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SUSITNA UTILITY MEETING June 19, 1985 RESULTS OF SENSITIVITY ANALYSES

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LOAD FORECAST

Utility Load Forecast - June 1985

Utility Load Forecast	1985-2000 by Utility
Utility Load Forecast	1985-2020 Southern Railbelt
Utility Load Forecast	1985-2020 Northern Railbelt
Utility Load Forecast	1985-2020 Total Railbelt

Utility Load Forecast - November 1984

Utility Load Forecast	1985-2000 by Utility
Utility Load Forecast	1985-2020 Total Railbelt

EXISTING GENERATION SYSTEM

AML
CEA
FMUS
GVEA

UTILITY SHORT-TERM EXPANSION PLANS (1985-1995)

Plant Parameters and Costs
Northern Railbelt
Southern Railbelt
Total Railbelt

LONG-TERM EXPANSION PLANS

Index to Sensitivity Analyses
New Plant Parameters and Costs
New Thermal Additions
New Hydroelectric Additions (EFC)

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SUSITNA UTILITY MEETING June 19, 1985 RESULTS OF SENSITIVITY ANALYSES

LONG-TERM EXPANSION PLANS (cont'd.)

0. Base Analysis (5 TCF Gas)
 - Cost of Energy
 - State Contribution
 - Expansion Plans
 - With-Susitna
 - Without-Susitna
 - Fuel Price Summary
1. 2 TCF Gas
 - (Same as above)
2. Low Gas Price
 - (Same as above)
3. Low Gas & Coal Price
 - (Same as above)
4. Low Coal Price with Diamond Plant
 - (Same as above)
5. Low Finance
 - (Same as above)
6. Low Inflation
 - (Same as above)
7. Matanuska
 - (Same as above)
8. Phase I
 - (Same as above)
9. No Coal Export
 - (Same as above)
10. Keetna
 - (Same as above)

SUMMARY RESULTS

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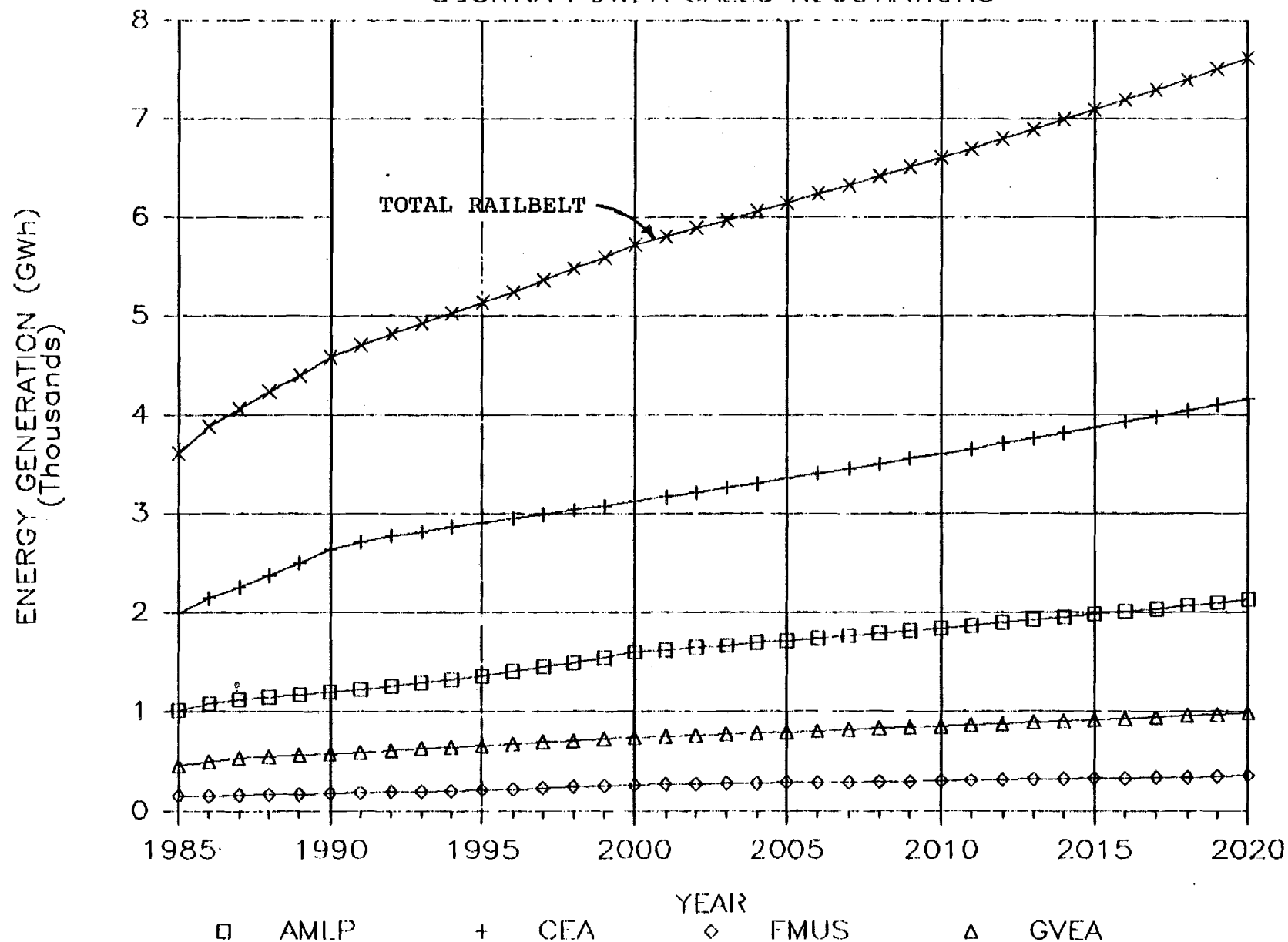
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UTILITY LOAD FORECAST -
JUNE 1985

NOTE: The June 85 Utility Load
Forecast reflects the April 85
GVEA Power Requirements Study
results and revised load growth
beyond the years 2000 in the
APA Reference Case Forecast.

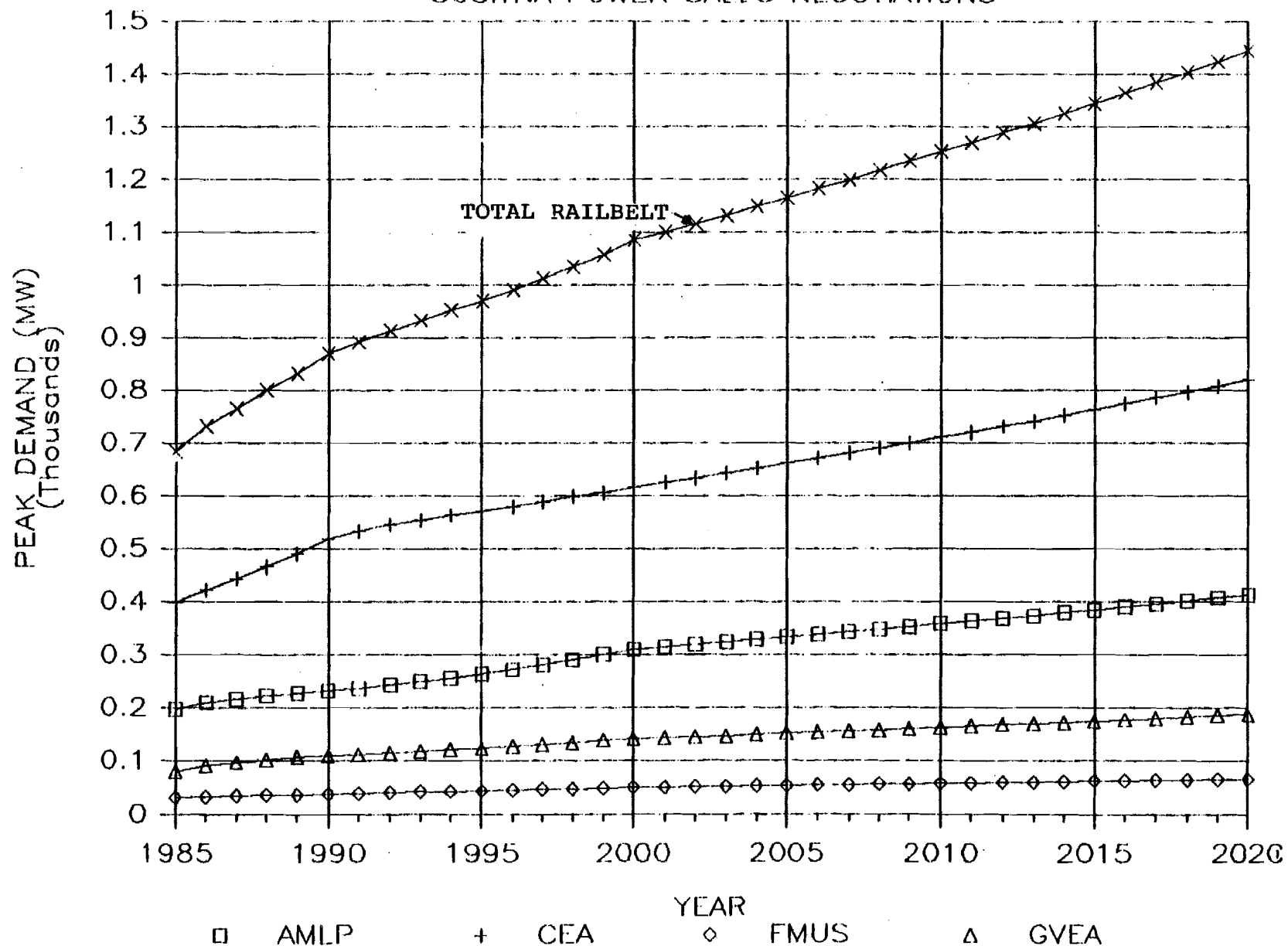
Utility Load Forecast -- Energy

SUSITNA POWER SALES NEGOTIATIONS



Utility Load Forecast -- Peak Demand

SUSITNA POWER SALES NEGOTIATIONS



SUSITNA POWER SALES NEGOTIATIONS

Table 1 - RAILBELT UTILITIES' LOAD FORECAST, JUNE 1985

YEAR	CEA/NEA/HEA/SES			AMPL			FMUS			GVEA 1/			PEAK COINCIDENCE FACTOR 2/ (percent)	RAILBELT TOTAL		
	ENERGY	PEAK	LOAD FACTOR	ENERGY	PEAK	LOAD FACTOR	ENERGY	PEAK	LOAD FACTOR	ENERGY	PEAK	LOAD FACTOR		ENERGY	COIN. PEAK	LOAD FACTOR
	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)		(GWh)	(MW)	(percent)
1985	1992	399	57.0	1017	198	58.6	150	31	55.2	451	81	63.6	96.6	3610	685	60.2
1986	2147	423	57.9	1080	210	58.7	155	33	53.6	501	92	62.2	96.6	3883	732	60.5
1987	2257	444	58.0	1118	217	58.8	159	34	53.4	526	97	61.9	96.6	4060	765	60.6
1988	2374	467	58.0	1148	223	58.8	164	35	53.5	547	103	60.6	96.6	4233	800	60.4
1989	2497	491	58.1	1174	228	58.8	168	36	53.3	562	107	60.0	96.6	4401	833	60.3
1990	2637	519	58.0	1200	233	58.8	171	38	51.4	576	110	59.8	96.6	4584	869	60.2
1991	2713	534	58.0	1225	238	58.8	179	40	51.1	591	112	60.2	96.6	4708	893	60.2
1992	2772	546	58.0	1255	244	58.7	187	41	52.1	607	115	60.3	96.6	4821	914	60.2
1993	2820	555	58.0	1288	250	58.8	194	42	52.7	627	119	60.1	96.6	4929	933	60.3
1994	2864	564	58.0	1323	257	58.8	202	43	53.6	642	122	60.1 3/	96.6	5031	952	60.3
1995	2907	572	58.0	1361	264	58.9	210	44	54.5	657	125	60.0	96.6	5135	971	60.4
1996	2949	580	58.0	1405	273	58.8	220	45	55.8	673	128	59.9	96.6	5247	991	60.4
1997	2993	589	58.0	1451	282	58.7 3/	231	46	57.3	689	131	59.8	96.6	5364	1013	60.5
1998	3036	598	58.0 3/	1499	291	58.7	241	47	58.5	706	135	59.8	96.6	5481	1035	60.5
1999	3080	607	57.9	1548	301	58.7	252	49	58.7	723	138	59.7	96.6	5602	1058	60.4
2000	3124	616	57.9	1598	311	58.7	262	50	59.8	740	142	59.6	97.0	5724	1085	60.2

1/ Golden Valley Electric Association load forecast based on April 1985 Power Requirements Study.

2/ Coincidence factor is applied to peak demands only.

3/ Energy and peak demands beyond footnoted year were extrapolated based on the annual growth rate for the preceding year.

