B2.9 Pleasant Oak Main PRS 5 (Reservoir 7)

Capital Cost	\$ 1,523,000	510	Plant Size (kW)	19.82%	IRR
First Year Annual O&M Costs	\$ 7,058	2,321	Avg. Annual Gen (MWh)	\$ 1,702,726	NPV
First Year Annual A&I Costs	\$ 7,590	\$ 117.30	Baseline Market Price Referent (\$/MWh)	7	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 3,360	2011	Initial Year of Operation	52%	Capacity Factor
First Year Annual Contingency Costs	\$ 3,602	30	Term of Debt (Years)	2.25	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 123.71	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 656	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Energy (MWh)	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321	2,321
Energy Price (\$/MWh)	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71	\$ 123.71
Energy Sales Revenue (\$)	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082	\$ 287,082
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (7,590)	\$ (7,780)	\$ (7,974)	\$ (8,174)	\$ (8,378)	\$ (8,587)	\$ (8,802)	\$ (9,022)	\$ (9,248)	\$ (9,479)	\$ (9,716)	\$ (9,959)	\$ (10,208)	\$ (10,463)	\$ (10,724)	\$ (10,993)	\$ (11,267)	\$ (11,549)	\$ (11,838)	\$ (12,134)
Repair and Replacement	\$ (3,360)	\$ (3,444)	\$ (3,530)	\$ (3,618)	\$ (3,709)	\$ (3,802)	\$ (3,897)	\$ (3,994)	\$ (4,094)	\$ (4,196)	\$ (4,301)	\$ (4,409)	\$ (4,519)	\$ (4,632)	\$ (4,748)	\$ (4,866)	\$ (4,988)	\$ (5,113)	\$ (5,240)	\$ (5,371)
Contingency	\$ (3,602)	\$ (3,692)	\$ (3,784)	\$ (3,879)	\$ (3,976)	\$ (4,075)	\$ (4,177)	\$ (4,282)	\$ (4,389)	\$ (4,498)	\$ (4,611)	\$ (4,726)	\$ (4,844)	\$ (4,965)	\$ (5,090)	\$ (5,217)	\$ (5,347)	\$ (5,481)	\$ (5,618)	\$ (5,758)
Total Cost of Operations (\$)	\$ (21,610)	\$ (22,150)	\$ (22,704)	\$ (23,272)	\$ (23,853)	\$ (24,450)	\$ (25,061)	\$ (25,687)	\$ (26,330)	\$ (26,988)	\$ (27,663)	\$ (28,354)	\$ (29,063)	\$ (29,790)	\$ (30,534)	\$ (31,298)	\$ (32,080)	\$ (32,882)	\$ (33,704)	\$ (34,547)
Operating Income	\$ 265,472	\$ 264,932	\$ 264,378	\$ 263,811	\$ 263,229	\$ 262,633	\$ 262,021	\$ 261,395	\$ 260,753	\$ 260,094	\$ 259,420	\$ 258,728	\$ 258,019	\$ 257,293	\$ 256,548	\$ 255,785	\$ 255,002	\$ 254,200	\$ 253,378	\$ 252,535
Debt Service																				
Principal	\$ (19,553)	\$ (20,726)	\$ (21,970)	\$ (23,288)	\$ (24,686)	\$ (26,167)	\$ (27,737)	\$ (29,401)	\$ (31,165)	\$ (33,035)	\$ (35,017)	\$ (37,118)	\$ (39,345)	\$ (41,706)	\$ (44,208)	\$ (46,861)	\$ (49,672)	\$ (52,652)	\$ (55,812)	\$ (59,160)
Interest	\$ (92,751)	\$ (91,578)	\$ (90,334)	\$ (89,016)	\$ (87,618)	\$ (86,137)	\$ (84,567)	\$ (82,903)	\$ (81,139)	\$ (79,269)	\$ (77,287)	\$ (75,186)	\$ (72,959)	\$ (70,598)	\$ (68,096)	\$ (65,443)	\$ (62,632)	\$ (59,651)	\$ (56,492)	\$ (53,144)
Total Debt Service (\$)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)	\$ (112,304)
Project Revenues	\$ 153,168	\$ 152,628	\$ 152,074	\$ 151,507	\$ 150,925	\$ 150,329	\$ 149,717	\$ 149,091	\$ 148,449	\$ 147,790	\$ 147,116	\$ 146,424	\$ 145,715	\$ 144,989	\$ 144,244	\$ 143,481	\$ 142,698	\$ 141,896	\$ 141,074	\$ 140,231
Cash Flow for IRR Calculation	\$ (1,280,373)	\$ 264,932	\$ 264,378	\$ 263,811	\$ 263,229	\$ 262,633	\$ 262,021	\$ 261,395	\$ 260,753	\$ 260,094	\$ 259,420	\$ 258,728	\$ 258,019	\$ 257,293	\$ 256,548	\$ 255,785	\$ 255,002	\$ 254,200	\$ 253,378	\$ 252,535
Cumulative Repayment	\$ (1,107,651)	\$ (934,297)	\$ (760,252)	\$ (585,457)	\$ (409,847)	\$ (233,352)	\$ (55,898)	\$ 122,594	\$ 302,207	\$ 483,033	\$ 665,165	\$ 848,707	\$ 1,033,767	\$ 1,220,462	\$ 1,408,914	\$ 1,599,255	\$ 1,791,625	\$ 1,986,174	\$ 2,183,059	\$ 2,382,451
Present Value of Cash Flow	\$ 153,168	\$ 143,989	\$ 135,346	\$ 127,208	\$ 119,547	\$ 112,334	\$ 105,545	\$ 99,154	\$ 93,138	\$ 87,477	\$ 82,149	\$ 77,134	\$ 72,416	\$ 67,976	\$ 63,799	\$ 59,869	\$ 56,173	\$ 52,695	\$ 49,424	\$ 46,348
Debt Service Coverage	2.36	2.36	2.35	2.35	2.34	2.34	2.33	2.33	2.32	2.32	2.31	2.30	2.30	2.29	2.28	2.28	2.27	2.26	2.26	2.25
Payback period								7	8	9	10	11	12	13	14	15	16	17	18	19

