Control Sheet

Baseload MPR Proxy

Results for current dataset in $/KWh

MPR All-in	**0.08429**
MPR fixed component	0.02222
MPR variable component	0.06207

Ena

- If, when oper
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- Under Tools--
security level to

Operating Instructions

1. Project Start Date - Input in cell E16 the project start date

Project Sart Date	**2012**

2.Contract Term - Input in cell E20 the term of contract (years)

Contract Term	**20**

3.Click on "Solve"

Fixed Component

PV of cash flow in operational years using mid-yr convention	$255,031,091
PV of equity infusion	($255,031,091)
Total NPV to January 1 of first operational year	$0
Levelized Fixed Price $/kWh (MPR fixed component)	$0.02222

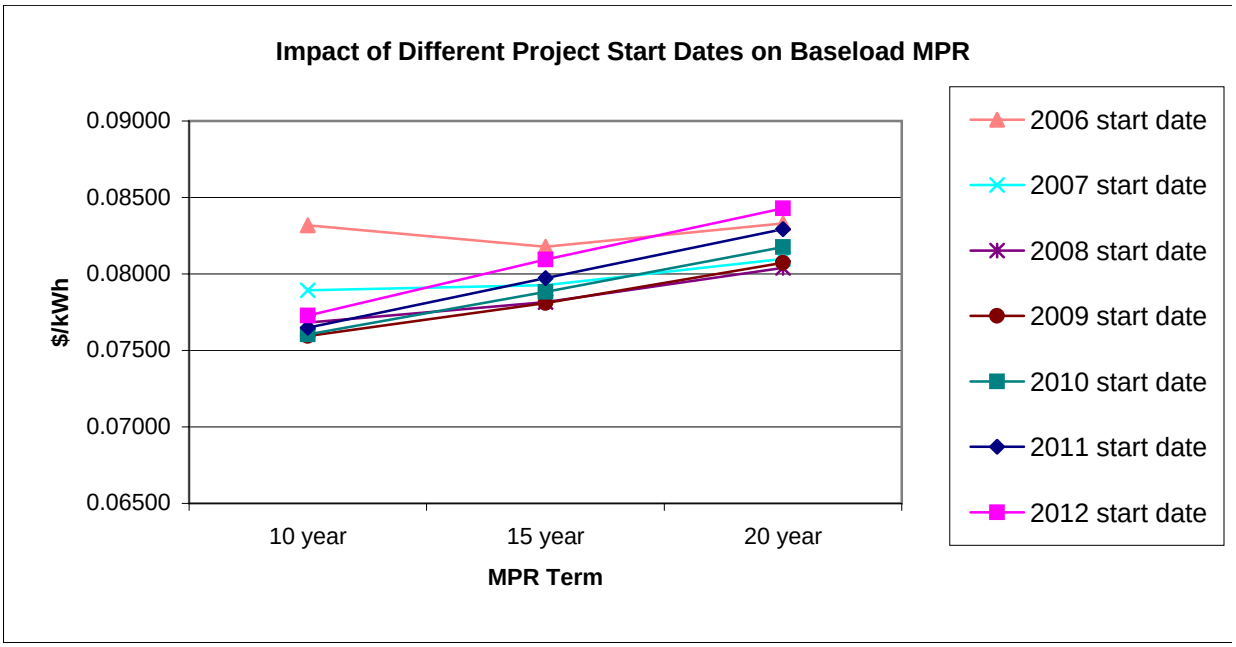
Variable Component

Annual Variable Price $/kWh	$0.05313
NPV of net energy revenues over 20 years	$0
NPV of annual variable price $/kWh	$0.60282
NPV of levelized annual variable price $/kWh	$0.60282
Levelized Annual Variable Price $/kWh (MPR variable component)	$0.06207

2005 MPR Summary

Baseload MPR Matrix - Based on Project Online Date (Nominal $/kWh)

	Baseload MPR	10 year	15 year	20 year
2006	MPR All-in	**0.08317**	**0.08178**	**0.08330**
	MPR fixed component	0.02116	0.02072	0.02116
	MPR variable component	0.06201	0.06106	0.06214
2007	MPR All-in	**0.07894**	**0.07926**	**0.08098**
	MPR fixed component	0.02074	0.02074	0.02074
	MPR variable component	0.05820	0.05853	0.06024
2008	MPR All-in	**0.07681**	**0.07817**	**0.08040**
	MPR fixed component	0.02118	0.02118	0.02118
	MPR variable component	0.05563	0.05698	0.05922
2009	MPR All-in	**0.07594**	**0.07811**	**0.08074**
	MPR fixed component	0.02164	0.02164	0.02164
	MPR variable component	0.05430	0.05646	0.05910
2010	MPR All-in	**0.07604**	**0.07882**	**0.08176**
	MPR fixed component	0.02211	0.02211	0.02211
	MPR variable component	0.05394	0.05671	0.05965
2011	MPR All-in	**0.07648**	**0.07973**	**0.08292**
	MPR fixed component	0.02217	0.02217	0.02217
	MPR variable component	0.05432	0.05757	0.06075
2012	MPR All-in	**0.07728**	**0.08095**	**0.08429**
	MPR fixed component	0.02222	0.02222	0.02222
	MPR variable component	0.05505	0.05872	0.06207


Impact of Different Project Start Dates on Baseload MPR
0.09000
0.08500
0.08000
0.07500
0.07000
0.06500
$/kWh
10 year
15 year
20 year
MPR Term
2006 start date
2007 start date
2008 start date
2009 start date
2010 start date
2011 start date
2012 start date

start date

start date

start date

start date

start date

start date

start date

Cash Flow (CF) Inputs

		Baseload MPR Proxy
Capacity	(kW)	500,000
Total installed capital cost January 1 of 1st operational year	($)	510,062,181
First operational year		2012
Final Capacity Factor	(%)	91.87%
Technical Capacity Factor	(%)	92.00%
New & Clean heat rate (HHV)	Btu/kWh	6,375
Fixed O&M - 1st operational yr.	($/kW-yr)	15.57
Variable O&M - 1st operational yr.	(mills/kWh)	2.76
Insurance as % of plant cost	(%)	0.60%
Property taxes as % of plant cost	(%)	1.20%
Annual Escaltion Rates		
Installed Capital Costs	(%)	2.10%
Insurance	(%)	2.45%
Fixed O&M	(%)	2.45%
Variable O&M	(%)	2.45%
Debt as % of Total Cost	(%)	50.00%
Cost of Debt	(%)	8.03%
Cost of Equity	(%)	12.68%
Debt Term	Years	20
20-year WACC	(%)	8.72%
Transformer Loss Factor	(%)	0.50%
GMM to load center	(%)	98.51%
Federal Tax Rate	(%)	35.00%
State Tax Rate	(%)	8.84%
Total Effective Tax Rate	(%)	40.75%