SUSITNA POWER SALES NEGOTIATIONS

Table 2 - SOUTHERN RAILBELT UTILITIES' LOAD FORECAST, JUNE 1985

YEAR	AML ¹			CEA/MEA/HEA/SES			PEAK COINCIDENCE FACTOR 1/ (percent)	SOUTH RAILBELT TOTAL		
	ENERGY	PEAK	LOAD	ENERGY	PEAK	LOAD		ENERGY	COIN.	LOAD
	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)		(GWh)	(MW)	(percent)
1985	1017	198	58.6	1992	399	57.0	96.6	3009	577	59.6
1986	1080	210	58.7	2147	423	57.9	96.6	3227	611	60.2
1987	1118	217	58.8	2257	444	58.0	96.6	3375	639	60.3
1988	1148	223	58.8	2374	467	58.0	96.6	3522	667	60.3
1989	1174	228	58.8	2497	491	58.1	96.6	3671	695	60.3
1990	1200	233	58.8	2637	519	58.0	96.6	3837	726	60.3
1991	1225	238	58.8	2713	534	58.0	96.6	3938	746	60.3
1992	1255	244	58.7	2772	546	58.0	96.6	4027	763	60.2
1993	1288	250	58.8	2820	555	58.0	96.6	4108	778	60.3
1994	1323	257	58.8	2864	564	58.0	96.6	4187	793	60.3
1995	1361	264	58.9	2907	572	58.0	96.6	4268	808	60.3
1996	1405	273	58.8	2949	580	58.0	96.6	4354	824	60.3
1997	1451	282	58.7	2993	589	58.0 2/	96.6	4444	841	60.3
1998	1499	291	58.7 2/	3036	598	58.0	96.6	4535	859	60.3
1999	1548	301	58.7	3080	607	57.9	96.6	4627	877	60.2
2000	1598	311	58.7	3124	616	57.9	97.0	4722	899	59.9
2001	1621	315	58.7 3/	3169	625	57.9 3/	97.0	4790	912	59.9
2002	1645	320	58.7	3214	634	57.9	97.0	4859	926	59.9
2003	1668	324	58.7	3261	643	57.9	97.0	4929	939	59.9
2004	1692	329	58.7	3308	653	57.9	97.0	5000	952	59.9
2005	1717	334	58.7	3355	662	57.9	97.0	5072	966	59.9
2006	1741	339	58.7	3404	672	57.9	97.0	5145	980	59.9
2007	1766	344	58.7	3453	681	57.9	97.0	5219	994	59.9
2008	1792	348	58.7	3502	691	57.9	97.0	5294	1008	59.9
2009	1818	354	58.7	3553	701	57.9	97.0	5371	1023	59.9
2010	1844	359	58.7	3604	711	57.9	97.0	5448	1038	59.9
2011	1870	364	58.7	3656	721	57.9	97.0	5526	1053	59.9
2012	1897	369	58.7	3709	732	57.9	97.0	5606	1068	59.9
2013	1925	374	58.7	3762	742	57.9	97.0	5687	1083	59.9
2014	1952	380	58.7	3816	753	57.9	97.0	5769	1099	59.9
2015	1981	385	58.7	3871	764	57.9	97.0	5852	1115	59.9
2016	2009	391	58.7	3927	775	57.9	97.0	5936	1131	59.9
2017	2038	396	58.7	3983	786	57.9	97.0	6021	1147	59.9
2018	2067	402	58.7	4041	797	57.9	97.0	6108	1163	59.9
2019	2097	408	58.7	4099	809	57.9	97.0	6196	1180	59.9
2020	2127	414	58.7	4158	820	57.9	97.0	6285	1197	59.9

1/ Coincidence factor is applied to peak demands only.

2/ Energy and peak demands between the footnoted year and 2000 were extrapolated based on the annual growth rate for the footnoted year.

3/ Energy and peak demands for the period 2001-2020 were extrapolated based on the average annual growth rate of the Power Authority's Reference Case forecast for the period 2000-2010.

SUSITNA POWER SALES NEGOTIATIONS

Table 3 - NORTHERN RAILBELT UTILITIES' LOAD FORECAST, JUNE 1985

YEAR	FMUS			GVEA 1/			PEAK COINCIDENCE FACTOR 2/	NORTH RAILBELT TOTAL		
	ENERGY	PEAK	LOAD	ENERGY	PEAK	LOAD		ENERGY	COIN.	LOAD
	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)		(GWh)	(MW)	(percent)
1985	150	31	55.2	451	81	63.6	96.6	601	108	63.4
1986	155	33	53.6	501	92	62.2	96.6	656	121	62.0
1987	159	34	53.4	526	97	61.9	96.6	685	127	61.8
1988	164	35	53.5	547	103	60.6	96.6	711	133	60.9
1989	168	36	53.3	562	107	60.0	96.6	730	138	60.3
1990	171	38	51.4	576	110	59.8	96.6	747	143	59.6
1991	179	40	51.1	591	112	60.2	96.6	770	147	59.9
1992	187	41	52.1	607	115	60.3	96.6	794	151	60.1
1993	194	42	52.7	627	119	60.1	96.6	821	156	60.3
1994	202	43	53.6	642	122	60.1 3/	96.6	844	159	60.4
1995	210	44	54.5	657	125	60.0	96.6	867	163	60.6
1996	220	45	55.8	673	128	59.9	96.6	893	167	60.9
1997	231	46	57.3	689	131	59.8	96.6	920	171	61.3
1998	241	47	58.5	706	135	59.8	96.6	947	176	61.5
1999	252	49	58.7	723	138	59.7	96.6	975	181	61.5
2000	262	50	59.8	740	142	59.6	97.0	1002	186	61.5
2001	266	51	59.8 4/	750	144	59.6 4/	97.0	1016	189	61.5
2002	270	51	59.8	761	146	59.6	97.0	1031	191	61.5
2003	273	52	59.8	772	148	59.6	97.0	1046	194	61.5
2004	277	53	59.8	783	150	59.6	97.0	1061	197	61.5
2005	281	54	59.8	795	152	59.6	97.0	1076	200	61.5
2006	285	54	59.8	806	154	59.6	97.0	1092	203	61.5
2007	290	55	59.8	818	157	59.6	97.0	1107	205	61.5
2008	294	56	59.8	829	159	59.6	97.0	1123	208	61.5
2009	298	57	59.8	841	161	59.6	97.0	1139	211	61.5
2010	302	58	59.8	854	163	59.6	97.0	1156	214	61.5
2011	307	59	59.8	866	166	59.6	97.0	1172	218	61.5
2012	311	59	59.8	878	168	59.6	97.0	1189	221	61.5
2013	316	60	59.8	891	171	59.6	97.0	1206	224	61.5
2014	320	61	59.8	904	173	59.6	97.0	1224	227	61.5
2015	325	62	59.8	917	176	59.6	97.0	1241	230	61.5
2016	329	63	59.8	930	178	59.6	97.0	1259	234	61.5
2017	334	64	59.8	943	181	59.6	97.0	1277	237	61.5
2018	339	65	59.8	957	183	59.6	97.0	1296	240	61.5
2019	344	66	59.8	971	186	59.6	97.0	1315	244	61.5
2020	349	67	59.8	985	189	59.6	97.0	1333	247	61.5

1/ Golden Valley Electric Association load forecast based on April 1985 Power Requirements Study.

2/ Coincidence factor is applied to peak demands only.

3/ Energy and peak demands between the footnoted year and 2000 were extrapolated based on the annual growth rate for the footnoted year.

4/ Energy and peak demands for the period 2001-2020 were extrapolated based on the average annual growth rate of the Power Authority's Reference Case forecast for the period 2000-2010.

SUSITNA POWER SALES NEGOTIATIONS

Table 4 - TOTAL RAILBELT UTILITIES' LOAD FORECAST, JUNE 1985

YEAR	SOUTHERN RAILBELT			NORTHERN RAILBELT			JUNE 1985 RAILBELT TOTAL		
	ENERGY	PEAK	LOAD	ENERGY	PEAK	LOAD	ENERGY	COIN.	LOAD
	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)
1985	3009	577	59.6	601	108	63.4	3610	685	60.2
1986	3227	611	60.2	656	121	62.0	3883	732	60.5
1987	3375	639	60.3	685	127	61.8	4060	765	60.6
1988	3522	667	60.3	711	133	60.9	4233	800	60.4
1989	3671	695	60.3	730	138	60.3	4401	833	60.3
1990	3837	726	60.3	747	143	59.6	4584	869	60.2
1991	3938	746	60.3	770	147	59.9	4708	893	60.2
1992	4027	763	60.2	794	151	60.1	4821	914	60.2
1993	4108	778	60.3	821	156	60.3	4929	933	60.3
1994	4187	793	60.3	844	159	60.4	5031	952	60.3
1995	4268	808	60.3	867	163	60.6	5135	971	60.4
1996	4354	824	60.3	893	167	60.9	5247	991	60.4
1997	4444	841	60.3	920	171	61.3	5364	1013	60.5
1998	4535	859	60.3	947	176	61.5	5481	1035	60.5
1999	4627	877	60.2	975	181	61.5	5602	1058	60.4
2000	4722	899	59.9	1002	186	61.5	5724	1085	60.2
2001	4790	912	59.9	1016	189	61.5	5806	1101	60.2
2002	4859	926	59.9	1031	191	61.5	5890	1117	60.2
2003	4929	939	59.9	1046	194	61.5	5975	1133	60.2
2004	5000	952	59.9	1061	197	61.5	6061	1149	60.2
2005	5072	966	59.9	1076	200	61.5	6148	1166	60.2
2006	5145	980	59.9	1092	203	61.5	6237	1183	60.2
2007	5219	994	59.9	1107	205	61.5	6326	1200	60.2
2008	5294	1008	59.9	1123	208	61.5	6418	1217	60.2
2009	5371	1023	59.9	1139	211	61.5	6510	1234	60.2
2010	5448	1038	59.9	1156	214	61.5	6604	1252	60.2
2011	5526	1053	59.9	1172	218	61.5	6699	1270	60.2
2012	5606	1068	59.9	1189	221	61.5	6795	1288	60.2
2013	5687	1083	59.9	1206	224	61.5	6893	1307	60.2
2014	5769	1099	59.9	1224	227	61.5	6992	1326	60.2
2015	5852	1115	59.9	1241	230	61.5	7093	1345	60.2
2016	5936	1131	59.9	1259	234	61.5	7195	1364	60.2
2017	6021	1147	59.9	1277	237	61.5	7299	1384	60.2
2018	6108	1163	59.9	1296	240	61.5	7404	1404	60.2
2019	6196	1180	59.9	1315	244	61.5	7511	1424	60.2
2020	6285	1197	59.9	1333	247	61.5	7619	1445	60.2