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	} Source: PG&E Advice Letter 3410-E, January 27, 2009
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	22.8	20.6	33.3	32.9	63.6	71.5	76.7	76.7	61.9	34.0	32.2	22.8	549.1
Shoulder	41.0	37.0	60.0	59.3	114.5	131.0	138.1	138.1	111.0	67.4	57.7	41.0	996.1
Night	31.9	28.8	46.6	46.1	89.1	100.5	107.1	106.3	85.2	57.8	44.1	31.9	775.4
TOTAL	95.6	86.3	139.9	138.3	267.2	303.0	322.0	321.1	258.1	159.3	134.1	95.6	2,320.6
Revenue													
Super-Peak	\$ 2,909	\$ 2,628	\$ 4,416	\$ 4,365	\$ 8,434	\$ 16,859	\$ 18,093	\$ 18,093	\$ 14,599	\$ 4,350	\$ 4,122	\$ 2,909	\$ 101,777
Shoulder	\$ 4,612	\$ 4,166	\$ 6,049	\$ 5,979	\$ 11,554	\$ 17,512	\$ 18,471	\$ 18,471	\$ 14,842	\$ 7,594	\$ 6,503	\$ 4,612	\$ 120,366
Night	\$ 2,915	\$ 2,633	\$ 3,447	\$ 3,407	\$ 6,583	\$ 8,492	\$ 9,049	\$ 8,974	\$ 7,197	\$ 5,290	\$ 4,039	\$ 2,915	\$ 64,939
TOTAL	\$ 10,436	\$ 9,426	\$ 13,911	\$ 13,751	\$ 26,570	\$ 42,863	\$ 45,613	\$ 45,538	\$ 36,638	\$ 17,235	\$ 14,664	\$ 10,436	\$ 287,082
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.46	\$ 141.65	\$ 141.81	\$ 141.94	\$ 108.20	\$ 109.32	\$ 109.20	\$ 123.71