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Fixed - Capacity Component

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
	1	2	3	4	5	6	7	8	9
GENERATION									
Annual Production (kWh) at low side trans	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333
Annual Production (kWh) at high side trans	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667
Annual Production (kWh) at load center	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808
REVENUES									
Levelized Fixed Price $/kWh	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222
Total revenues	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907
OPERATIONAL EXPENSES									
Insurance	$ 3,060,373	$ 3,140,661	$ 3,218,587	$ 3,301,236	$ 3,383,885	$ 3,473,618	$ 3,570,435	$ 3,669,614	$ 3,771,154
Property Taxes	$ 5,814,709	$ 5,508,672	$ 5,202,634	$ 4,896,597	$ 4,590,560	$ 4,284,522	$ 3,978,485	$ 3,672,448	$ 3,366,410
Fixed O&M	$ 7,782,758	$ 7,986,935	$ 8,185,107	$ 8,395,290	$ 8,605,472	$ 8,833,670	$ 9,079,884	$ 9,332,103	$ 9,590,327
Total Expenses	$ 16,657,840	$ 16,636,267	$ 16,606,328	$ 16,593,123	$ 16,579,917	$ 16,591,811	$ 16,628,805	$ 16,674,165	$ 16,727,892
OPERATING INCOME									
Operating Income	$ 70,996,067	$ 71,017,639	$ 71,047,578	$ 71,060,784	$ 71,073,990	$ 71,062,096	$ 71,025,102	$ 70,979,742	$ 70,926,015
Debt cost	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497
Debt coverage ratio	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.72
Taxes due	$ 12,842,399	$ 5,868,498	$ 7,187,748	$ 8,433,156	$ 9,618,978	$ 10,742,068	$ 11,809,189	$ 12,833,647	$ 13,323,894
After-Tax Cash Flow	$ 32,120,171	$ 39,115,644	$ 37,826,334	$ 36,594,132	$ 35,421,515	$ 34,286,531	$ 33,182,416	$ 32,112,598	$ 31,568,624

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
	1	2	3	4	5	6	7	8	9
DEPRECIATION									
State depreciation fractions	0.03571	0.06888	0.06396	0.05939	0.05515	0.05121	0.04755	0.04415	0.04100
Federal depreciation fractions	0.0375	0.0722	0.0668	0.0618	0.0571	0.0528	0.0489	0.0452	0.0446
State depreciation ($)	$ 18,216,506	$ 35,131,834	$ 32,622,417	$ 30,292,245	$ 28,128,513	$ 26,119,333	$ 24,253,667	$ 22,521,262	$ 20,912,600
Federal depreciation ($)	$ 19,127,332	$ 36,820,114	$ 34,058,605	$ 31,504,210	$ 29,141,394	$ 26,955,789	$ 24,934,105	$ 23,064,047	$ 22,756,527
LOAN AMORTIZATION									
Initial balance ($)	$ 255,031,091	$ 249,476,590	$ 243,476,064	$ 236,993,695	$ 229,990,792	$ 222,425,556	$ 214,252,831	$ 205,423,837	$ 195,885,874
Payment ($)	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497
Interest ($)	$ 20,478,997	$ 20,032,970	$ 19,551,128	$ 19,030,594	$ 18,468,261	$ 17,860,772	$ 17,204,502	$ 16,495,534	$ 15,729,636
Principal ($)	$ 5,554,500	$ 6,000,527	$ 6,482,369	$ 7,002,903	$ 7,565,236	$ 8,172,725	$ 8,828,994	$ 9,537,963	$ 10,303,861
Final balance ($)	$ 249,476,590	$ 243,476,064	$ 236,993,695	$ 229,990,792	$ 222,425,556	$ 214,252,831	$ 205,423,837	$ 195,885,874	$ 185,582,013
TAXES									
Gross taxable income	$ 70,996,067	$ 71,017,639	$ 71,047,578	$ 71,060,784	$ 71,073,990	$ 71,062,096	$ 71,025,102	$ 70,979,742	$ 70,926,015
Depreciation	$ 18,216,506	$ 35,131,834	$ 32,622,417	$ 30,292,245	$ 28,128,513	$ 26,119,333	$ 24,253,667	$ 22,521,262	$ 20,912,600
Interest	$ 20,478,997	$ 20,032,970	$ 19,551,128	$ 19,030,594	$ 18,468,261	$ 17,860,772	$ 17,204,502	$ 16,495,534	$ 15,729,636
Net taxable income	$ 32,300,564	$ 15,852,835	$ 18,874,033	$ 21,737,946	$ 24,477,216	$ 27,081,990	$ 29,566,933	$ 31,962,946	$ 34,283,778
State Tax	$ 2,855,370	$ 1,401,391	$ 1,668,465	$ 1,921,634	$ 2,163,786	$ 2,394,048	$ 2,613,717	$ 2,825,524	$ 3,030,686
Gross taxable income	$ 70,996,067	$ 71,017,639	$ 71,047,578	$ 71,060,784	$ 71,073,990	$ 71,062,096	$ 71,025,102	$ 70,979,742	$ 70,926,015
Depreciation	$ 19,127,332	$ 36,820,114	$ 34,058,605	$ 31,504,210	$ 29,141,394	$ 26,955,789	$ 24,934,105	$ 23,064,047	$ 22,756,527
Interest	$ 20,478,997	$ 20,032,970	$ 19,551,128	$ 19,030,594	$ 18,468,261	$ 17,860,772	$ 17,204,502	$ 16,495,534	$ 15,729,636
State Taxes	$ 2,855,370	$ 1,401,391	$ 1,668,465	$ 1,921,634	$ 2,163,786	$ 2,394,048	$ 2,613,717	$ 2,825,524	$ 3,030,686
Net taxable income	$ 28,534,368	$ 12,763,165	$ 15,769,381	$ 18,604,346	$ 21,300,549	$ 23,851,486	$ 26,272,778	$ 28,594,636	$ 29,409,166
Federal Taxes	$ 9,987,029	$ 4,467,108	$ 5,519,283	$ 6,511,521	$ 7,455,192	$ 8,348,020	$ 9,195,472	$ 10,008,122	$ 10,293,208
Total Taxes	$ 12,842,399	$ 5,868,498	$ 7,187,748	$ 8,433,156	$ 9,618,978	$ 10,742,068	$ 11,809,189	$ 12,833,647	$ 13,323,894

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
10	11	12	13	14	15	16	17	18	19	20
4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333
4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667
3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808
0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222	0.02222
$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907	$ 87,653,907
$ 3,872,694	$ 3,976,596	$ 4,082,859	$ 4,186,760	$ 4,293,023	$ 4,399,286	$ 4,507,911	$ 4,616,535	$ 4,722,798	$ 4,836,145	$ 4,952,213
$ 3,060,373	$ 2,754,336	$ 2,448,298	$ 2,142,261	$ 1,836,224	$ 1,530,187	$ 1,224,149	$ 918,112	$ 612,075	$ 306,037	$ -
$ 9,848,552	$ 10,112,781	$ 10,383,016	$ 10,647,245	$ 10,917,480	$ 11,187,715	$ 11,463,954	$ 11,740,194	$ 12,010,429	$ 12,298,679	$ 12,593,847
$ 16,781,619	$ 16,843,713	$ 16,914,173	$ 16,976,267	$ 17,046,727	$ 17,117,187	$ 17,196,014	$ 17,274,841	$ 17,345,301	$ 17,440,862	$ 17,546,060
$ 70,872,287	$ 70,810,194	$ 70,739,733	$ 70,677,640	$ 70,607,179	$ 70,536,719	$ 70,457,892	$ 70,379,065	$ 70,308,605	$ 70,213,045	$ 70,107,846
$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497
2.72	2.72	2.72	2.71	2.71	2.71	2.71	2.70	2.70	2.70	2.69
$ 13,724,966	$ 14,143,570	$ 14,582,318	$ 15,050,782	$ 15,545,060	$ 16,071,651	$ 16,603,941	$ 17,150,733	$ 17,747,420	$ 18,384,099	$ 8,783,580
$ 31,113,825	$ 30,633,127	$ 30,123,919	$ 29,593,361	$ 29,028,623	$ 28,431,571	$ 27,820,454	$ 27,194,836	$ 26,527,689	$ 25,795,450	$ 35,290,770