UTILITY LOAD FORECAST -
NOVEMBER 1984

Utility Load Forecast Comparison

SUSITNA POWER SALES NEGOTIATIONS

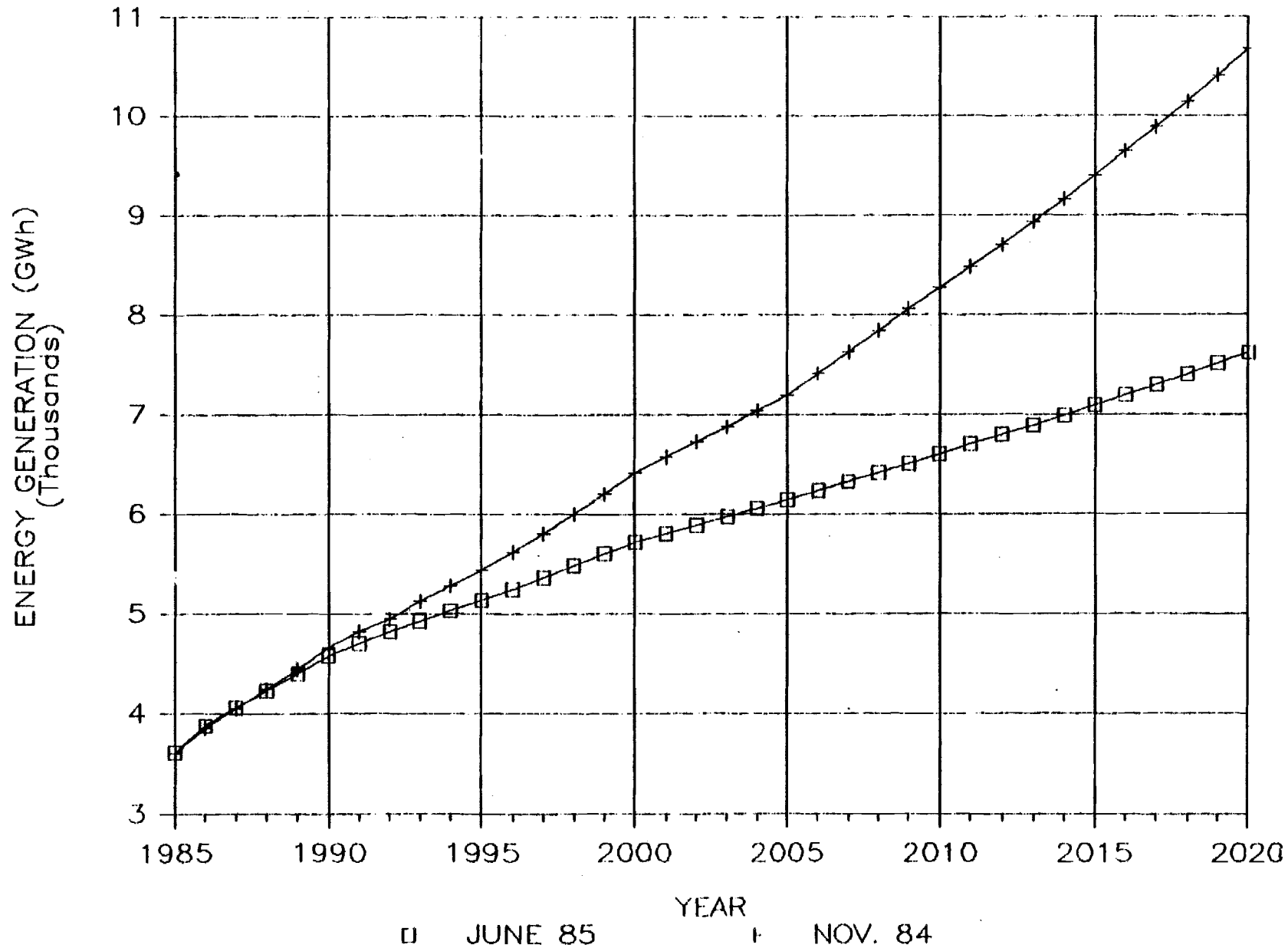


TABLE 5

SUSITNA POWER SALES NEGOTIATIONS

RAILBELT UTILITY LOAD FORECAST

NOVEMBER 1984

Year	CEA ^{1/}			AML			FMUS			GVEA			RAILBELT TOTAL		
	Energy (GWh)	Peak (MW)	Load Factor (%)	Energy (GWh)	Peak (MW)	Load Factor (%)	Energy (GWh)	Peak (MW)	Load Factor (%)	Energy (GWh)	Peak (MW)	Load Factor (%)	Energy (GWh)	Peak (MW)	Load Factor (%)
1985	1992	399	57.0	1017	198	58.6	150	31	55.2	447	89	57.3	3606	717	57.4
1986	2147	423	57.9	1080	210	58.7	155	33	53.6	482	96	57.3	3864	762	57.9
1987	2257	444	58.0	1118	217	58.8	159	34	53.4	520	103	57.6	4054	798	58.0
1988	2374	467	58.0	1148	223	58.8	164	35	53.5	561	111	57.7	4247	836	58.0
1989	2497	491	58.1	1174	228	58.8	168	36	53.3	605	119	58.0	4444	874	58.0
1990	2637	519	58.0	1200	233	58.8	171	38	51.4	653	128	58.2	4661	918	58.0
1991	2713	534	58.0	1225	238	58.8	179	40	51.1	706	136	59.3	4823	948	58.1
1992	2772	546	58.0	1255	244	58.7	187	41	52.1	765	145	60.2	4979	976	58.2
1993	2820	555	58.0	1288	250	58.8	194	42	52.7	827	154	61.3	5129	1001	58.5
1994	2864	564	58.0	1323	257	58.8	202	43	53.6	895	164	62.3	5284	1028	58.7
1995	2907	572	58.0	1361	264	58.9	210	44	54.5	967	174	63.4	5445	1054	59.0
1996	2949	580	58.0	1405	273	58.8	220	45	55.8	1045	185	64.5	5619	1083	59.2
1997	2993	589	58.0	1451 ^{2/}	282 ^{2/}	58.7	231	46	57.3	1130	197	65.5	5805	1114	59.5
1998	3036 ^{2/}	598 ^{2/}	58.0	1498	291	58.8	241	47	58.5	1222	209	66.7	5907	1145	59.8
1999	3080	607	57.9	1548	301	58.7	252	49	58.7	1322	223	67.7	6202	1180	60.0
2000	3124	616	57.9	1598	311	58.7	262	50	59.8	1432	237	69.0	6416	1214	60.3

^{1/} Net generation at plant, includes CEA retail sales and sales for resale to HEA, MEA, and SES.

^{2/} Energy and peak beyond the footnoted year were extrapolated at the annual growth rate for the preceding year.

Table 6 - COMPARISON OF UTILITY LOAD FORECASTS, NOV. 1984 AND JUNE 1985

YEAR	JUNE 1985 RAILBELT TOTAL			NOV. 1984 RAILBELT TOTAL		
	ENERGY	COIN. PEAK	LOAD FACTOR	ENERGY	COIN. PEAK	LOAD FACTOR
	(GWh)	(MW)	(percent)	(GWh)	(MW)	(percent)
	-----	-----	-----	-----	-----	-----
1985	3610	685	60.2	3606	717	57.4
1986	3883	732	60.5	3864	762	57.9
1987	4060	765	60.6	4054	798	58.0
1988	4233	800	60.4	4247	836	58.0
1989	4401	833	60.3	4444	874	58.0
1990	4584	869	60.2	4661	918	58.0
1991	4708	893	60.2	4823	948	58.1
1992	4821	914	60.2	4949	976	57.9
1993	4929	933	60.3	5129	1001	58.5
1994	5031	952	60.3	5284	1028	58.7
1995	5135	971	60.4	5445	1054	59.0
1996	5247	991	60.4	5619	1083	59.2
1997	5364	1013	60.5	5805	1114	59.5
1998	5481	1035	60.5	5997	1145	59.8
1999	5602	1058	60.4	6202	1180	60.0
2000	5724	1085	60.2	6416	1214	60.3
2001	5806	1101	60.2	6571	1243	60.3
2002	5890	1117	60.2	6726	1287	59.7
2003	5975	1133	60.2	6882	1325	59.3
2004	6061	1149	60.2	7039	1346	59.7
2005	6148	1166	60.2	7194	1375	59.7
2006	6237	1183	60.2	7411	1416	59.7
2007	6326	1200	60.2	7627	1456	59.8
2008	6418	1217	60.2	7843	1498	59.8
2009	6510	1234	60.2	8060	1540	59.7
2010	6604	1252	60.2	8276	1580	59.8
2011	6699	1270	60.2	8489	1620	59.8
2012	6795	1288	60.2	8708	1662	59.8
2013	6893	1307	60.2	8933	1704	59.8
2014	6992	1326	60.2	9164	1748	59.8
2015	7093	1345	60.2	9400	1793	59.8
2016	7195	1364	60.2	9643	1839	59.9
2017	7299	1384	60.2	9891	1886	59.9
2018	7404	1404	60.2	10147	1934	59.9
2019	7511	1424	60.2	10408	1984	59.9
2020	7619	1445	60.2	10677	2034	59.9

SUSITNA POWER SALES NEGOTIATIONS

Table 7 - ANCHORAGE MUNICIPAL LIGHT & POWER
EXISTING PLANT DATA, JUNE 1985

UNIT NAME	OPERATION PERIOD		UNIT CAPACITY		HEAT RATE @ MAX CAPACITY (BTU/KWH)	O&M COSTS		OUTAGE RATES	
	ONLINE DATE	RETIRE DATE	WINTER RATING	SUMMER RATING		FIXED O&M	VARIABLE O&M	PLANNED OUTAGE	FORCED OUTAGE
			(MW)	(MW)		(\$/kW/yr)	(\$/MWh)	(% time)	(% time)
AML PCT#1	1962	1990	16.2	12.4	15329	10.12	5.67	10.0 *	2.0
AML PCT#2	1964	1990	16.2	12.4	15329	10.12	5.67	7.7 *	2.0
AML PCT#3	1968	1991	19.9	16.0	14089	10.12	5.67	10.3 *	2.0
AML PCT#4	1972	1992	33.8	28.0	13901	10.12	5.67	11.5 *	2.0
AM CC 56	1979	1999	47.5	39.8	11209	12.79	0.92	9.0 *	2.0
AM CC 76	1979	1999	109.3	92.4	9018	12.79	0.92	9.0 *	2.0
AML PCT#8	1984	2009	87.0	73.0	12000	12.79	0.92	12.8 *	2.0
EKLUTNA	1955	----	16.0	----	----	----	19.0	----	----

* Note: Planned outage rate shown is an equivalent value based on maintenance schedule provided by CEA.

SUSITNA POWER SALES NEGOTIATIONS

Table 8 - CHUGACH ELECTRIC ASSOCIATION
EXISTING PLANT DATA, JUNE 1985

UNIT NAME	OPERATION PERIOD		UNIT CAPACITY		HEAT RATE @ MAX CAPACITY (BTU/KWh)	O&M COSTS		OUTAGE RATES	
	ONLINE	RETIRE	WINTER	SUMMER		FIXED	VARIABLE	PLANNED	FORCED
	DATE	DATE	RATING	RATING		O&M	O&M	OUTAGE	OUTAGE
			(MW)	(MW)		(\$/kW/yr)	(\$/MWh)	(% time)	(% time)
BEL CT#1	1968	1996	16.1	13.4	15314	12.27	1.29	10.3 *	6.0
BEL CT#2	1968	1996	16.1	13.4	15314	12.27	1.29	9.0 *	6.0
BEL CT#3	1972	1996	49.5	36.2	11344	12.27	1.29	12.8 *	6.0
BEL CT#5	1972	1996	67.3	49.3	12963	12.27	1.29	12.8 *	6.0
BEL CC 68	1976	2006	100.6	87.4	9391	12.27	1.29	11.5 *	8.0
BEL CC 78	1976	2006	100.6	87.4	9391	12.27	1.29	11.5 *	8.0
BERNCT#2	1971	1991	18.4	14.8	15957	11.53	1.54	9.0 *	6.0
BERNCT#3	1978	1998	27.2	22.2	15023	11.53	1.54	10.3 *	6.0
BERNCT#4	1978	1998	27.2	22.2	15023	11.53	1.54	12.8 *	6.0
INT CT#1	1965	1996	14.3	12.3	19371	20.44	13.11	7.7 *	6.0
INT CT#2	1965	1996	14.3	12.3	19371	20.44	13.11	7.7 *	6.0
INT CT#3	1965	1996	19.9	16.5	16627	20.44	13.11	15.4 *	6.0
SELDIC#1	1952	1990	0.3	0.3	14998	2.75	37.56	4.0 *	5.0
SELDIC#2	1964	1994	0.6	0.6	12006	2.75	37.56	4.0 *	5.0
SELDIC#3	1970	2000	0.6	0.6	12006	2.75	37.56	4.0 *	5.0
SELDIC#4	1982	2012	0.6	0.6	12006	2.75	37.56	4.0 *	5.0
SES IC#1	1965	1990	1.5	1.5	15000	0.61	5.97	1.0 *	5.0
SES IC#2	1965	1990	1.5	1.5	15000	0.61	5.97	1.0 *	5.0
SES IC#3	1965	1995	2.5	2.5	15000	0.61	5.97	1.0 *	5.0
EKLUTNA	1955	----	14.0	----	----	----	19.00	----	----
COOPER	1961	----	15.0	----	----	----	7.40	----	----

* Note: Planned outage rate shown is an equivalent
value based on maintenance schedule provided
by CEA.