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009

B2.10 Diamond Springs Main PRS 1 (Reservoir 8)

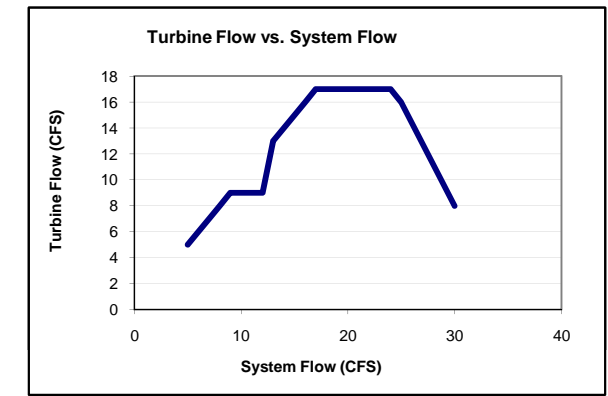
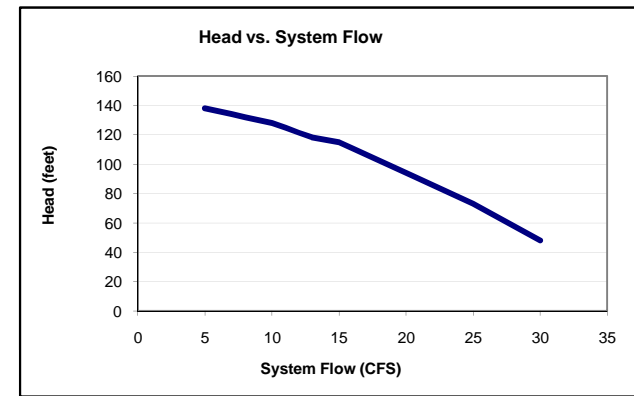
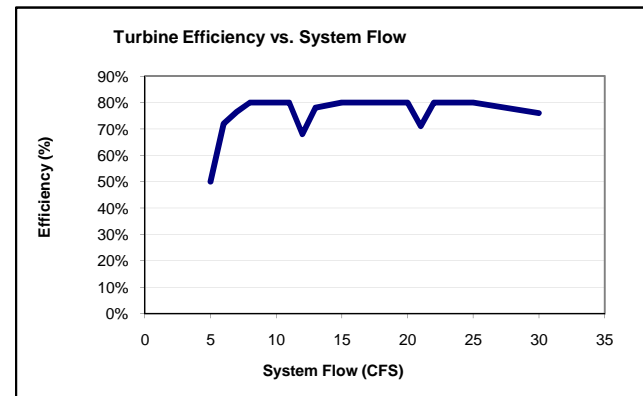
	System Flow (cfs)	System Flow (af)	Turbine Flow (cfs)	Turbine Flow (af)	Head (feet)	Eff (%)	2011-30 Generation* (mWh)	2011-40 Generation* (mWh)	2008 Generation* (mWh)
Jan	6	400	6	400	136	72%	38	39	36
Feb	6	300	6	300	136	72%	35	35	32
Mar	8	500	8	500	132	80%	55	56	52
Apr	12	700	9	500	122	68%	47	48	44
May	17	1,000	17	1,000	107	80%	95	97	89
Jun	22	1,300	17	1,000	86	80%	74	76	69
Jul	24	1,500	17	1,000	77	80%	68	70	64
Aug	24	1,400	17	1,000	77	80%	68	70	64
Sep	21	1,200	17	1,000	90	71%	68	70	64
Oct	12	700	9	600	122	68%	49	50	46
Nov	8	500	8	500	132	80%	53	55	50
Dec	6	400	6	400	136	72%	38	39	36
Total =	14	9,900	11	8,200	-	-	690	710	650

* Assumed at 97% of flow available for generation.