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
10	11	12	13	14	15	16	17	18	19	20
0.03807	0.03535	0.03283	0.03048	0.02830	0.02628	0.02531	0.02531	0.02531	0.02531	0.24044
0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0446	0.0669
$ 19,418,843	$ 18,031,783	$ 16,743,798	$ 15,547,813	$ 14,437,255	$ 13,406,022	$ 12,909,503	$ 12,909,503	$ 12,909,503	$ 12,909,503	$ 122,640,278
$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 34,134,790
$ 185,582,013	$ 174,450,752	$ 162,425,651	$ 149,434,934	$ 135,401,063	$ 120,240,271	$ 103,862,068	$ 86,168,696	$ 67,054,545	$ 46,405,528	$ 24,098,396
$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497	$ 26,033,497
$ 14,902,236	$ 14,008,395	$ 13,042,780	$ 11,999,625	$ 10,872,705	$ 9,655,294	$ 8,340,124	$ 6,919,346	$ 5,384,480	$ 3,726,364	$ 1,935,101
$ 11,131,261	$ 12,025,101	$ 12,990,717	$ 14,033,872	$ 15,160,791	$ 16,378,203	$ 17,693,373	$ 19,114,150	$ 20,649,017	$ 22,307,133	$ 24,098,396
$ 174,450,752	$ 162,425,651	$ 149,434,934	$ 135,401,063	$ 120,240,271	$ 103,862,068	$ 86,168,696	$ 67,054,545	$ 46,405,528	$ 24,098,396	$ (0)
$ 70,872,287	$ 70,810,194	$ 70,739,733	$ 70,677,640	$ 70,607,179	$ 70,536,719	$ 70,457,892	$ 70,379,065	$ 70,308,605	$ 70,213,045	$ 70,107,846
$ 19,418,843	$ 18,031,783	$ 16,743,798	$ 15,547,813	$ 14,437,255	$ 13,406,022	$ 12,909,503	$ 12,909,503	$ 12,909,503	$ 12,909,503	$ 122,640,278
$ 14,902,236	$ 14,008,395	$ 13,042,780	$ 11,999,625	$ 10,872,705	$ 9,655,294	$ 8,340,124	$ 6,919,346	$ 5,384,480	$ 3,726,364	$ 1,935,101
$ 36,551,209	$ 38,770,015	$ 40,953,155	$ 43,130,202	$ 45,297,219	$ 47,475,403	$ 49,208,265	$ 50,550,216	$ 52,014,622	$ 53,577,178	$ (54,467,533)
$ 3,231,127	$ 3,427,269	$ 3,620,259	$ 3,812,710	$ 4,004,274	$ 4,196,826	$ 4,350,011	$ 4,468,639	$ 4,598,093	$ 4,736,223	$ (4,814,930)
$ 70,872,287	$ 70,810,194	$ 70,739,733	$ 70,677,640	$ 70,607,179	$ 70,536,719	$ 70,457,892	$ 70,379,065	$ 70,308,605	$ 70,213,045	$ 70,107,846
$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 22,756,527	$ 34,134,790
$ 14,902,236	$ 14,008,395	$ 13,042,780	$ 11,999,625	$ 10,872,705	$ 9,655,294	$ 8,340,124	$ 6,919,346	$ 5,384,480	$ 3,726,364	$ 1,935,101
$ 3,231,127	$ 3,427,269	$ 3,620,259	$ 3,812,710	$ 4,004,274	$ 4,196,826	$ 4,350,011	$ 4,468,639	$ 4,598,093	$ 4,736,223	$ (4,814,930)
$ 29,982,398	$ 30,618,002	$ 31,320,168	$ 32,108,778	$ 32,973,673	$ 33,928,073	$ 35,011,231	$ 36,234,553	$ 37,569,506	$ 38,993,932	$ 38,852,885
$ 10,493,839	$ 10,716,301	$ 10,962,059	$ 11,238,072	$ 11,540,786	$ 11,874,826	$ 12,253,931	$ 12,682,094	$ 13,149,327	$ 13,647,876	$ 13,598,510
$ 13,724,966	$ 14,143,570	$ 14,582,318	$ 15,050,782	$ 15,545,060	$ 16,071,651	$ 16,603,941	$ 17,150,733	$ 17,747,420	$ 18,384,099	$ 8,783,580

Variable Component - 20 Years

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
	1	2	3	4	5	6	7	8	9
GENERATION									
Annual Production (kWh) at low side trans	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333
Annual Production (kWh) at high side trans	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667
Annual Production (kWh) at load center	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808
Burnertip Gas Prices ($/MMBtu)	6.70	6.55	6.39	6.46	6.66	6.99	7.22	7.58	7.89
REVENUES									
Annual Variable Price $/kWh	0.0531	0.0519	0.0507	0.0512	0.0528	0.0554	0.0572	0.0601	0.0625
Levelized Annual Variable Price $/kWh	0.0621	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207
Total Revenue	$ 209,535,553	$ 204,665,449	$ 199,802,178	$ 202,033,614	$ 208,310,123	$ 218,336,834	$ 225,595,180	$ 236,984,452	$ 246,464,561
OPERATIONAL EXPENSES									
Variable O&M	$ 11,105,927	$ 11,397,286	$ 11,680,076	$ 11,980,005	$ 12,279,933	$ 12,605,570	$ 12,956,915	$ 13,316,829	$ 13,685,313
Fuel Cost	$ 197,021,204	$ 192,938,548	$ 188,597,166	$ 190,854,859	$ 196,891,099	$ 206,450,446	$ 213,378,975	$ 224,206,086	$ 233,221,366
Total Expenses	$ 208,127,131	$ 204,335,834	$ 200,277,242	$ 202,834,864	$ 209,171,032	$ 219,056,016	$ 226,335,890	$ 237,522,916	$ 246,906,679
OPERATING INCOME	$ 1,408,422	$ 329,615	$ (475,064)	$ (801,250)	$ (860,908)	$ (719,181)	$ (740,709)	$ (538,464)	$ (442,118)