SUSITNA POWER SALES NEGOTIATIONS

Table 9 - FAIRBANKS MUNICIPAL UTILITY SYSTEM
EXISTING PLANT DATA, JUNE 1985

UNIT NAME	OPERATION PERIOD		UNIT CAPACITY		HEAT RATE @ MAX CAPACITY	O&M COSTS		OUTAGE RATES	
	ONLINE DATE	RETIRE DATE	WINTER RATING	SUMMER RATING		FIXED O&M	VARIABLE O&M	PLANNED OUTAGE	FORCED OUTAGE
			(MW)	(MW)		(\$/kW/yr)	(\$/MWh)	(% time)	(% time)
CHENST#1	1954	1986	5.1	5.1	15968	51.57	1.23	6.0	6.0
CHENST#2	1952	1986	2.0	2.0	18049	51.57	1.23	6.0	6.0
CHENST#3	1952	1986	1.5	1.5	18091	51.57	1.23	6.0	6.0
CHENCT#4	1963	1985	6.1	4.7	12894	1.02	3.63	3.0	8.0
CHENST#5	1970	1987	20.0	20.0	14236	74.20	0.64	6.0	6.0
CHENCT#6	1976	2006	26.1	21.0	12733	0.43	0.06	3.0	8.0
FMUSIC#1	1967	1992	2.8	2.8	12128	0.88	23.02	2.0	5.0
FMUSIC#2	1968	1992	2.8	2.8	12128	0.88	23.02	2.0	5.0
FMUSIC#3	1969	1992	2.8	2.8	12128	0.88	23.02	2.0	5.0

SUSITNA POWER SALES NEGOTIATIONS

Table 10 - GOLDEN VALLEY ELECTRIC ASSOCIATION
EXISTING PLANT DATA, JUNE 1985

UNIT NAME	OPERATION PERIOD		UNIT CAPACITY		HEAT RATE @ MAX CAPACITY (BTU/KWh)	O&M COSTS		OUTAGE RATES	
	ONLINE	RETIRE	WINTER	SUMMER		FIXED	VARIABLE	PLANNED	FORCED
	DATE	DATE	RATING	RATING		O&M	O&M	OUTAGE	OUTAGE
			(MW)	(MW)		(\$/kW/yr)	(\$/MWh)	(% time)	(% time)
HEALST#1	1967	2002	25.0	25.0	12750	61.72	4.32	7.0	3.0
HEALIC#2	1967	1997	2.6	2.6	11210	0.61	5.97	20.0	1.0
NOPOCT#1	1976	2006	64.3	52.8	10221	8.84	0.59	15.0	1.0
NOPOCT#2	1977	2007	64.3	52.8	10221	8.84	0.59	15.0	1.0
ZEN CT#1	1971	2001	18.0	15.7	14869	8.84	0.59	15.0	1.0
ZEN CT#2	1972	2002	18.0	15.7	14869	8.84	0.59	15.0	1.0
DSL IC#1	1961	1991	1.9	1.9	11209	0.61	5.97	20.0	1.0
DSL IC#2	1961	1991	1.9	1.9	11209	0.61	5.97	20.0	1.0
DSL IC#3	1964	1991	1.9	1.9	11209	0.61	5.97	20.0	1.0
DSL IC#5	1970	2000	2.6	2.6	11210	0.61	5.97	20.0	1.0
DSL IC#6	1970	2000	2.6	2.6	11210	0.61	5.97	20.0	1.0
UAF IC#7	1970	1996	1.9	1.9	11209	0.61	5.97	20.0	1.0
UAF IC#8	1970	1996	1.9	1.9	11209	0.61	5.97	20.0	1.0

SUSITNA POWER SALES NEGOTIATIONS

Table 11 - UTILITY SHORT-TERM ADDITIONS 1985-1995
PLANT DATA AND COSTS, JUNE 1985

UNIT NAME	COMPANY	OPERATION PERIOD 1/		UNIT CAPACITY		HEAT RATE @ MAX CAPACITY	O&M COSTS		OUTAGE RATES		CAPITAL COST (\$ 1985)	
		ONLINE DATE	RETIRE DATE	WINTER RATING	SUMMER RATING		FIXED O&M	VARIABLE O&M	PLANNED OUTAGE	FORCED OUTAGE	UNIT COST	TOTAL COST
				(MW)	(MW)	(BTU/KWH)	(\$/KW/yr)	(\$/MWh)	(% time)	(% time)	(\$/KW)	(\$million)
GTK CT#1	AEGLT	1985	2010	45.0	38.0	12785	8.43	0.59	9.0 *	6.0	360	16.2
GTK CT#2	AEGLT	1988	2013	45.0	38.0	12785	8.43	0.59	5.8 *	6.0	360	16.2
SES IC#4	SES	1986	2006	2.5	2.5	15000	0.61	5.97	1.0	5.0	500	1.3
SES IC#5	SES	1986	2006	2.5	2.5	15000	0.61	5.97	1.0	5.0	500	1.3
SES IC#6	SES	1990	2010	2.5	2.5	15000	0.61	5.97	1.0	5.0	500	1.3
CHENST#5	FMUS	1987	2002	23.0	23.0	13268	61.72	4.32	6.0	6.0	2/	5.2
CHENST#7	FMUS	1994	2024	25.0	25.0	13268	61.72	4.32	6.0	6.0	2/	15.6
CEA CT	CEA	1988	2013	87.0	87.0	12000	8.43	0.59	3.8 *	6.0	360	31.3
AML PCT#9	AML P	1991	2016	87.0	87.0	12000	12.79	0.92	12.8 *	2.0	310	27.0

* Note: Planned outage rate shown is an equivalent value based on maintenance schedule provided by CEA.

1/ Unit is online in January of stated year.

2/ FMUS Generation expenditure: 1986 Coal Handling - 7.8 \$million
1987 CHENST#5 - 5.2 \$million
1989 New Boiler - 20.9 \$million
1994 CHENST#7 - 15.6 \$million

SUSITNA POWER SALES NEGOTIATIONS

DEC 1984 CAPACITY

AMLP 345.9
 CEA 479.1
 FMUS 69.2
 GVEA 206.9

S. TOTAL 825.0
 N. TOTAL 276.1

Table 12 - SOUTH RAILBELT SCHEDULE OF CAPACITY ADDITIONS AND RETIREMENTS, JUNE 1985
Capacity in Megawatts

YEAR	COMPANY NO. 1 -- ANCH. ML&P						COMPANY NO. 2 -- CHUGACH ELEC.						SOUTH RAILBELT TOTALS			
	COAL STEAM	COMB. CYCLE	GAS CT	BRADLEY	RETIRE- MENTS	TOTAL CAPACITY ON-LINE	COAL STEAM	COMB. CYCLE	GAS CT	DIESEL IC	BRADLEY	RETIRE- MENTS	TOTAL CAPACITY ON-LINE	TOTAL ADDITIONS	TOTAL RETIRE- MENTS	TOTAL CAPACITY ON-LINE
1985						345.9			45.0				524.1	45.0		870.0
1986						345.9				5.0			529.1	5.0		875.0
1987						345.9							529.1			875.0
1988						345.9			132.0				661.1	132.0		1007.0
1989						345.9							661.1			1007.0
1990				22.0	32.4	335.5				2.5	51.0	3.3	711.3	75.5	35.7	1046.8
1991			87.0		19.9	402.6						18.4	692.9	87.0	38.3	1095.5
1992					33.8	368.8							692.9		33.8	1061.7
1993						368.8							692.9			1061.7
1994						368.8						0.6	692.3		0.6	1061.1
1995				11.0		379.8					25.5	2.5	715.3	36.5	2.5	1095.1
1996						379.8						197.5	517.8		197.5	897.6

SUSITNA POWER SALES NEGOTIATIONS

Table 13 - NORTH RAILBELT SCHEDULE OF CAPACITY ADDITIONS AND RETIREMENTS, JUNE 1985
Capacity in Megawatts

YEAR	COMPANY NO. 3 - FMUS						COMPANY NO. 4 - GVEA						NORTH RAILBELT TOTALS		
	COAL STEAM	COMB. CYCLE	OIL CT	BRADLEY	RETIRE- MENTS	TOTAL CAPACITY ON-LINE	COAL STEAM	COMB. CYCLE	GAS CT	BRADLEY	RETIRE- MENTS	TOTAL CAPACITY ON-LINE	TOTAL ADDITIONS	TOTAL RETIRE- MENTS	TOTAL CAPACITY ON-LINE
1985					6.1	63.1						206.9		6.1	270.0
1986					8.6	54.5						206.9		8.6	261.4
1987		3.0				57.5						206.9	3.0		264.4
1988						57.5						206.9			264.4
1989						57.5						206.9			264.4
1990				4.0		61.5				13.0		219.9	17.0		281.4
1991						61.5					5.7	214.2		5.7	275.7
1992						61.5						214.2			275.7
1993						61.5						214.2			275.7
1994		25.0				86.5						214.2	25.0		300.7
1995				2.0		88.5				6.5		220.7	8.5		309.2
1996						88.5						220.7			309.2

SUSITNA POWER SALES NEGOTIATIONS

Table 14 - TOTAL RAILBELT SCHEDULE OF CAPACITY ADDITIONS AND RETIREMENTS, JUNE 1985
Capacity in Megawatts

[illegible]

INDEX TO SENSITIVITY ANALYSES

Sensitivity Analysis Parameters

Sensitivity Analysis Run	NO.	DESCRIPTION															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Base Analysis (5 TCF Gas)	0	X		X		X					X				X		
2 TCF Gas	1		X	X		X					X				X		
Low Gas Price	2	X			X	X					X				X		
Low Gas & Coal Price	3	X			X						X				X		
Low Coal Price with Diamond Plant	4	X		X				X			X				X		X
Low Finance	5	X		X		X						X			X		
Low Inflation	6	X		X		X							X		X		
Matanuska	7	X		X		X		X			X				X		
Phase I	8	X		X		X					X				X	X	
No Coal Export	9	X		X		X				X	X				X		
Keetna	10	X		X		X					X			X	X		

INDEX TO SENSITIVITY ANALYSES

SUSITNA HEP POWER SALES NEGOTIATIONS MAPS MODEL SENSITIVITY ANALYSIS PARAMETERS

1. 1999 Gas Peak Case. Cut-off date of 1999 for bringing new base load natural gas fired generation on-line.
2. 1996 Gas Peak Case. Cut-off date of 1996 for bringing new base load natural gas fired generation on-line.
3. Ramped Gas Price Case. For natural gas pricing, use the CEA-Enstar prices 1985 thru 1989. Then ramp the CEA-Enstar price upward, straight-line 1990 thru 1999 to match Sherman Clark prices in 1999.
4. CEA-Enstar Gas Price Case. For natural gas pricing, use CEA-Enstar through entire analysis period.
5. APA Coal Price Case. For all coal pricing, use the APA coal prices.
6. Nenana 0% Case. For Nenana coal, use APA 1985 price and 0% real price increase.
7. Beluga Low Coal Price Case. For Beluga Coal, use the Diamond Coal Beluga price of \$1.05/mm BTU in 1985 with 1.1% annual real price increase.
8. No Coal Export Case. For coal pricing at Beluga, use the price which results if there is no coal export facility.
9. Matanuska Case. For construction of coal fired plants, assume the Matanuska Power Project unit is installed in 1992, the two Nenana units next, and units at Beluga last.
10. 11.2% Financing Case. Use 11.2% cost of capital with 6.31% underlying inflation.
11. 10% Financing Case. Use 10% cost of capital with 6.31% underlying inflation.
12. 5% Inflation Case. Use 5% underlying inflation with 8.5% cost of capital.
13. Keetna Case. Includes the Keetna project in the thermal case.
14. Bradley Lake 3rd Unit Case. Assume installation of a third unit at Bradley Lake in 1995.

INDEX TO SENSITIVITY ANALYSES

15. Phase I Only Case. Assume the Susitna Project is staged and that only Phase I is ever completed.
16. Diamond Coal Case. Use the Diamond Coal capital and O&M cost for one Beluga unit installed in 1992.

ECONOMIC/FINANCE ASSUMPTIONS

<u>Case</u>	<u>Case Description</u>	<u>Cost of Money^{1/}</u>		<u>General Inflation Rate</u>
		<u>Susitna</u>	<u>Thermal</u>	
		%	%	%
0-4, 7-10		10.0	11.2	6.31
5	Low Finance	10.0	10.0	6.31
6	Low Inflation	8.5	9.7	5.00

1/ These rates to be used to compute cumulative present worth of system costs

June 12, 1985

NOTES TO RAILBELT COST OF POWER TABLES

1. Includes estimated annual debt service and estimated credits for reinvestment earnings on reserve funds.
2. Estimated debt service associated with "utility own" generation and transmission plant existing debt.
3. Estimated debt service on new "utility specified" generation additions assuming 100% debt financing. Interest rates assumed to be 11.75% for cooperatives and 10% for municipalities (10.25% and 8.5%, respectively, for Case 6).
4. Estimated debt service on new railbelt large thermal additions. Assumes 100% debt financing at 11.225% (10% for Case 5 and 9.7% for Case 6) and repayment over 30 years for coal plants and 25 years for combustion turbines. Includes credit for reinvestment earnings on reserve funds at 11% per year (9.5% for Case 6). Also includes net debt service on railbelt transmission additions which are assumed to be financed at 11.225% (10% for Case 5 and 9.7% for Case 6) and repaid over 35 years.
5. Estimated annual debt service on the Bradley Lake Project assuming 10% interest rate and \$218,000,000 State equity contribution.
6. Estimated debt service on the Susitna Project assuming 10% interest rate (8.5% for Case 6).
7. Railbelt fuel costs as estimated by Harza-Ebasco.
8. Total Railbelt operations and maintenance expense.
9. Based on annual expense of 1% of capital costs on large coal plants and 0.3% on Susitna. Includes estimates provided by the Authority for Bradley Lake.
10. Summation of all previous columns.
11. Estimated Railbelt energy requirements reduced by 3% for transmission losses.