Efficiency

DSM PRS1

System Flow (cfs)	Turbine Flow (cfs)	Head (ft)	Eff (%)
5	5	138	50%
6	6	136	72%
7	7	134	77%
8	8	132	80%
9	9	130	80%
10	9	128	80%
11	9	125	80%
12	9	122	68%
13	13	118	78%
15	15	115	80%
16	16	111	80%
17	17	107	80%
18	17	102	80%
19	17	98	80%
20	17	94	80%
21	17	90	71%
22	17	86	80%
23	17	81	80%
24	17	77	80%
25	16	73	80%
30	8	48	76%



Maintain 25 cfs on POM PRS3

B2.10 Diamond Springs Main PRS1

Capital Cost	\$ 1,082,000	140	Plant Size (kW)	1.76%	IRR
First Year Annual O&M Costs	\$ 7,058	688	Avg. Annual Gen (MWh)	\$ (168,717)	NPV
First Year Annual A&I Costs	\$ 2,277	\$ 117.30	Baseline Market Price Referent (\$/MWh)	>20	Payback Period (Years)
First Year Annual Repair & Replace Costs	\$ 2,376	2011	Initial Year of Operation	56%	Capacity Factor
First Year Annual Contingency Costs	\$ 2,342	30	Term of Debt (Years)	0.75	Minimum Annual Debt Service Coverage
Annual Costs Inflation Rate	2.50%	20	Length of Initial Contract (Years)	\$ 119.52	Average Price Received (\$/MWh)
Cost of Debt	6.00%	50	Project Physical Life (Years)	\$ 1,573	Capital Cost per Avg Annual Generation (\$/MWh)
Discount Rate	6.00%	1.50%	Finance Fee		