Check

NPV of operating income over 20 years	$0

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
10	11	12	13	14	15	16	17	18	19	20	
											Total
4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	4,023,733,333	80,474,666,667
4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	4,003,614,667	80,072,293,333
3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	3,943,960,808	78,879,216,163
8.18	8.53	8.88	9.25	9.62	9.96	10.33	10.68	11.06	11.49	11.49	172
0.0649	0.0676	0.0703	0.0733	0.0762	0.0790	0.0819	0.0847	0.0876	0.0911	0.0911	
0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	0.06207	
$ 255,779,403	$ 266,583,049	$ 277,432,633	$ 289,113,091	$ 300,691,270	$ 311,438,253	$ 322,968,484	$ 333,968,518	$ 345,661,651	$ 359,150,577	$ 359,150,577	5,373,665,452
$ 14,053,797	$ 14,430,850	$ 14,816,472	$ 15,193,525	$ 15,579,148	$ 15,964,770	$ 16,358,962	$ 16,753,154	$ 17,138,777	$ 17,550,107	$ 17,971,310	286,818,727
$ 242,075,789	$ 252,336,044	$ 262,637,487	$ 273,723,772	$ 284,711,909	$ 294,911,880	$ 305,852,588	$ 316,290,427	$ 327,384,035	$ 340,178,063	$ 340,194,836	5,083,856,577
$ 256,129,585	$ 266,766,893	$ 277,453,959	$ 288,917,298	$ 300,291,056	$ 310,876,650	$ 322,211,550	$ 333,043,581	$ 344,522,812	$ 357,728,170	$ 358,166,146	5,370,675,305
$ (350,182)	$ (183,845)	$ (21,327)	$ 195,794	$ 400,214	$ 561,603	$ 756,933	$ 924,937	$ 1,138,840	$ 1,422,407	$ 984,431	2,990,147

Data Source	Fixed O&M (2006$)	Variable O&M (2006$)
Palomar	13.84	3.18
CC8	14.94	1.84
EIA Annual Energy Outlook Conven. CC	11.01	3.29
Henwood New CC	10.41	2.08
CERA	16.01	1.07
CEC	16.01	2.54
Stone & Webster	N/A	3.01
Average	$13.70	$2.43

Install Capital Cost Inputs (2006$)	Palomar (San Diego) Combined-Cycle 555 MW		Cosumnes (SMUD) Combined-Cycle 500 MW	
	(Million $)	$/kW	(Million $)	$/kW
Capital Cost Investment - Overnight Costs	$410	$739	$435	$870
Interconnection (natural gas, water, electric)	Included in Instant Capital Costs Shown Above	Included in Instant Capital Costs Shown Above	$21.75	$44
Environmental Review & Permitting			Included in Instant Capital Costs Shown Above	Included in Instant Capital Costs Shown Above
Emissions offsets				
Dry Cooling Adjustment	$20	$36	$20	$55
Contingency	-	-	-	-
AFUDC	-	-	-	-
EITC	-	-	-	-
Other or Subtotal	$74	$134	-	-
Total "Turn-Key" Capital Costs (2006$)	$504	$909	$477	$969

CCGT Heat Rate

Heat Rate Inputs	
New/Clean Heat Rate - LHV (Btu/kWh)	6,375
Higher Heating Value (HHV) Adjustment	11%
Dry Cooling Heat Rate Adjustment	1.5%
Minimum # Annual Starts	125
Start-up Fuel Cost (MMBtu/MW)	2.8
Start-up Fuel Cost (Btu/kWh)	43

Degradati Calculatic
a
b
c
d
e

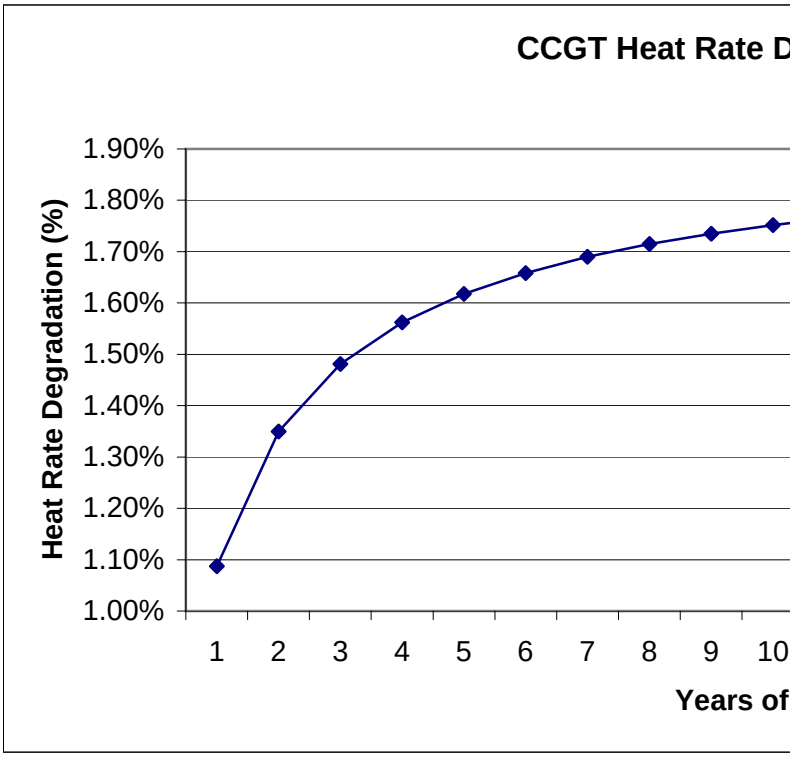
Yrs of Operation	HHV Heat Rate	CCGT Fired (Hours)	Heat Rate Degradation Factor	Heat Rate w/ Degradation	Dry Cooling HR Adj. (Btu/kWh)
1	7,076	8,047	1.09%	7,153	107
2	7,076	16,095	1.35%	7,172	108
3	7,076	24,142	1.48%	7,181	108
4	7,076	32,190	1.56%	7,187	108
5	7,076	40,237	1.62%	7,191	108
6	7,076	48,285	1.66%	7,194	108
7	7,076	56,332	1.69%	7,196	108
8	7,076	64,380	1.71%	7,198	108
9	7,076	72,427	1.73%	7,199	108
10	7,076	80,475	1.75%	7,200	108
11	7,076	88,522	1.77%	7,201	108
12	7,076	96,570	1.78%	7,202	108
13	7,076	104,617	1.79%	7,203	108
14	7,076	112,665	1.80%	7,204	108
15	7,076	120,712	1.81%	7,204	108
16	7,076	128,759	1.81%	7,205	108
17	7,076	136,807	1.82%	7,205	108
18	7,076	144,854	1.83%	7,206	108
19	7,076	152,902	1.83%	7,206	108
20	7,076	160,949	1.84%	7,206	108
		Average	**1.69%**		

Lower Heating Value vs. Higher Heating Value

HHV stands for Higher Heating Value. Most gas turbine heat rates are quoted in LHV or lowe
difference is about 11%, i.e., LHV * 1.11 = HHV. HHV is used for the cash flow pro forma be
amount of fuel required (and which must be purchased). The LHV accounts for the thermal e
fuel combustion process but ignores the fact that the water produced will be steam at the con
and this process reduces the usable energy

and this process reduces the usable energy.