Table 15 - UTILITY LONG-TERM ADDITIONS 1995-2020
PLANT DATA AND COSTS, JUNE 1985

UNIT NAME	COMPANY	UNIT CAPACITY		HEAT RATE @ MAX CAPACITY	O&M COSTS		OUTAGE RATES		CAPITAL COST (\$ 1985)	
		WINTER RATING	SUMMER RATING		FIXED O&M	VARIABLE O&M	PLANNED OUTAGE	FORCED OUTAGE	UNIT COST	TOTAL COST
		(MW)	(MW)		(\$/kW/yr)	(\$/MWh)	(% time)	(% time)	(\$/kW)	(\$million)
NENAST#1	APA	200.0	200.0	10300	61.72	4.32	8.0	5.7	2728	545.6
BEL ST#1	APA	200.0	200.0	10300	61.72	4.32	8.0	5.7	2564	512.8
MAT COAL	APA	153.0	153.0	10300	51.00	----	8.0	5.7	2680	410.0
DIA COAL	APA	141.0	141.0	10400	92.20	4.55	8.0	5.7	2270	320.0
BEL CC	APA	229.0	192.0	9200	13.39	0.67	7.0	8.0	659	150.9
NG CT#1	APA	87.0	73.0	12000	8.43	0.59	3.2	8.0	392	34.1
AM CC810 1/	AML P	114.5	96.0	9200	12.79	0.92	9.0 *	2.0		
AM CC910 1/	AML P	114.5	96.0	9200	12.79	0.92	9.0 *	2.0	568	28.4
TRANSMISSION										
PHASE I	APA	-----	-----	-----	-----	----	----	----	-----	244.0
PHASE II	APA	-----	-----	-----	-----	----	----	----	-----	130.0

* Note: Planned outage rate shown is an equivalent
value based on maintenance schedule provided
by CEA.

1/ Sensitivity Case 2 - low gas and low coal, AMLPCT#8 and
AMLPCT#9 are converted to combined cycle operation in 1994.

Table 16 - HYDROELECTRIC DATA

PROJECT	KEETNA (100 MW)	BRADLEY 1/ (90 MW)	STAGE I	STAGE II			STAGE III		
			----- Watana	----- Watana	----- Devil Canyon	----- Total	----- Watana Raise	----- Devil Canyon	----- Total
Average Energy (GWh) -----									
Jan	14	31	252	232	300	532	415	381	796
Feb	12	28	154	172	238	410	317	297	614
Mar	13	28	157	166	249	415	317	304	621
Apr	12	23	98	130	213	343	257	258	515
May	17	26	223	184	306	490	222	275	497
Jun	80	27	245	138	296	434	163	274	437
Jul	84	30	249	172	271	443	189	266	455
Aug	84	32	259	206	252	458	214	266	480
Sep	55	28	288	224	258	482	289	241	530
Oct	26	31	146	174	223	397	326	278	604
Nov	15	31	167	201	231	432	348	306	654
Dec	16	32	227	130	278	408	396	357	753
Average Annual	428	347	2465	2129	3115	5244	3453	3503	6956
Construction Cost (\$ million 1985)	1029	302	2828		1642		1410		

1/ In the sensitivity analysis a third 45 MW unit is added at the Bradley Lake Project in 1995. Estimated cost is \$20 million 1985.

Sensitivity
Analysis
Parameters

Sensitivity Analysis Run	NO.	DESCRIPTION
Base Analysis (5 TCF Gas)	1	1999 Gas Peak
	2	1996 Gas Peak
	3	Ramped Gas Price
	4	CEA-Enstar Gas Price
	5	APA Coal Price
	6	Nenana 0%
	7	Beluga Low Coal Price
	8	Matanuska
	9	No Coal Export
	10	11.2% Financing (Thermal only)
	11	10% Financing (Both)
	12	5% Inflation
	13	Keetna
	14	Bradley Lake 3rd Unit
	15	Phase I Only
	16	Diamond Coal
2 TCF Gas	1	X
Low Gas Price	2	X
Low Gas & Coal Price	3	X
Low Coal Price with Diamond Plant	4	X
Low Finance	5	X
Low Inflation	6	X
Matanuska	7	X
Phase I	8	X
No Coal Export	9	X
Keetna	10	X

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 0: BASE CASE ANALYSIS
WITHOUT SUSITNA

11-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS ON NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)	
	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)						
1985	24,638	1,974	0	0	0	47,500	23,000	0	97,112	3,502	2.8
1986	24,692	2,289	0	0	0	61,300	24,800	0	113,081	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,700	0	124,210	3,938	3.2
1988	24,910	9,946	0	0	0	81,800	29,200	0	145,856	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,400	0	166,721	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,400	33,900	484	185,516	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,800	37,400	514	211,061	4,567	4.6
1992	25,214	14,567	0	17,562	0	130,800	39,300	547	227,990	4,676	4.9
1993	25,196	14,567	0	17,562	0	147,800	42,100	581	247,806	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,100	47,700	618	358,943	4,880	7.4
1995	25,179	17,783	210,429	21,862	0	267,600	82,400	15,134	640,387	4,981	12.9
1996	25,113	17,783	210,429	21,862	0	304,400	82,300	16,087	677,975	5,090	13.3
1997	24,874	17,783	379,398	21,862	0	307,800	121,900	33,319	906,936	5,203	17.4
1998	24,715	17,783	379,398	21,862	0	346,500	129,600	35,418	955,276	5,317	18.0
1999	24,658	17,783	598,457	21,862	0	330,700	170,000	54,778	1,218,238	5,434	22.4
2000	24,425	17,783	598,457	21,862	0	372,600	181,500	58,229	1,274,857	5,552	23.0
2001	22,014	17,783	598,457	21,862	0	417,600	193,300	61,898	1,332,914	5,632	23.7
2002	22,009	17,783	598,457	21,862	0	476,800	196,100	65,797	1,398,809	5,713	24.5
2003	20,983	17,783	822,008	21,862	0	432,600	253,300	91,400	1,659,936	5,796	28.6
2004	20,970	17,783	822,008	21,862	0	481,000	270,200	97,158	1,730,981	5,879	29.4
2005	20,910	17,783	822,008	21,862	0	536,200	288,300	103,279	1,810,342	5,964	30.4
2006	20,683	17,783	1,090,234	21,862	0	516,900	346,300	135,530	2,149,292	6,050	35.5
2007	20,666	17,783	1,106,242	21,862	0	579,500	369,300	145,559	2,260,911	6,136	36.8
2008	20,651	17,783	1,123,259	21,862	0	646,700	397,100	156,313	2,383,669	6,225	38.3
2009	20,635	17,783	1,141,351	21,862	0	715,300	422,100	167,845	2,506,876	6,311	39.7
2010	20,619	17,783	1,141,351	21,862	0	804,300	447,800	178,419	2,632,134	6,406	41.1
2011	20,597	17,783	1,141,351	21,862	0	887,400	478,100	189,660	2,756,753	6,498	42.4
2012	20,588	17,783	1,163,088	21,862	0	989,300	513,400	203,632	2,929,653	6,543	44.8
2013	14,898	17,783	1,569,037	21,862	0	945,800	615,700	255,425	3,440,505	6,686	51.5
2014	12,637	17,783	1,569,037	21,862	0	1,042,600	657,000	271,517	3,592,435	6,782	53.0
2015	12,637	17,783	1,569,037	21,862	0	1,155,400	700,900	288,622	3,766,241	6,880	54.7
2016	12,637	17,783	1,596,802	21,862	0	1,281,700	745,100	309,390	3,985,274	6,979	57.1
2017	12,637	17,783	1,626,318	21,862	0	1,426,300	800,000	331,629	4,236,530	7,080	59.8
2018	12,637	17,783	1,626,318	21,862	0	1,572,800	853,400	352,522	4,457,322	7,182	62.1
2019	12,637	17,783	1,626,318	21,862	0	1,760,100	909,700	374,731	4,723,131	7,286	64.8
2020	12,637	17,783	2,244,503	21,862	0	1,715,400	1,081,200	457,674	5,551,059	7,390	75.1

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,989,973

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

11-Jun-85

CASE 0: BASE CASE ANALYSIS
WITH SUSITNA

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT	ANNUAL CAPITAL COSTS ON NEW PLANT (1)					RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS	COMPARABLE COST OF POWER
	SERVICE (2)	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)		(6WH) (11)	(C/KWH) (12)
1985	24,638	1,974	0	0	0	47,500	23,000	0	97,112	3,502	2.8
1986	24,692	2,289	0	0	0	61,300	24,800	0	113,081	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,700	0	124,210	3,958	3.2
1988	24,910	9,946	0	0	0	81,800	29,200	0	145,856	4,100	3.6
1989	25,275	9,946	0	0	0	100,100	31,400	0	166,721	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,400	33,900	484	185,516	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,800	37,400	514	211,061	4,567	4.6
1992	25,214	14,567	0	17,562	0	130,800	39,300	547	227,990	4,676	4.9
1993	25,196	14,567	0	17,562	0	147,800	42,100	581	247,806	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,100	47,700	618	358,943	4,880	7.4
1995	25,179	17,783	0	21,862	0	291,000	50,700	657	407,181	4,981	8.2
1996	25,113	17,783	0	21,862	728,000	155,600	61,200	25,598	1,035,156	5,090	20.3
1997	24,874	17,783	0	21,862	766,000	180,700	65,400	27,211	1,103,830	5,203	21.2
1998	24,715	17,783	0	21,862	766,000	212,200	68,500	28,925	1,139,985	5,317	21.4
1999	24,658	17,783	0	21,862	766,000	259,800	69,000	30,748	1,189,851	5,434	21.9
2000	24,425	17,783	0	21,862	766,000	305,200	70,600	32,685	1,238,555	5,552	22.3
2001	22,014	17,783	0	21,862	766,000	353,200	74,500	34,744	1,290,103	5,632	22.9
2002	22,009	17,783	0	21,862	1,351,000	82,100	68,200	57,033	1,619,987	5,713	28.4
2003	20,983	17,783	0	21,862	1,384,000	94,200	72,500	60,626	1,671,954	5,796	28.8
2004	20,970	17,783	0	21,862	1,384,000	112,900	77,400	64,445	1,699,360	5,879	28.9
2005	20,910	17,783	0	21,862	1,384,000	132,600	82,300	68,505	1,727,960	5,964	29.0
2006	20,683	17,783	0	21,862	1,384,000	177,800	67,200	72,821	1,762,149	6,050	29.1
2007	20,666	17,783	0	21,862	1,384,000	210,200	69,900	77,409	1,801,820	6,136	29.4
2008	20,651	17,783	0	21,862	2,119,000	0	69,900	107,186	2,356,382	6,225	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	69,500	113,938	2,393,718	6,315	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	11,100	75,700	122,907	2,439,204	6,406	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	12,300	80,500	130,650	2,452,925	6,498	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	23,000	85,600	138,881	2,476,947	6,543	37.9
2013	14,898	17,783	65,450	21,862	2,150,000	28,800	93,200	151,933	2,543,928	6,686	38.0
2014	12,637	17,783	65,450	21,862	2,150,000	47,200	99,100	161,505	2,575,537	6,782	38.0
2015	12,637	17,783	65,450	21,862	2,150,000	68,300	106,000	171,679	2,613,712	6,880	38.0
2016	12,637	17,783	120,980	21,862	2,150,000	104,000	114,600	187,665	2,729,527	6,979	39.1
2017	12,637	17,783	120,980	21,862	2,150,000	136,000	122,600	199,488	2,781,350	7,080	39.3
2018	12,637	17,783	152,359	21,862	2,150,000	185,300	136,300	214,976	2,891,218	7,182	40.3
2019	12,637	17,783	152,359	21,862	2,150,000	238,600	144,900	228,520	2,966,661	7,286	40.7
2020	12,637	17,783	152,359	21,862	2,150,000	340,500	154,900	242,917	3,092,958	7,390	41.9