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales																				
Generating Capacity (MW)	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Energy (MWH)	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688
Energy Price (\$/MWH)	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52	\$ 119.52
Energy Sales Revenue (\$)	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196	\$ 82,196
Cost of Operations																				
Operations & Maintenance	\$ (7,058)	\$ (7,234)	\$ (7,415)	\$ (7,601)	\$ (7,791)	\$ (7,985)	\$ (8,185)	\$ (8,390)	\$ (8,599)	\$ (8,814)	\$ (9,035)	\$ (9,261)	\$ (9,492)	\$ (9,730)	\$ (9,973)	\$ (10,222)	\$ (10,478)	\$ (10,740)	\$ (11,008)	\$ (11,283)
Administration & Insurance	\$ (2,277)	\$ (2,334)	\$ (2,392)	\$ (2,452)	\$ (2,513)	\$ (2,576)	\$ (2,641)	\$ (2,707)	\$ (2,774)	\$ (2,844)	\$ (2,915)	\$ (2,988)	\$ (3,062)	\$ (3,139)	\$ (3,217)	\$ (3,298)	\$ (3,380)	\$ (3,465)	\$ (3,551)	\$ (3,640)
Repair and Replacement	\$ (2,376)	\$ (2,435)	\$ (2,496)	\$ (2,559)	\$ (2,623)	\$ (2,688)	\$ (2,755)	\$ (2,824)	\$ (2,895)	\$ (2,967)	\$ (3,041)	\$ (3,118)	\$ (3,195)	\$ (3,275)	\$ (3,357)	\$ (3,441)	\$ (3,527)	\$ (3,615)	\$ (3,706)	\$ (3,798)
Contingency	\$ (2,342)	\$ (2,401)	\$ (2,461)	\$ (2,522)	\$ (2,585)	\$ (2,650)	\$ (2,716)	\$ (2,784)	\$ (2,853)	\$ (2,925)	\$ (2,998)	\$ (3,073)	\$ (3,150)	\$ (3,228)	\$ (3,309)	\$ (3,392)	\$ (3,477)	\$ (3,564)	\$ (3,653)	\$ (3,744)
Total Cost of Operations (\$)	\$ (14,053)	\$ (14,404)	\$ (14,764)	\$ (15,134)	\$ (15,512)	\$ (15,900)	\$ (16,297)	\$ (16,705)	\$ (17,122)	\$ (17,550)	\$ (17,989)	\$ (18,439)	\$ (18,900)	\$ (19,372)	\$ (19,857)	\$ (20,353)	\$ (20,862)	\$ (21,383)	\$ (21,918)	\$ (22,466)
Operating Income	\$ 68,143	\$ 67,792	\$ 67,432	\$ 67,062	\$ 66,684	\$ 66,296	\$ 65,899	\$ 65,491	\$ 65,074	\$ 64,646	\$ 64,207	\$ 63,757	\$ 63,296	\$ 62,824	\$ 62,340	\$ 61,843	\$ 61,334	\$ 60,813	\$ 60,278	\$ 59,730
Debt Service																				
Principal	\$ (13,891)	\$ (14,725)	\$ (15,608)	\$ (16,545)	\$ (17,538)	\$ (18,590)	\$ (19,705)	\$ (20,888)	\$ (22,141)	\$ (23,469)	\$ (24,877)	\$ (26,370)	\$ (27,952)	\$ (29,629)	\$ (31,407)	\$ (33,292)	\$ (35,289)	\$ (37,406)	\$ (39,651)	\$ (42,030)
Interest	\$ (65,894)	\$ (65,060)	\$ (64,177)	\$ (63,240)	\$ (62,248)	\$ (61,195)	\$ (60,080)	\$ (58,898)	\$ (57,644)	\$ (56,316)	\$ (54,908)	\$ (53,415)	\$ (51,833)	\$ (50,156)	\$ (48,378)	\$ (46,494)	\$ (44,496)	\$ (42,379)	\$ (40,134)	\$ (37,755)
Total Debt Service (\$)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)	\$ (79,785)
Project Revenues	\$ (11,642)	\$ (11,994)	\$ (12,354)	\$ (12,723)	\$ (13,101)	\$ (13,489)	\$ (13,886)	\$ (14,294)	\$ (14,711)	\$ (15,139)	\$ (15,578)	\$ (16,028)	\$ (16,489)	\$ (16,961)	\$ (17,446)	\$ (17,942)	\$ (18,451)	\$ (18,972)	\$ (19,507)	\$ (20,055)
Cash Flow for IRR Calculation	\$ (1,030,087)	\$ 67,792	\$ 67,432	\$ 67,062	\$ 66,684	\$ 66,296	\$ 65,899	\$ 65,491	\$ 65,074	\$ 64,646	\$ 64,207	\$ 63,757	\$ 63,296	\$ 62,824	\$ 62,340	\$ 61,843	\$ 61,334	\$ 60,813	\$ 60,278	\$ 59,730
Cumulative Repayment	\$ (1,027,838)	\$ (1,025,106)	\$ (1,021,852)	\$ (1,018,029)	\$ (1,013,593)	\$ (1,008,492)	\$ (1,002,673)	\$ (996,079)	\$ (988,650)	\$ (980,320)	\$ (971,021)	\$ (960,679)	\$ (949,215)	\$ (936,547)	\$ (922,586)	\$ (907,237)	\$ (890,398)	\$ (871,964)	\$ (851,821)	\$ (829,846)
Present Value of Cash Flow	\$ (11,642)	\$ (11,315)	\$ (10,995)	\$ (10,682)	\$ (10,377)	\$ (10,080)	\$ (9,789)	\$ (9,506)	\$ (9,230)	\$ (8,961)	\$ (8,699)	\$ (8,443)	\$ (8,194)	\$ (7,952)	\$ (7,716)	\$ (7,487)	\$ (7,263)	\$ (7,046)	\$ (6,834)	\$ (6,628)
Debt Service Coverage	0.85	0.85	0.85	0.84	0.84	0.83	0.83	0.82	0.82	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.77	0.76	0.76	0.75
Payback period																				