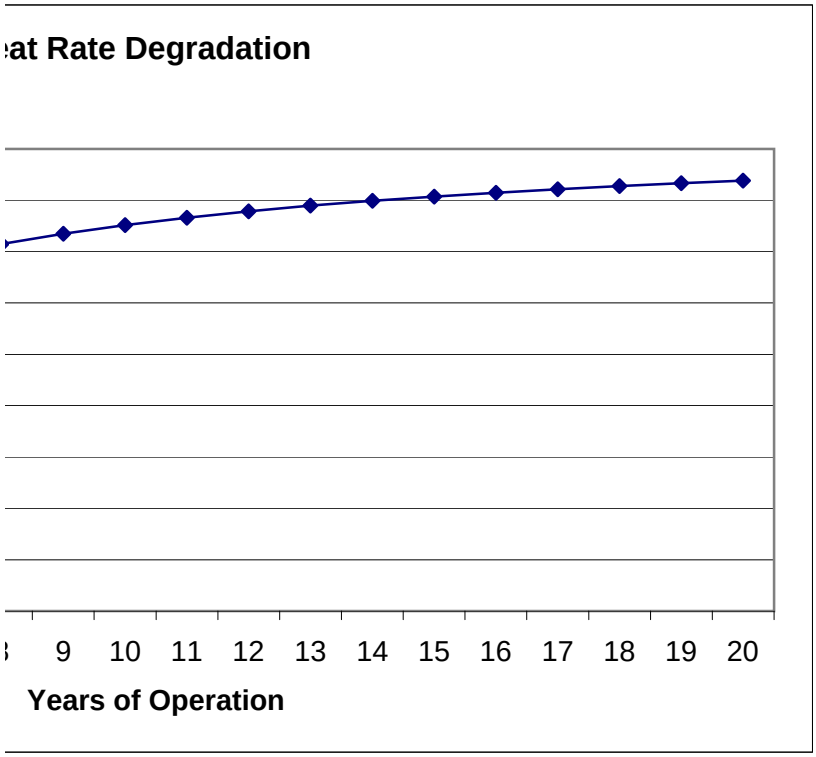
ion Factor on: Inputs
-0.00757
1323.705
1.963382
0.823937
7



Start/Stop HR Adj. (Btu/kWh)	Adjusted Heat Rate (Btu/kWh)
43	7,304
43	7,323
43	7,332
43	7,338
43	7,342
43	7,345
43	7,347
43	7,349
43	7,350
43	7,352
43	7,353
43	7,354
43	7,354
43	7,355
43	7,356
43	7,356
43	7,357
43	7,357
43	7,358
43	7,358
Average	**7,347**

1	2	3	4
7304	7323	7332	7338

' or lower heating value. The
orma because it reflects the
nermal energy inherent in the
the combustion temperature



5	6	7	8	9	10	11	12
7342	7345	7347	7349	7350	7352	7353	7354

13	14	15	16	17	18	19	20
7354	7355	7356	7356	7357	7357	7358	7358

Cost of Capital

Updated: 2/27/2006

Input	Value	Source
Debt (%)	50%	D.05-12-042, Findings of Fact 22 (pg. 53)
Equity %	50%	N/A
Cost of Debt (%)	8.03%	N/A
Cost of Equity (%)	12.68%	N/A
WACC	8.72%	N/A
Risk Free Rate		
10-Year Tbill	4.55%	http://www.bloomberg.com/markets/rates/index.html
20-Year Tbill	4.53%	N/A
30-Year Tbill	4.51%	http://www.bloomberg.com/markets/rates/index.html
Risk Premium (Debt)		
BBB	4.75%	http://pages.stern.nyu.edu/~adamodar/
Mid Point	3.50%	N/A
B+	2.25%	http://pages.stern.nyu.edu/~adamodar/
Risk Premium (Equity)	7.20%	Ibbotson Associates SBBE Valuation Edition (2005)
Mid-Cap Risk Premium (Equity)	0.95%	Ibbotson Associates SBBE Valuation Edition (2005)

Notes
Cost of Debt (industrial firms) = risk free rate (20 year T-Bill) + risk premium (mid point between BBB & B+)
Cost of Equity = risk free rate (20-yr Tbill) + risk premium (equity) + mid-cap risk premium (equity)
Weight-Average Cost of Capital = (Cost of Equity x Equity %) + (Cost of Debt x (1-tax rate) x Debt %)
Risk Free Rate = Mid point between 10 and 30 yr T-Bill (US Treasury yields)
Risk Premium (Large Manufacturer) = Mid point between BBB and B+ rated company

Capacity Factor

MPR	
Fixed ($/kW-year)	$ 178.85
Initial Capacity Factor	92%
Fixed ($/kWh)	$ 0.02222
Variable ($/kWh)	$ 0.0621
Total ($/kWh)	$ 0.08429
Calc. Cap Factor	**91.9%**

CF 1
91.9%

Utility	Source	TOD Period	TOD Factor	Hours	Hours/Day
PG&E	2005 RFO	Season A Super Peak	1.54	696	8
		Season A Shoulder	1.02	1256	8
		Season A Night	0.75	976	8
		Season B Super Peak	1.31	824	8
		Season B Shoulder	1.07	1592	8
		Season B Night	0.79	1208	8
		Season C Super Peak	1.10	520	8
		Season C Shoulder	0.92	952	8
		Season C Night	0.67	736	8
SCE	2005 RFO	Summer On	1.43	528	6
		Summer Mid	1.02	792	9
		Summer Off	0.85	1608	9
		Winter Mid	1.22	2184	13
		Winter Off	0.93	2190	5
		Winter Super	0.78	1458	6
SDG&E	2005 RFO	Summer On-Peak	1.63	976	8
		Summer Semi-Peak	1.04	976	9
		Summer Off-Peak	0.88	1000	7
		Winter On-Peak	1.19	1352	8
		Winter Semi-Peak	1.08	2424	8
		Winter Off-Peak	0.79	2032	8

CF 2	Avg.
91.9%	91.9%

MPR	Variable Cost	Operating Shortfall per Day	Operating Hours	Start Ups	Economic Cap Factor	Technical Cap Factor
$ 0.13	$ 0.06	$ 0.54	696	-		
$ 0.09	$ 0.06	$ 0.19	1,256	-		
$ 0.06	$ 0.06	$ 0.01	976	-		
$ 0.11	$ 0.06	$ 0.39	824	-		
$ 0.09	$ 0.06	$ 0.22	1,592	-		
$ 0.07	$ 0.06	$ 0.03	1,208	-		
$ 0.09	$ 0.06	$ 0.25	520	-		
$ 0.08	$ 0.06	$ 0.12	952	-		
$ 0.06	$ 0.06	**$ (0.04)**	**-**	92	92%	92%
$ 0.12	$ 0.06	$ 0.35	528	-		
$ 0.09	$ 0.06	$ 0.21	792	-		
$ 0.07	$ 0.06	$ 0.09	1,608	-		
$ 0.10	$ 0.06	$ 0.53	2,184	-		
$ 0.08	$ 0.06	$ 0.08	2,190	-		
$ 0.07	$ 0.06	$ 0.02	1,458	-	100%	92%
$ 0.14	$ 0.06	$ 0.60	976	-		
$ 0.09	$ 0.06	$ 0.23	976	-		
$ 0.07	$ 0.06	$ 0.09	1,000	-		
$ 0.10	$ 0.06	$ 0.31	1,352	-		
$ 0.09	$ 0.06	$ 0.23	2,424	-		
$ 0.07	$ 0.06	$ 0.04	2,032	-	100%	92%
			8,515	92		

Actual Cap Factor		
	1.543	
	1.024	
	0.747	
	1.31	
	1.065	
	0.787	
	1.104	
	0.92	
92%	0.673	
	1.4251	3.28
	1.015867	1.28
	0.8526	0.67
	1.2185	1.02
	0.931227	0.82
92%	0.776	0.65
	1.530409	
	0.976877	
	0.829688	
	1.119276	
	1.01351	
92%	0.744681	