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,447,372

11-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

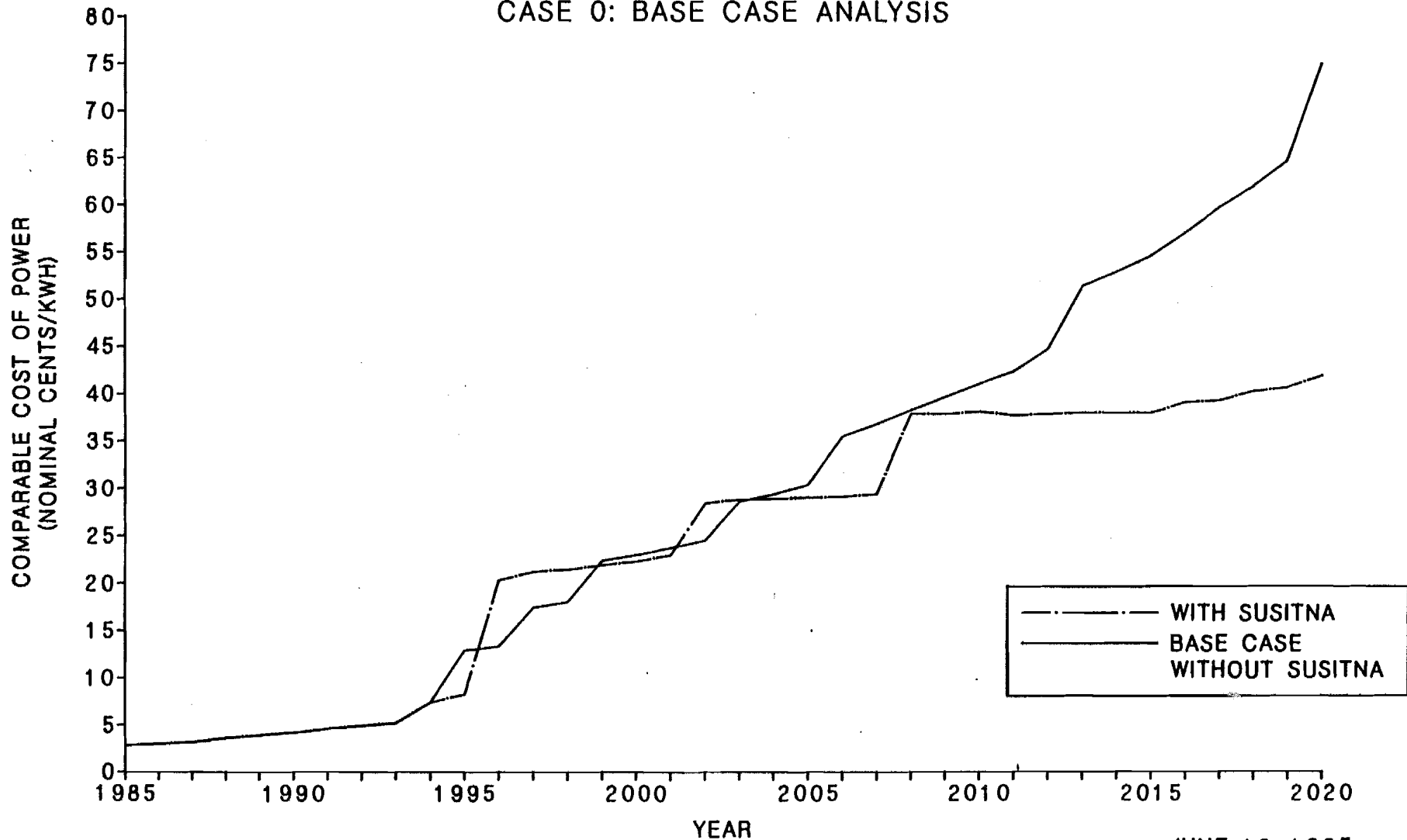
Annual 11.00
Semi-annual 5.36

BASE CASE

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	12.4	286.5		
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	308.5		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	410.3		
1990	186	4,446	4.2	186	4,446	4.2		0.0	455.5		
1991	211	4,567	4.6	211	4,567	4.6		0.0	505.6		
1992	228	4,676	4.9	228	4,676	4.9		0.0	561.2		
1993	248	4,781	5.2	248	4,781	5.2		0.0	622.9		
1994	359	4,880	7.4	359	4,880	7.4		0.0	691.4		
1995	407	4,981	8.2	640	4,981	12.9		0.0	767.5		
1996	1,035	5,090	20.3	678	5,090	13.3	357	0.0	475.6	357	0
1997	1,104	5,203	21.2	907	5,203	17.4	197		320.4	197	0
1998	1,140	5,317	21.4	955	5,317	18.0	185		161.1	185	0
1999	1,190	5,434	21.9	1,218	5,434	22.4	0		178.8	0	28
2000	1,239	5,552	22.3	1,275	5,552	23.0	0		198.5	0	36
2001	1,290	5,632	22.9	1,333	5,632	23.7	0		220.3	0	43
2002	1,620	5,713	28.4	1,399	5,713	24.5	221		11.5	221	0
2003	1,672	5,796	28.8	1,660	5,796	28.6	12		.0	12	0
2004	1,699	5,879	28.9	1,731	5,879	29.4	0		.0	0	32
2005	1,728	5,964	29.0	1,810	5,964	30.4	0		.0	0	82
2006	1,762	6,050	29.1	2,149	6,050	35.5	0		.0	0	387
2007	1,802	6,136	29.4	2,261	6,136	36.8	0		.0	0	459
2008	2,356	6,225	37.9	2,384	6,225	38.3	0		.0	0	27
2009	2,394	6,315	37.9	2,507	6,315	39.7	0		.0	0	113
2010	2,439	6,406	38.1	2,632	6,406	41.1	0		.0	0	193
2011	2,453	6,498	37.7	2,757	6,498	42.4	0		.0	0	304
2012	2,477	6,543	37.9	2,930	6,543	44.8	0		.0	0	453
2013	2,544	6,686	38.0	3,441	6,686	51.5	0		.0	0	897
2014	2,576	6,782	38.0	3,592	6,782	53.0	0		.0	0	1,017
2015	2,614	6,880	38.0	3,766	6,880	54.7	0		.0	0	1,153
2016	2,730	6,979	39.1	3,985	6,979	57.1	0		.0	0	1,256
2017	2,781	7,080	39.3	4,237	7,080	59.8	0		.0	0	1,455
2018	2,891	7,182	40.3	4,457	7,182	62.1	0		.0	0	1,566
2019	2,967	7,286	40.7	4,723	7,286	64.8	0		.0	0	1,756
2020	3,093	7,390	41.9	5,551	7,390	75.1	0		.0	0	2,458
							972	312.4		972	13,715

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 0: BASE CASE ANALYSIS



JUNE 12, 1985

WITH SUSITNA
0. BASE ANALYSIS
(5 TCF GAS)

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1989	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
0. BASE ANALYSIS
(5 TCF GAS)

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 36638 06/01/85 10:09 AM

BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96			339*	1563
97				1560
98				1506
99				1349
0				1343
1				1325
2			478*	1737
3				1737
4				1735
5				1730
6				1438
7				1374

WITH SUSITNA
0. BASE ANALYSIS
(5 TCF GAS)

753*

9

2040

1X 87

2082

2082

2081

2X 87

2123

2118

2118

2X 87

2205

2205

IX 87

2292

~~2292~~

2292

MW ADD	0	0	522	0	0	0	1570	SUM=	2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM=	-1225
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2020	0	25	522	0	0	0	1745	SUM=	2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100	PCT

WITHOUT SUSITNA
0. BASE ANALYSIS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85		45*		
			5*	1177
86				1168
87		23*		1171
88		132*		1303
89				1303
90				90* 1357
91		87*		1400
92				1358
93				1358
94		25*		1383
95		200*		45* 1625

WITHOUT SUSITNA
0. BASE ANALYSIS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 30250 06/01/85 08:23 AM

BASED ON DATA PREP JOB 30196 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

YR	YEARLY	MW	ADDITIONS	TOTAL CAPAB. + TIES
**	*****	*****	*****	*****

96				1424
97	200*			1621
98				1567
99	1X 200			1610
0				1604
1				1586
2				1520
3	1X 200			1720
4				1718
5				1713
6	1X 200			1621
7		1X 87		1644

WITHOUT SUSITNA
0. BASE ANALYSIS

8	1X 87	1731
9	1X 87	1731
10		1686
11		1686
12	1X 87	1772
13	1X 200	1840
14		1840
15		1840
16	1X 87	1840
17	1X 87	1927
18		1927
19		1927
20	1X 200	2127

MW ADD	0	1200	522	0	0	0	0 SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	0 SUM= -1220

2020	0	1425	522	0	0	0	180 SUM= 2127
PCT TOT	0.0	67.0	24.5	0.0	0.0	0.0	8.5 SUM=100 PCT

FUEL PRICE 0. BASE ANALYSIS

ANCHORAGE - APA COOK INLET
IN 1999
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.368	3.216
1991	2.492	3.598
1992	2.623	4.026
1993	2.761	4.505
1994	2.906	5.040
1995	3.058	5.640
1996	3.219	6.310
1997	3.388	7.060
1998	3.560	7.900
1999	3.753	8.839
2000	3.950	9.890
2005	4.840	16.457
2010	5.930	27.379
2015	6.851	42.948
2020	7.910	67.343

ANCHORAGE - APA NORTH SLOPE
IN 1999
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.416	3.281
1991	2.595	3.746
1992	2.787	4.277
1993	2.993	4.883
1994	3.214	5.574
1995	3.451	6.364
1996	3.707	7.266
1997	3.981	8.295
1998	4.275	9.471
1999	4.591	10.812
2000	4.930	12.344
2005	6.140	20.877
2010	7.370	34.028
2015	8.511	53.357
2020	9.831	83.690

BELUGA RIVER - APA COOK INLET
IN 1999
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	0.240	0.240
1986	0.240	0.240
1987	0.240	0.240
1988	0.300	0.300
1989	0.300	0.300
1990	0.310	0.310
1991	0.310	0.310
1992	0.320	0.320
1993	0.320	0.320
1994	2.906	5.040
1995	3.059	5.640
1996	3.219	6.310
1997	3.388	7.061
1998	3.566	7.900
1999	3.753	8.839
2000	3.950	9.890
2005	4.840	16.457
2010	5.930	27.380
2015	6.851	42.949
2020	7.911	67.344

APA NENANA
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.910	1.910
1986	1.939	2.061
1987	1.969	2.225
1988	1.999	2.401
1989	2.029	2.592
1990	2.060	2.797
1991	2.091	3.019
1992	2.123	3.258
1993	2.155	3.515
1994	2.187	3.793
1995	2.220	4.094
1996	2.253	4.417
1997	2.287	4.765
1998	2.321	5.141
1999	2.355	5.547
2000	2.390	5.984
2005	2.570	8.739
2010	2.760	12.744
2015	2.977	18.662
2020	3.210	27.330

APA BELUGA EXPORT
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.670	1.670
1986	1.670	1.775
1987	1.670	1.887
1988	1.670	2.006
1989	1.670	2.133
1990	1.670	2.268
1991	1.670	2.411
1992	1.670	2.563
1993	1.670	2.725
1994	1.670	2.897
1995	1.670	3.079
1996	1.670	3.274
1997	1.670	3.480
1998	1.670	3.700
1999	1.670	3.933
2000	1.670	4.181
2005	1.920	6.528
2010	2.160	9.973
2015	2.310	14.481
2020	2.470	21.029

FMUS
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.130	2.130
1986	2.425	2.577
1987	2.760	3.119
1988	3.141	3.774
1989	3.576	4.567
1990	4.070	5.527
1991	4.130	5.962
1992	4.191	6.432
1993	4.253	6.939
1994	4.316	7.486
1995	4.380	8.076
1996	4.446	8.715
1997	4.513	9.405
1998	4.581	10.149
1999	4.650	10.952
2000	4.720	11.818
2005	5.080	17.273
2010	5.450	25.163
2015	5.879	36.855
2020	6.341	53.978

GVEA
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.440	1.440
1986	1.440	1.531
1987	1.440	1.627
1988	1.440	1.730
1989	1.440	1.839
1990	1.440	1.955
1991	1.440	2.079
1992	1.440	2.210
1993	1.440	2.349
1994	1.440	2.498
1995	1.440	2.655
1996	1.440	2.823
1997	1.440	3.001
1998	1.440	3.190
1999	1.440	3.392
2000	1.440	3.606
2005	1.440	4.896
2010	1.440	6.648
2015	1.440	9.028
2020	1.440	12.259

GVEA
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	4.350	4.350
1986	4.419	4.698
1987	4.489	5.073
1988	4.560	5.479
1989	4.630	5.914
1990	4.700	6.382
1991	4.700	6.785
1992	4.700	7.213
1993	4.700	7.668
1994	4.700	8.152
1995	4.700	8.667
1996	4.759	9.328
1997	4.818	10.040
1998	4.878	10.807
1999	4.939	11.632
2000	5.000	12.520
2005	5.250	17.851
2010	5.513	25.452
2015	5.789	36.290
2020	6.078	51.743

FMUS
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	6.590	6.590
1986	6.590	7.006
1987	6.590	7.448
1988	6.590	7.918
1989	6.790	8.673
1990	6.990	9.492
1991	7.206	10.403
1992	7.429	11.401
1993	7.659	12.496
1994	7.896	13.695
1995	8.140	15.010
1996	8.486	16.634
1997	8.846	18.434
1998	9.221	20.429
1999	9.613	22.640
2000	10.021	25.090
2005	12.277	41.741
2010	15.040	69.441
2015	17.367	108.877
2020	20.052	170.711

SES
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	7.210	7.210
1986	7.210	7.665
1987	7.210	8.149
1988	7.210	8.663
1989	7.430	9.490
1990	7.650	10.388
1991	7.887	11.385
1992	8.131	12.479
1993	8.383	13.677
1994	8.642	14.990
1995	8.910	16.429
1996	9.289	18.208
1997	9.683	20.179
1998	10.094	22.364
1999	10.523	24.785
2000	10.970	27.468
2005	13.434	45.676
2010	16.451	75.952
2015	18.998	119.108
2020	21.941	186.786

HEA
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.312) ***** (\$)
1985	7.780	7.780
1986	7.780	8.271
1987	7.780	8.793
1988	7.780	9.348
1989	8.010	10.231
1990	8.250	11.203
1991	8.506	12.279
1992	8.769	13.458
1993	9.041	14.751
1994	9.321	16.167
1995	9.610	17.720
1996	10.018	19.638
1997	10.443	21.763
1998	10.887	24.119
1999	11.349	26.729
2000	11.831	29.622
2005	14.491	49.271
2010	17.750	81.952
2015	20.503	128.541
2020	23.683	201.615