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
TOD Factors													
Super-Peak	1.090	1.090	1.130	1.130	1.130	2.010	2.010	2.010	2.010	1.090	1.090	1.090	Source: PG&E Advice Letter 3410-E, January 27, 2009
Shoulder	0.960	0.960	0.860	0.860	0.860	1.140	1.140	1.140	1.140	0.960	0.960	0.960	
Night	0.780	0.780	0.630	0.630	0.630	0.720	0.720	0.720	0.720	0.780	0.780	0.780	
TOD Prices													
Super-Peak	\$ 127.86	\$ 127.86	\$ 132.55	\$ 132.55	\$ 132.55	\$ 235.77	\$ 235.77	\$ 235.77	\$ 235.77	\$ 127.86	\$ 127.86	\$ 127.86	\$ 1,980.02
Shoulder	\$ 112.61	\$ 112.61	\$ 100.88	\$ 100.88	\$ 100.88	\$ 133.72	\$ 133.72	\$ 133.72	\$ 133.72	\$ 112.61	\$ 112.61	\$ 112.61	\$ 1,400.56
Night	\$ 91.49	\$ 91.49	\$ 73.90	\$ 73.90	\$ 73.90	\$ 84.46	\$ 84.46	\$ 84.46	\$ 84.46	\$ 91.49	\$ 91.49	\$ 91.49	\$ 1,016.99
TOD Generation													
Super-Peak	9.1	8.2	13.1	11.2	22.5	17.5	16.2	16.2	16.3	11.6	12.7	9.1	163.7
Shoulder	16.4	14.8	23.6	20.1	40.6	31.6	29.2	29.2	29.3	20.8	22.8	16.4	294.7
Night	12.7	11.5	18.3	15.7	31.6	24.5	22.7	22.7	22.8	16.2	17.7	12.7	229.2
TOTAL	38.2	34.5	55.0	47.0	94.7	73.6	68.1	68.1	68.4	48.6	53.2	38.2	687.7
Revenue													
Super-Peak	\$ 1,164	\$ 1,051	\$ 1,735	\$ 1,484	\$ 2,988	\$ 4,134	\$ 3,825	\$ 3,825	\$ 3,840	\$ 1,479	\$ 1,619	\$ 1,164	\$ 28,307
Shoulder	\$ 1,845	\$ 1,666	\$ 2,376	\$ 2,033	\$ 4,093	\$ 4,221	\$ 3,905	\$ 3,905	\$ 3,920	\$ 2,345	\$ 2,567	\$ 1,845	\$ 34,721
Night	\$ 1,166	\$ 1,053	\$ 1,354	\$ 1,158	\$ 2,332	\$ 2,073	\$ 1,918	\$ 1,918	\$ 1,926	\$ 1,482	\$ 1,622	\$ 1,166	\$ 19,168
TOTAL	\$ 4,174	\$ 3,770	\$ 5,465	\$ 4,674	\$ 9,414	\$ 10,428	\$ 9,648	\$ 9,648	\$ 9,685	\$ 5,305	\$ 5,809	\$ 4,174	\$ 82,196
Weighted Average Price	\$ 109.20	\$ 109.20	\$ 99.43	\$ 99.43	\$ 99.43	\$ 141.60	\$ 141.60	\$ 141.60	\$ 141.60	\$ 109.20	\$ 109.20	\$ 109.20	\$ 119.52

Start Year	Length of Contract		
	10	15	20
2010	\$ 101.75	\$ 107.48	\$ 113.90
2011	\$ 104.00	\$ 110.46	\$ 117.30
2012	\$ 106.98	\$ 114.05	\$ 121.26
2013	\$ 109.98	\$ 117.76	\$ 125.27
2014	\$ 112.78	\$ 121.22	\$ 128.97
2015	\$ 116.05	\$ 125.03	\$ 132.90
2016	\$ 119.71	\$ 129.15	\$ 137.06
2017	\$ 123.67	\$ 133.52	\$ 141.44
2018	\$ 128.02	\$ 138.14	\$ 146.03
2019	\$ 132.71	\$ 142.98	\$ 150.80
2020	\$ 137.76	\$ 147.97	\$ 155.78

Source: PG&E Advice Letter 3410-E, January 27, 2009