CF Data Set

Input	Unit	1 2006	2 2007	3 2008	4 2009	5 2010	6 2011	7 2012	8 2013	9 2014	10 2015	11 2016	12 2017	13 2018	14 2019	15 2020
CA Burnertip Gas Price	$/MMBtu	10.75	9.52	8.35	7.56	7.02	6.86	6.70	6.55	6.39	6.46	6.66	6.99	7.22	7.58	7.89

Input	Unit	2006	2007	2008	2009	2010	2011	2012
1st yr capital costs (January 1)	($)	469,373,649	479,231,521	489,296,144	499,567,517	510,062,181	510,062,181	510,062,181
Fixed O&M	$/kW-yr	13.70	13.94	14.23	14.52	14.83	15.18	15.57
Variable O&M	mills/kWh	2.43	2.47	2.52	2.57	2.63	2.69	2.76

no escalation due to offsetting effect of technological improvements

Input	Unit	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EIA GDP Price Index	(%)	1.97%	1.75%	2.07%	2.03%	2.15%	2.35%	2.53%	2.62%	2.48%	2.57%	2.50%	2.65%	2.79%	2.78%	2.77%
US Army Corp Eng. Index	(%)	2.13%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Input	Unit	Average
EIA GDP Price Index	(%)	2.45%
US Army Corp Eng. Index	(%)	2.10%

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EIA GDP Price Index Deflator	1.119	1.14100	1.16100	1.18500	1.20900	1.23500	1.26400	1.296	1.330	1.363	1.398	1.433	1.471	1.512	1.554	1.597
US Army Corp Eng. Index	555.75	567.56	579.48	591.65	604.07	616.76	629.71	642.93	656.44	670.22	684.30	698.67	713.34	728.32	743.61	759.23

Appendix D for 2005 MPR Resolution - Non-Gas Inputs

Row No.	Input Category	Input	Units	Baseload Inputs	Escal. Rates/yr.	Notes
1	Capital Inputs	Total capital cost January 1 - 1st operational yr.	$/kw	$939	2.10%	Per D.05-12-042, Staff conducted a survey of actual plant costs in CA. Four plants were selected and an average was calculated
2		Fixed O&M	($/kW-yr) 1st operational yr.	$13.70	2.45%	See Attachement F, Mountainview Application (FERC Docket ER04-316). Highest and lowest values were deleted from Wharton data set, Palomar and CC8 were added, and an average value was calculated
3		Variable O&M	(mills/kWh) 1st operational yr.	$2.43	2.45%	See Attachement F, Mountainview Application (FERC Docket ER04-316). Highest and lowest values were deleted from Wharton data set, Palomar and CC8 were added, and an average value was calculated
4		New & Clean heat rate	Btu/kWh HHV	7076	n.a.	Per D.05-12-042, Staff used the the "new & clean" heat rate for an F-Series (GE S207FA) CC Turbine, adjusted for Higher Heating Value
5		Heat rate degradation factor	Percent-%	1.69%	n.a.	Per D.05-12-042, Staff contacted GE for an appropriate heat rate degradation factor for an F-series CC turbine. GE provide a degradtion curve that calculated the average degradation over the life of the project.
6		Average heat rate	Btu/kWh HHV	7347	n.a.	Average heat rate over life of plant, taking into account the impact of Higher Heating Value, degradation, dry cooling, and starts/stops
7	Finance Inputs	20-year WACC	Percent-%	8.72%	n.a.	Weight-Average Cost of Capital = (Cost of Equity x Equity %) + (Cost of Debt x (1-tax rate) x Debt %)
8		Cost of LT Debt	Percent-%	8.03%	n.a.	Per D.05-12-042, Cost of Debt (industrial firms) = risk free rate (20 year T-Bill) + risk premium (mid point between BBB & B+)
9		Cost of Equity	Percent-%	12.68%	2.00%	Per D.05-12-042, Cost of Equity = risk free rate (20-yr Tbill) + risk premium (equity) + mid-cap risk premium (equity)
10		Debt as % of total cost	Percent-%	50%	n.a.	Per D.05-12-042, LT debt ratio for BBB rated company
11		Debt Term	Years	20	n.a.	Adopted in D.04-06-015 and reaffirmed in D.05-12-042
12		Insurance as % of plant cost	Percent-%	0.60%	2.45%	Same value used for 2004 MPR. Energy Division contacted insurance brokers for quotes and calculated an average value.
13	Power Delivery Inputs	Transformer Loss Factor	Percent-%	0.50%	n.a.	Loss factor recommended by parties and used in 2004 MPR calculation - Parties did not propose changes for 2005
14		Generation Meter Multiplier (GMM) to load center	Percent-%	98.5%	n.a.	Per CCC recommendation (comments, pg. 13) , Staff calculated the 2005 system annual average for GMMs used data provided by CAISO
15		Capacity Factor	Percent-%	92%	n.a.	Per D.05-12-042, Staff developed a methodology, using the average of IOU TODs, to calculate a range of capacity factors. See Cap_Fac Tab in 2005 MPR model
16	Tax Rate Inputs	Federal Tax Rate	Percent-%	35%	n.a.	Tax rate proposed by the parties and used in the 2004 MPR calculation - Parties did not propose changes for 2005
17		State Tax Rate	Percent-%	8.84%	n.a.	Tax rate proposed by the parties and used in the 2004 MPR calculation - Parties did not propose changes for 2005
18		Total Effective Tax Rate	Percent-%	40.75%	n.a.	Effective Tax = Federal Tax * (1 - State Tax) + State Tax
19		Property taxes as % of plant cost	Percent-%	1.20%	n.a.	Same value used for 2004 MPR. Energy Division averaged the property tax rates for 14 counties in which power plants were constructed (or under construction) in the last 5 years.
20	Gas Forecast	20yr gas forecast - 2006 levelized	$/MMBtu	$7.91	n.a.	Output from CA_Gas_Forecast Tab (Cell L36) in 2005 MPR model

Notes:

Cashflow model solves for the revenue needed to generate the cashflow to pay for operating expenses, interest expense, principal repayments and taxes (federal and state) and to provide investors with the required IRR.

Revenues <-- solve for
minus Fixed Costs
minus Property Taxes
minus Insurance
minus Fuel
minus Variable Costs
} Operating Expenses
equals Operating Income

Operating Income
minus Interest Expense (note a)
minus Depreciation (calculated separately for state and federal) (note b)
equals Taxable Income (separate for state and federal)

Operating Income
Minus Interest Expense
Minus Principal Repayments
Minus (state taxes + federal taxes) (note c)
equals After tax cash flow

Summation of the after tax cash flow discounted at the IRR minus equity investment equals 0.
where equity investment = equity % ownership * capital costs of plant

Notes:

Note a: Interest Expense = interest rate * (beginning balance of debt minus cumulative principal payments) where beginning balance of debt = debt % * capital costs

Note b: State and federal tax codes require two different depreciation schedules. Federal uses 20 year 150% declining balance. State uses 28 year double declining balance. This calculation uses one depreciation schedule for the entire plant. Typically, certain assets on plants have different schedules (e.g., land is not depreciable). Each individual particular power plant will have its particular adjustments.