Sensitivity
Analysis
Parameters

	DESCRIPTION	NO.	Sensitivity Analysis Run	Base Analysis (5 TCF Gas)	2 TCF Gas	Low Gas Price	Low Gas & Coal Price	Low Coal Price with Diamond Plant	Low Finance	Low Inflation	Matanuska	Phase I	No Coal Export	Keetna
1	1999 Gas Peak	1		X		X			X	X	X	X	X	
2	1996 Gas Peak	2			X				X					
3	Ramped Gas Price	3		X	X				X	X	X	X	X	
4	CEA-Enstar Gas Price	4				X	X		X	X	X	X	X	
5	APA Coal Price	5		X	X	X								
6	Nenana 0%	6					X	X						
7	Beluga Low Coal Price	7					X							
8	Matanuska	8									X			
9	No Coal Export	9										X	X	
10	11.2% Financing (Thermal only)	10		X	X	X	X	X	X		X	X	X	X
11	10% Financing (Both)	11								X				
12	5% Inflation	12								X				
13	Keetna	13												X
14	Bradley Lake 3rd Unit	14		X			X		X		X	X	X	X
15	Phase I Only	15												
16	Diamond Coal	16						X						

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 1: 2 TCF GAS
WITHOUT SUSITNA

11-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)	ENERGY REQUIREMENTS (GMH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)			
1985	24,638	1,974	0	0	0	47,700	23,100	0	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	3.9
1990	25,224	9,946	0	17,562	0	99,000	34,200	484	4.2
1991	25,218	14,567	0	17,562	0	116,900	37,400	514	4.6
1992	25,214	14,567	0	17,562	0	132,400	39,200	547	4.9
1993	25,196	14,567	0	17,562	0	151,200	41,800	581	5.2
1994	25,180	17,783	0	17,562	0	260,000	48,000	618	7.6
1995	25,179	17,783	210,429	21,862	0	275,500	82,400	15,134	13.0
1996	25,113	17,783	210,429	21,862	0	313,700	82,300	16,087	13.5
1997	24,874	17,783	379,398	21,862	0	313,000	121,800	33,319	17.5
1998	24,715	17,783	379,398	21,862	0	349,700	129,900	35,418	18.0
1999	24,658	17,783	598,457	21,862	0	332,500	170,200	54,778	22.5
2000	24,425	17,783	598,457	21,862	0	372,600	182,000	58,229	23.0
2001	22,014	17,783	598,457	21,862	0	417,300	193,200	61,898	23.7
2002	22,009	17,783	598,457	21,862	0	476,700	196,700	65,797	24.5
2003	20,983	17,783	822,008	21,862	0	433,200	253,400	91,400	28.7
2004	20,970	17,783	822,008	21,862	0	480,700	269,400	97,158	29.4
2005	20,910	17,783	822,008	21,862	0	535,100	288,500	103,279	30.3
2006	20,683	17,783	1,090,234	21,862	0	516,300	347,200	135,530	35.5
2007	20,666	17,783	1,106,242	21,862	0	578,500	369,500	145,559	36.8
2008	20,651	17,783	1,123,259	21,862	0	647,600	395,900	156,313	38.3
2009	20,635	17,783	1,141,351	21,862	0	715,300	421,300	167,845	39.7
2010	20,619	17,783	1,141,351	21,862	0	805,000	448,200	178,419	41.1
2011	20,597	17,783	1,141,351	21,862	0	887,800	476,800	189,660	42.4
2012	20,588	17,783	1,163,088	21,862	0	989,200	514,100	203,632	44.8
2013	14,898	17,783	1,569,037	21,862	0	944,500	615,600	255,425	51.4
2014	12,637	17,783	1,569,037	21,862	0	1,043,200	655,600	271,517	53.0
2015	12,637	17,783	1,569,037	21,862	0	1,156,200	702,600	288,622	54.8
2016	12,637	17,783	1,596,802	21,862	0	1,280,400	743,300	309,390	57.1
2017	12,637	17,783	1,626,318	21,862	0	1,427,400	801,600	331,629	59.9
2018	12,637	17,783	1,626,318	21,862	0	1,572,800	853,300	352,522	62.1
2019	12,637	17,783	1,626,318	21,862	0	1,762,300	908,200	374,731	64.8
2020	12,637	17,783	2,244,503	21,862	0	1,718,800	1,083,200	457,674	75.2

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

7,006,319

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

11-Jun-85

CASE 1: 2 TCF GAS
WITH SUSITNA

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS ON NEW PLANT (1)				RENEWALS AND REPLACEMENTS			TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)			
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	165,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	116,900	37,400	514	212,161	4,567	4.6
1992	25,214	14,567	0	17,562	0	132,400	39,200	547	229,490	4,676	4.9
1993	25,196	14,567	0	17,562	0	150,400	41,800	581	250,106	4,781	5.2
1994	25,180	17,783	0	17,562	0	178,900	48,000	618	288,043	4,880	5.9
1995	25,179	17,783	0	21,862	0	217,800	51,100	657	334,381	4,981	6.7
1996	25,113	17,783	0	21,862	728,000	161,500	61,700	25,598	1,041,556	5,090	20.5
1997	24,874	17,783	0	21,862	766,000	185,600	64,800	27,211	1,108,130	5,203	21.3
1998	24,715	17,783	0	21,862	766,000	216,100	69,200	28,925	1,144,585	5,317	21.5
1999	24,658	17,783	0	21,862	766,000	262,600	68,600	30,748	1,192,251	5,434	21.9
2000	24,425	17,783	0	21,862	766,000	305,300	70,200	32,685	1,238,255	5,552	22.3
2001	22,014	17,783	0	21,862	766,000	353,900	74,200	34,744	1,290,503	5,632	22.9
2002	22,009	17,783	0	21,862	1,351,000	81,700	68,300	57,033	1,619,687	5,713	28.3
2003	20,983	17,783	0	21,862	1,384,000	93,500	71,900	60,626	1,670,654	5,796	28.8
2004	20,970	17,783	0	21,862	1,384,000	112,400	77,500	64,445	1,698,960	5,879	28.9
2005	20,910	17,783	0	21,862	1,384,000	131,700	81,500	68,505	1,726,260	5,964	28.9
2006	20,683	17,783	0	21,862	1,384,000	178,100	67,600	72,821	1,762,849	6,050	29.1
2007	20,666	17,783	0	21,862	1,384,000	209,100	70,500	77,409	1,801,320	6,136	29.4
2008	20,651	17,783	0	21,862	2,119,000	0	70,800	107,186	2,357,282	6,225	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	70,700	113,938	2,394,918	6,315	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	12,200	76,200	122,907	2,440,804	6,406	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	13,200	78,900	130,650	2,452,225	6,498	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	21,300	85,100	138,881	2,474,747	6,543	37.8
2013	14,898	17,783	65,450	21,862	2,150,000	30,600	91,800	151,933	2,544,326	6,686	38.1
2014	12,637	17,783	65,450	21,862	2,150,000	45,400	99,000	161,505	2,573,637	6,782	37.9
2015	12,637	17,783	65,450	21,862	2,150,000	66,700	106,700	171,679	2,612,812	6,880	38.0
2016	12,637	17,783	120,980	21,862	2,150,000	105,500	115,100	187,665	2,731,527	6,979	39.1
2017	12,637	17,783	120,980	21,862	2,150,000	134,500	124,100	199,488	2,781,350	7,080	39.3
2018	12,637	17,783	152,359	21,862	2,150,000	184,000	133,900	214,976	2,887,518	7,182	40.2
2019	12,637	17,783	152,359	21,862	2,150,000	240,600	144,400	228,520	2,968,161	7,286	40.7
2020	12,637	17,783	152,359	21,862	2,150,000	337,300	155,700	242,917	3,090,558	7,390	41.8

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,402,056

11-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

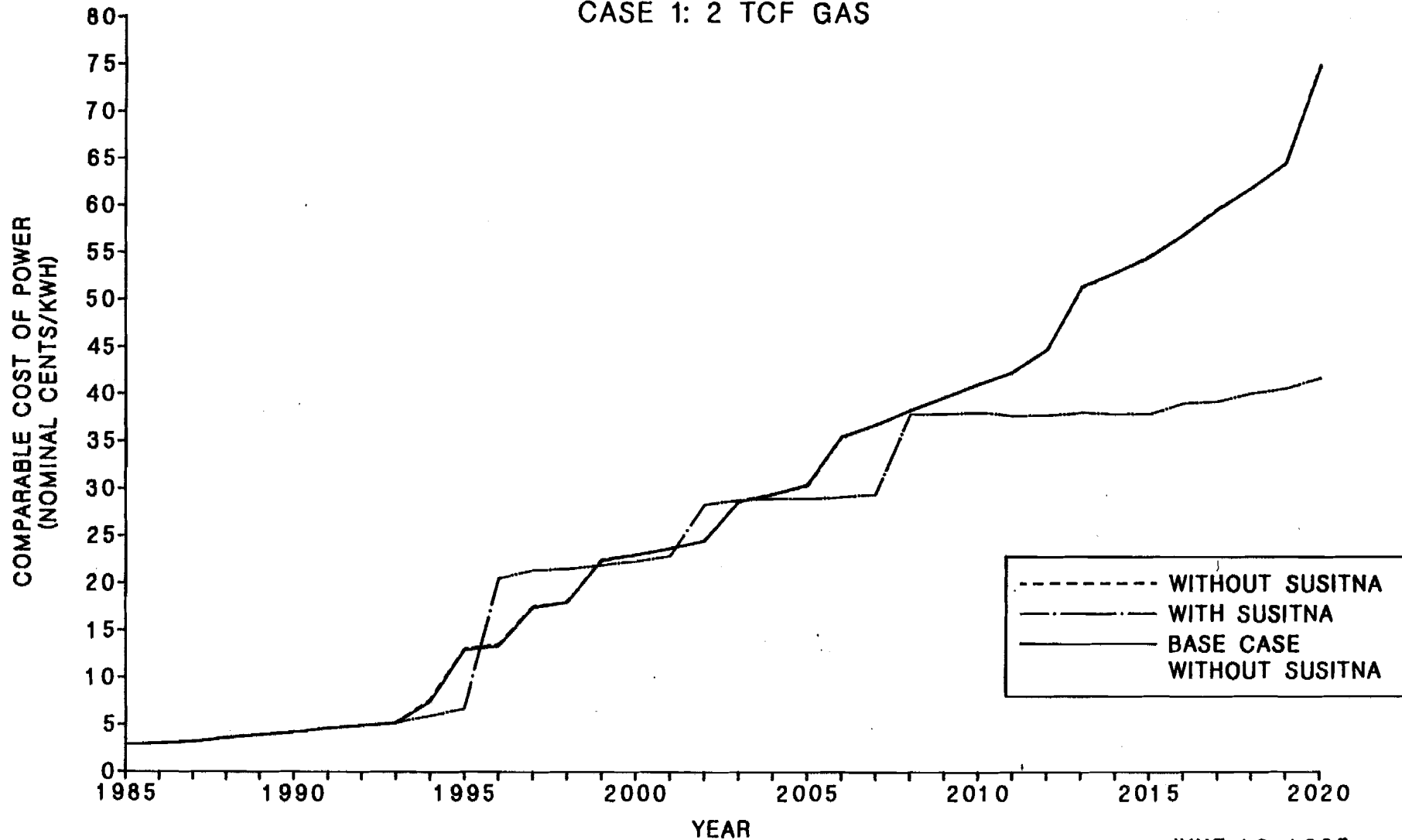
Annual 11.00
Semi-annual 5.36

CASE 1: 2 TCF GAS

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	10.9	284.8		
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	306.7		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	408.2		
1990	186	4,446	4.2	186	4,446	4.2		0.0	453.1		
1991	212	4,567	4.6	212	4,567	4.6		0.0	503.0		
1992	230	4,676	4.9	230	4,676	4.9		0.0	558.3		
1993	250	4,781	5.2	251	4,781	5.2		0.0	619.7		
1994	288	4,880	5.9	369	4,880	7.6		0.0	687.9		
1995	334	4,981	6.7	648	4,981	13.0		0.0	763.6		
1996	1,042	5,090	20.5	687	5,090	13.5	354	0.0	474.3	354	0
1997	1,108	5,203	21.3	912	5,203	17.5	196		319.8	196	0
1998	1,145	5,317	21.5	959	5,317	18.0	186		159.3	186	0
1999	1,192	5,434	21.9	1,220	5,434	22.5	0		176.8	0	28
2000	1,239	5,552	22.3	1,275	5,552	23.0	0		196.2	0	37
2001	1,291	5,632	22.9	1,333	5,632	23.7	0		217.8	0	42
2002	1,620	5,713	28.4	1,399	5,713	24.5	220		9.6	220	0
2003	1,671	5,796	28.8	1,661	5,796	28.7	10		.0	10	0
2004	1,699	5,879	28.9	1,730	5,879	29.4	0		.0	0	31
2005	1,726	5,964	28.9	1,809	5,964	30.3	0		.0	0	83
2006	1,763	6,050	29.1	2,150	6,050	35.5	0		.0	0	387
2007	1,801	6,136	29.4	2,260	6,136	36.8	0		.0	0	459
2008	2,357	6,225	37.9	2,383	6,225	38.3	0		.0	0	26
2009	2,395	6,315	37.9	2,506	6,315	39.7	0		.0	0	111
2010	2,441	6,406	38.1	2,633	6,406	41.1	0		.0	0	192
2011	2,452	6,498	37.7	2,756	6,498	42.4	0		.0	0	304
2012	2,475	6,543	37.8	2,930	6,543	44.8	0		.0	0	456
2013	2,544	6,686	38.1	3,439	6,686	51.4	0		.0	0	895
2014	2,574	6,782	37.9	3,592	6,782	53.0	0		.0	0	1,018
2015	2,613	6,880	38.0	3,769	6,880	54.8	0		.0	0	1,156
2016	2,732	6,979	39.1	3,982	6,979	57.1	0		.0	0	1,251
2017	2,781	7,080	39.3	4,239	7,080	59.9	0		.0	0	1,458
2018	2,888	7,182	40.2	4,457	7,182	62.1	0		.0	0	1,570
2019	2,968	7,286	40.7	4,724	7,286	64.8	0		.0	0	1,756
2020	3,091	7,390	41.8	5,557	7,390	75.2	0		.0	0	2,466
							967	310.9		967	13,724