Note c: To calculate taxes:
Taxable Income (minus states taxes for federal tax calculation)
multiplied by tax rate (separate for state and federal)
State and federal taxes

Tab Divider for Gas and Basis Fo

recasts

Natural Gas Forecast for MPR Baseload Proxy

Year	NYMEX Futures Contract Average	2011 - 2013 Linear Interpolation	Average HHub Fundamental Forecast	MPR Hhub Forecast	Combined CA Basis Forecast	PG&E/SoCal Average Distribution Rate w/ Escalation	Average Franchise Fee Surcharge	Hedging Transaction Cost	MPR CA Gas Forecast (nominal$)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
2006	$11.04		$8.22	$11.04	-$0.83	$0.316	$0.137	$0.082	$10.75
2007	$9.53		$7.01	$9.53	-$0.54	$0.323	$0.121	$0.082	$9.52
2008	$8.36		$6.56	$8.36	-$0.54	$0.331	$0.105	$0.082	$8.35
2009	$7.58		$6.10	$7.58	-$0.54	$0.339	$0.095	$0.082	$7.56
2010	$7.04		$5.93	$7.04	-$0.54	$0.348	$0.087	$0.082	$7.02
2011		$6.87	$5.88	$6.87	-$0.54	$0.356	$0.085	$0.082	$6.86
2012		$6.71	$6.03	$6.71	-$0.54	$0.365	$0.083	$0.082	$6.70
2013		$6.55	$6.28	$6.55	-$0.54	$0.374	$0.081	$0.082	$6.55
2014			$6.39	$6.39	-$0.54	$0.383	$0.078	$0.082	$6.39
2015			$6.45	$6.45	-$0.54	$0.392	$0.079	$0.082	$6.46
2016			$6.64	$6.64	-$0.54	$0.402	$0.082	$0.082	$6.66
2017			$6.94	$6.94	-$0.54	$0.412	$0.086	$0.082	$6.99
2018			$7.16	$7.16	-$0.54	$0.422	$0.089	$0.082	$7.22
2019			$7.51	$7.51	-$0.54	$0.432	$0.094	$0.082	$7.58
2020			$7.80	$7.80	-$0.54	$0.443	$0.097	$0.082	$7.89
2021			$8.08	$8.08	-$0.54	$0.454	$0.101	$0.082	$8.18
2022			$8.41	$8.41	-$0.54	$0.465	$0.106	$0.082	$8.53
2023			$8.74	$8.74	-$0.54	$0.476	$0.110	$0.082	$8.88
2024			$9.10	$9.10	-$0.54	$0.488	$0.115	$0.082	$9.25
2025			$9.46	$9.46	-$0.54	$0.500	$0.120	$0.082	$9.62
2026			$9.78	$9.78	-$0.54	$0.512	$0.124	$0.082	$9.96
2027			$10.13	$10.13	-$0.54	$0.525	$0.129	$0.082	$10.33
2028			$10.47	$10.47	-$0.54	$0.537	$0.133	$0.082	$10.68
2029			$10.83	$10.83	-$0.54	$0.550	$0.138	$0.082	$11.06
2030			$11.25	$11.25	-$0.54	$0.550	$0.144	$0.082	$11.49
2031			$11.57	$11.57	-$0.54	$0.564	$0.148	$0.082	$11.83

linear interpolation	-0.162565

20-yr Levelized Natural Gas Forecast

2006	$7.91
2007	$7.64
2008	$7.50
2009	$7.47
2010	$7.53
2011	$7.89
2012	$7.84

Contract	22-Day Average Prices
January 2006	13.05
February 2006	13.01
March 2006	12.70
April 2006	10.42
May 2006	10.16
June 2006	10.18
July 2006	10.23
August 2006	10.27
September 2006	10.25
October 2006	10.29
November 2006	10.75
December 2006	11.19
January 2007	11.54
February 2007	11.46
March 2007	11.15
April 2007	8.93
May 2007	8.66
June 2007	8.69
July 2007	8.72
August 2007	8.76
September 2007	8.74
October 2007	8.78
November 2007	9.24
December 2007	9.69
January 2008	10.05
February 2008	9.96
March 2008	9.65
April 2008	7.86
May 2008	7.58
June 2008	7.62
July 2008	7.66
August 2008	7.70
September 2008	7.69
October 2008	7.72
November 2008	8.20
December 2008	8.67
January 2009	9.05
February 2009	8.98
March 2009	8.68
April 2009	7.12
May 2009	6.84
June 2009	6.89
July 2009	6.95
August 2009	7.00
September 2009	6.98
October 2009	7.01
November 2009	7.50
December 2009	7.97
January 2010	8.36
February 2010	8.27
March 2010	7.98
April 2010	6.64
May 2010	6.37
June 2010	6.41
July 2010	6.45
August 2010	6.49
September 2010	6.47
October 2010	6.51
November 2010	7.00
December 2010	7.48

		1	2	3	4	5
	22-Day Ave. NYMEX Closing Prices (10/17/05 - 11/16/05)					
	Month	**2006**	**2007**	**2008**	**2009**	**2010**
1	January	13.05	11.54	10.05	9.05	8.36
2	February	13.01	11.46	9.96	8.98	8.27
3	March	12.70	11.15	9.65	8.68	7.98
4	April	10.42	8.93	7.86	7.12	6.64
5	May	10.16	8.66	7.58	6.84	6.37
6	June	10.18	8.69	7.62	6.89	6.41
7	July	10.23	8.72	7.66	6.95	6.45
8	August	10.27	8.76	7.70	7.00	6.49
9	September	10.25	8.74	7.69	6.98	6.47
10	October	10.29	8.78	7.72	7.01	6.51
11	November	10.75	9.24	8.20	7.50	7.00
12	December	11.19	9.69	8.67	7.97	7.48
	Average	**11.04**	**9.53**	**8.36**	**7.58**	**7.04**

a Basis Forecast

Clearport SoCal Average	Clearport PG&E Citygate	CA Basis Average
(a)	(b)	(c)
-$1.03	-$0.63	-$0.83
-$0.75	-$0.32	-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
		-$0.54
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		-$0.54
		-$0.54
		-$0.54
		-$0.54

is Adjustment - 22 Day

sta_12_27_04.xls https://www.services.nymex.com/otcsettlement/

od

Jan-06	Feb-06	Mar-06	Apr-06	May-06
-1.25	-1.18	-1.13	-0.81	-0.81
-1.26	-1.22	-1.16	-0.79	-0.79
-1.29	-1.22	-1.15	-0.80	-0.80
-1.32	-1.26	-1.15	-0.83	-0.83
-1.40	-1.38	-1.23	-0.84	-0.84
-1.59	-1.48	-1.35	-0.89	-0.89
-1.56	-1.49	-1.34	-0.89	-0.89
-1.56	-1.42	-1.37	-0.88	-0.88
-1.73	-1.58	-1.41	-0.93	-0.93
-1.96	-1.80	-1.67	-1.00	-1.00
-2.01	-1.86	-1.64	-1.02	-1.02
-1.98	-1.88	-1.75	-1.06	-1.06
-2.20	-2.09	-1.82	-1.10	-1.10
-2.06	-1.96	-1.83	-1.05	-1.05
-2.15	-2.02	-1.93	-1.06	-1.06
-2.15	-2.10	-1.92	-1.10	-1.10
-2.06	-1.96	-1.90	-1.12	-1.12
-2.13	-2.02	-1.91	-1.20	-1.20
-2.36	-2.15	-2.05	-1.24	-1.24
-2.22	-2.10	-2.06	-1.25	-1.25
-2.11	-1.97	-1.91	-1.14	-1.14
-2.07	-1.98	-1.87	-1.14	-1.14
-1.85	-1.75	-1.64	-1.01	-1.01

rGate Basis Adjustment - 22 Day Average

sta_12_27_04.xls https://www.services.nymex.com/otcsettlement/

od

Jan-06	Feb-06	Mar-06	Apr-06	May-06
-0.880	-0.793	-0.708	-0.386	-0.385
-0.853	-0.805	-0.728	-0.378	-0.378
-0.880	-0.872	-0.723	-0.375	-0.375
-0.910	-0.850	-0.740	-0.405	-0.405
-1.018	-0.950	-0.815	-0.438	-0.438
-1.196	-1.082	-0.945	-0.463	-0.463
-1.155	-1.093	-0.938	-0.463	-0.463
-1.180	-1.060	-0.930	-0.469	-0.469
-1.320	-1.196	-0.973	-0.520	-0.520
-1.570	-1.443	-1.208	-0.623	-0.623
-1.940	-1.768	-1.613	-0.830	-0.830
-1.590	-1.460	-1.400	-0.680	-0.680
-1.560	-1.493	-1.380	-0.725	-0.725
-1.653	-1.555	-1.450	-0.658	-0.658
-1.690	-1.570	-1.465	-0.665	-0.665
-1.685	-1.605	-1.565	-0.755	-0.755
-1.650	-1.570	-1.450	-0.693	-0.693
-1.660	-1.600	-1.440	-0.778	-0.778
-1.860	-1.740	-1.580	-0.828	-0.828
-1.740	-1.640	-1.650	-0.825	-0.825
-1.630	-1.500	-1.390	-0.725	-0.725
-1.575	-1.515	-1.380	-0.720	-0.720
-$1.426	-$1.332	-$1.206	-$0.610	-$0.610

Delivery Tariff

Row	Gas Inputs - Summary		
1	Average Distribution Rate ($/MMBtu)	$0.3157	D.04-06-015, p19 "SoCal/PG&E average distribution rate"
2	Transaction Cost ($/MMBtu)	$0.082	D.04-06-015 (p26), reafirmed in D.05-12-042 (A-7)
3	Average Municipal Surcharge (%)	1.34%	D.04-06-015, p19 "municipal franchise fee"
4	Transportation Escalation Rate	2.45%	D.04-06-015, p19 "with appropriate escalation rate"
5	Cost of Capital	8.72%	Cost Cap Tab - Cell D9

Row	Calculation of PG&E Delivery Rate to Electric Generation			
1	Customer Access Charge ($/day)	$179	http://www.pge.com/tariffs/pdf/G-EG.pdf	Effective 1/2006
2	Proxy Plant Capacity (MW)	500	CF Input Tab - Cell E4	
3	Heat Rate (MMBtu/MWh)	7.3	Heat Rate Tab - Cell J13	
4	Capacity Factor	91.9%	Cap Fac Tab - Cell E9	
5	Daily Gas Consumption (MMBtu)	80,518	(Row 2 * Row 3 * Row 4) * 24	
6	Unit Cost of Customer Access Charge ($/MMBtu)	$0.0022	Row 1 / Row 5	
7	Transportation Charge ($/MMBtu)	$0.2337	http://www.pge.com/tariffs/pdf/G-EG.pdf	Effective 1/2006
8	Total PG&E Distribution Rate ($/MMBtu)	$0.2359	Row 6 + Row 7	

Row	Calculation of SoCal Gas Delivery Rate to Electric Generation			
1	Customer Charge ($/month)	$0.00	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf	Effective 1/2006
2	Transmission Charge ($/MMBtu)	$0.3954	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf	Effective 1/2006
3	Interstate Transition Cost Surcharge ($/MMBtu)	$0.0000	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf	Effective 1/2006
4	Total SoCal Distribution Rate ($/MMBtu)	$0.3954	Row 1 + Row 2 + Row 3	

Row	Municipal Surcharge			
1	SoCal Muni Surcharge, Schedule G-MSUR (%)	1.553%	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/G-MSUR.pdf	Effective 3/1/2005
2	PG&E Muni Surcharge, Schedule G-SUR (%)	1.130%	Cell N48	Effective 3/2006
3	Average Municipal Surcharge (%)	1.342%	D.04-06-015, p19 "municipal franchise fee"	

Appendix D for 2005 MPR Resolution - Gas Forecast Inputs

Row No.	Input Category	Input	Units	Baseload Inputs	Notes
1	**Henry Hub Forecasts /1**	CERA, PIRA, or Global Insight /2	$/MMBtu	N/A	20 yr. Henry Hub forecast (private - purchased)
2		Energy Information Administration (EIA)	$/MMBtu	N/A	EIA (Feb. 2006) - 20 yr.wellhead prices adjusted 10.8% to reflect Henry Hub forecast (public)
3	**General Inputs**	Transaction Cost	$/MMBtu	$0.082	D.04-06-015, pg. 26, reafirmed in D.05-12-042 (pg. A-7)
4		Transportation Escalation Rate	Percent-%	2.45%	Average of EIA 2006 GDP Chain-Type Price Index. See 2005 MPR model - Delivery_Tar Tab (Cell E9)
5		20-year WACC	Percent-%	8.72%	2005 MPR model - Cost Cap Tab (Cell D9)
6	**Municipal Surcharge**	SoCal Muni Surcharge	Percent-%	1.553%	Schedule G-MSUR - http://www.socalgas.com/regulatory/tariffs/tm2/pdf/G-MSUR.pdf
7		PG&E Muni Surcharge	Percent-%	1.130%	PG&E Rate Schedule GC-P: (1) http://www.pge.com/rates/tariffs/GCP_Current.xls and (2) http://www.pge.com/rates/tariffs/GSUR_Current.xls
8	**PG&E Gas Distrib. Rate**	Customer Access Charge	$/day	$179	http://www.pge.com/tariffs/pdf/G-EG.pdf
9		Proxy Plant Capacity	MW	500	2005 MPR model - Delivery_Tar Tab (Cell E15)
10		Heat Rate	MMBtu/MWh	7.30	2005 MPR model - Delivery_Tar Tab (Cell E16)
11		Capacity Factor	%	92%	2005 MPR model - Delivery_Tar Tab (Cell E17)
12		Monthly Gas Consumption	MMBtu	80,518	(Row 8 * Row 9* Row 10) * 24 hours
13		Unit Cost of Customer Access Charge	$/MMBtu	$0.0022	Row 7 / Row 11
14		Transportation Charge	$/MMBtu	$0.2337	http://www.pge.com/tariffs/pdf/G-EG.pdf
15	**SoCal Gas Distrib. Rate**	Customer Charge	$/month	$0.00000	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf
16		Transmission Charge	$/MMBtu	$0.3954	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf
17		Interstate Transportation Cost Surcharge	$/MMBtu	$0.0000	http://www.socalgas.com/regulatory/tariffs/tm2/pdf/GT-F.pdf

1/ The Henry Hub forecasts are inputs for the MPR - Henry Hub forecast - there are no specific baseload values.

2/ Due to contractual obligations requiring the CPUC to keep the forecast confidential, staff can not reveal which of the three firms the forecast was purchased from.