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 1: 2 TCF GAS



JUNE 12, 1985

WITH SUSITNA
1. TCF GAS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

YR	YEARLY	MW	ADDITIONS	TIES	TOTAL CAPAB.
**	*****	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
1. TCF GAS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 36638 06/01/85 10:09 AM

BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S + T I E S
**	*****	*****	*****

96

339*

1563

97

1560

98

1506

99

1349

0

1343

1

1325

2

478*

1737

3

1737

4

1735

5

1730

6

1438

7

1374

WITH SUSITNA
1. TCF GAS

8							753*		2127
9									2040
10			1X	87					2082
11									2082
12									2081
13				2X	87				2123
14									2118
15									2118
16				2X	87				2205
17									2205
18				1X	87				2292
19									2292
20									2292

*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MW ADD	0	0	522	0	0	0	1570	SUM=	2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM=	-1225
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2020	0	25	522	0	0	0	1745	SUM=	2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100	PCT

WITHOUT SUSITNA
1. 2 TCF GAS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

200*

45*

1625

WITHOUT SUSITNA

1. 2 TCF GAS

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 30250 06/01/85 08:23 AM

BASED ON DATA PREP JOB 30196 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				1424
97	200*			1621
98				1567
99	1X 200			1610
0				1604
1				1586
2				1520
3	1X 200			1720
4				1718
5				1713
6	1X 200			1621
7		1X 87		1644

WITHOUT SUSITNA
1. 2 TCF GAS

8	1X 87	1731
9	1X 87	1731
10		1686
11		1686
12	1X 87	1772
13	1X 200	1840
14		1840
15		1840
16	1X 87	1840
17	1X 87	1927
18		1927
19		1927
20	1X 200	2127

MW ADD	0	1200	522	0	0	0	0 SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	0 SUM= -1220

2020	0	1425	522	0	0	0	180 SUM= 2127
PCT TOT	0.0	67.0	24.5	0.0	0.0	0.0	8.5 SUM=100 PCT

FUEL PRICE 1. 2 TCF GAS

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Base Analysis Fuel</u>
Natural Gas	Anchorage-Cook Inlet In 1996	Anchorage-Cook Inlet In 1999
Natural Gas	Anchorage-North Slope In 1996	Anchorage-North Slope In 1999
Natural Gas	Beluga River-Cook Inlet In 1996	Beluga River-Cook Inlet In 1999

ANCHORAGE - APA COOK INLET
IN 1996
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.382	3.234
1991	2.521	3.639
1992	2.669	4.095
1993	2.825	4.608
1994	2.990	5.186
1995	3.165	5.836
1996	3.350	6.567
1997	3.491	7.275
1998	3.638	8.059
1999	3.791	8.928
2000	3.950	9.890
2005	4.840	16.457
2010	5.930	27.379
2015	6.850	42.948
2020	7.910	67.342

ANCHORAGE - APA NORTH SLOPE
IN 1996
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.443	3.316
1991	2.653	3.830
1992	2.881	4.421
1993	3.129	5.104
1994	3.397	5.892
1995	3.689	6.802
1996	4.006	7.853
1997	4.350	9.065
1998	4.535	10.048
1999	4.729	11.137
2000	4.930	12.345
2005	6.140	20.877
2010	7.370	34.029
2015	8.511	53.357
2020	9.831	83.693

BELUGA RIVER - APA COOK INLET
 IN 1996
 NATURAL GAS
 (\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	0.240	0.240
1986	0.240	0.240
1987	0.240	0.240
1988	0.300	0.300
1989	0.300	0.300
1990	0.310	0.310
1991	0.310	0.310
1992	0.320	0.320
1993	0.320	0.320
1994	3.105	5.386
1995	3.228	5.953
1996	3.357	6.580
1997	3.490	7.273
1998	3.637	8.058
1999	3.790	8.927
2000	3.950	9.691
2005	4.840	16.457
2010	5.930	27.379
2015	6.850	42.948

Sensitivity
Analysis
Parameters

	NO.	DESCRIPTION
Sensitivity Analysis Run	1	1999 Gas Peak
	2	1996 Gas Peak
	3	Ramped Gas Price
	4	CEA-Enstar Gas Price
	5	APA Coal Price
	6	Nenana 0%
	7	Beluga Low Coal Price
	8	Matanuska
	9	No Coal Export
	10	11.2% Financing (Thermal only)
	11	10% Financing (Both)
	12	5% Inflation
	13	Keetna
	14	Bradley Lake 3rd Unit
	15	Phase I Only
	16	Diamond Coal
Base Analysis (5 TCF Gas)	0	X
2 TCF Gas	1	X
Low Gas Price	2	X
Low Gas & Coal Price	3	X
Low Coal Price with Diamond Plant	4	X
Low Finance	5	X
Low Inflation	6	X
Matanuska	7	X
Phase I	8	X
No Coal Export	9	X
Keetna	10	X

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

12-Jun-85

CASE 2: LOW GAS PRICE
WITHOUT SUSITNA

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				RENEWALS AND REPLACEMENTS			ENERGY REQUIREMENTS	COMPARABLE COST OF POWER	
	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)	TOTAL (10)	(GWH) (11)	(C/KWH) (12)	
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,632	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781	5.2
1994	25,180	22,989	56,100	17,562	0	229,500	48,900	618	400,849	4,880	8.2
1995	25,179	22,989	56,100	21,862	0	266,100	52,100	657	444,987	4,981	8.9
1996	25,113	22,989	56,100	21,862	0	282,900	49,400	698	459,062	5,090	9.0
1997	24,874	22,989	56,100	21,862	0	315,200	53,700	742	495,467	5,203	9.5
1998	24,715	22,989	65,329	21,862	0	360,700	57,100	1,648	554,343	5,317	10.4
1999	24,658	22,989	256,291	21,862	0	390,500	96,300	20,081	832,681	5,434	15.3
2000	24,425	22,989	266,721	21,862	0	438,600	104,600	22,317	901,514	5,552	16.2
2001	22,014	22,989	482,541	21,862	0	442,000	154,500	44,438	1,190,344	5,632	21.1
2002	22,009	22,989	482,541	21,862	0	503,400	155,000	47,238	1,255,039	5,713	22.0
2003	20,983	22,989	757,992	21,862	0	478,100	213,900	71,671	1,587,497	5,796	27.4
2004	20,970	22,989	757,992	21,862	0	525,300	228,700	76,186	1,653,999	5,879	28.1
2005	20,910	22,989	757,992	21,862	0	583,200	242,500	80,986	1,730,439	5,964	29.0
2006	20,683	22,989	1,026,218	21,862	0	570,400	302,100	111,833	2,076,085	6,050	34.3
2007	20,666	22,989	1,042,226	21,862	0	634,400	323,300	120,369	2,185,811	6,136	35.6
2008	20,651	22,989	1,042,226	21,862	0	710,500	343,400	127,952	2,289,579	6,225	36.8
2009	20,635	22,989	1,042,226	21,862	0	780,300	367,500	136,013	2,391,524	6,315	37.9
2010	20,619	22,989	1,061,459	21,862	0	872,000	393,300	146,372	2,538,601	6,406	39.6
2011	20,597	22,989	1,061,459	21,862	0	970,000	420,900	155,593	2,673,400	6,498	41.1
2012	20,588	22,989	1,443,313	21,862	0	932,500	521,200	202,047	3,164,499	6,543	48.4
2013	14,898	22,989	1,443,313	21,862	0	1,024,700	550,600	214,776	3,293,138	6,686	49.3
2014	12,637	22,989	1,443,313	21,862	0	1,138,000	585,500	228,307	3,452,608	6,782	50.9
2015	12,637	22,989	1,443,313	21,862	0	1,254,000	627,000	242,690	3,624,491	6,880	52.7
2016	12,637	22,989	1,443,313	21,862	0	1,390,700	666,600	257,979	3,816,081	6,979	54.7
2017	12,637	22,989	1,957,822	21,862	0	1,360,200	812,000	323,616	4,511,127	7,080	63.7
2018	12,637	22,989	1,957,822	21,862	0	1,517,000	864,500	344,004	4,740,814	7,182	66.0
2019	12,637	22,989	1,957,822	21,862	0	1,666,100	920,300	365,676	4,967,387	7,286	68.2
2020	12,637	22,989	1,957,822	21,862	0	1,829,100	979,400	388,714	5,212,524	7,390	70.5

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,334,545

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 2: LOW GAS PRICE
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	O&M (8)	RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)						
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880	7.4
1995	25,179	17,783	0	21,862	0	290,700	51,100	657	407,281	4,981	8.2
1996	25,113	17,783	0	21,862	728,000	141,900	61,700	25,598	1,021,956	5,090	20.1
1997	24,874	17,783	0	21,862	766,000	162,100	64,800	27,211	1,084,630	5,203	20.8
1998	24,715	17,783	0	21,862	766,000	188,200	68,000	28,925	1,115,485	5,317	21.0
1999	24,658	17,783	0	21,862	766,000	228,300	68,600	30,748	1,157,951	5,434	21.3
2000	24,425	17,783	0	21,862	766,000	265,100	70,200	32,685	1,198,055	5,552	21.6
2001	22,014	17,783	0	21,862	766,000	306,000	74,200	34,744	1,242,603	5,632	22.1
2002	22,009	17,783	0	21,862	1,351,000	70,000	68,300	57,033	1,607,987	5,713	28.1
2003	20,983	17,783	0	21,862	1,384,000	79,100	71,900	60,626	1,656,254	5,796	28.6
2004	20,970	17,783	0	21,862	1,384,000	95,000	77,500	64,445	1,681,560	5,879	28.6
2005	20,910	17,783	0	21,862	1,384,000	112,900	81,500	68,505	1,707,460	5,964	28.6
2006	20,683	17,783	0	21,862	1,384,000	151,000	67,600	72,821	1,735,749	6,050	28.7
2007	20,666	17,783	0	21,862	1,384,000	177,400	70,500	77,409	1,769,620	6,136	28.8
2008	20,651	17,783	0	21,862	2,119,000	0	70,800	107,186	2,357,282	6,225	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	70,700	113,938	2,394,918	6,315	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	9,100	76,200	122,907	2,437,704	6,406	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	9,900	78,900	130,650	2,448,925	6,498	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	17,700	85,100	138,881	2,471,147	6,543	37.8
2013	14,898	17,783	65,450	21,862	2,150,000	22,900	91,800	151,933	2,536,626	6,686	37.9
2014	12,637	17,783	65,450	21,862	2,150,000	37,100	99,000	161,505	2,565,337	6,782	37.8
2015	12,637	17,783	65,450	21,862	2,150,000	53,400	106,700	171,679	2,599,512	6,880	37.8
2016	12,637	17,783	120,980	21,862	2,150,000	71,900	115,100	187,665	2,697,927	6,979	38.7
2017	12,637	17,783	120,980	21,862	2,150,000	98,300	124,100	199,488	2,745,150	7,080	38.8
2018	12,637	17,783	152,359	21,862	2,150,000	133,900	133,900	214,976	2,837,418	7,182	39.5
2019	12,637	17,783	152,359	21,862	2,150,000	174,400	144,400	228,520	2,901,961	7,286	39.8
2020	12,637	17,783	152,359	21,862	2,150,000	246,500	155,700	242,917	2,999,758	7,390	40.6

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,376,358

12-Jun

**SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS**

Interest Earnings

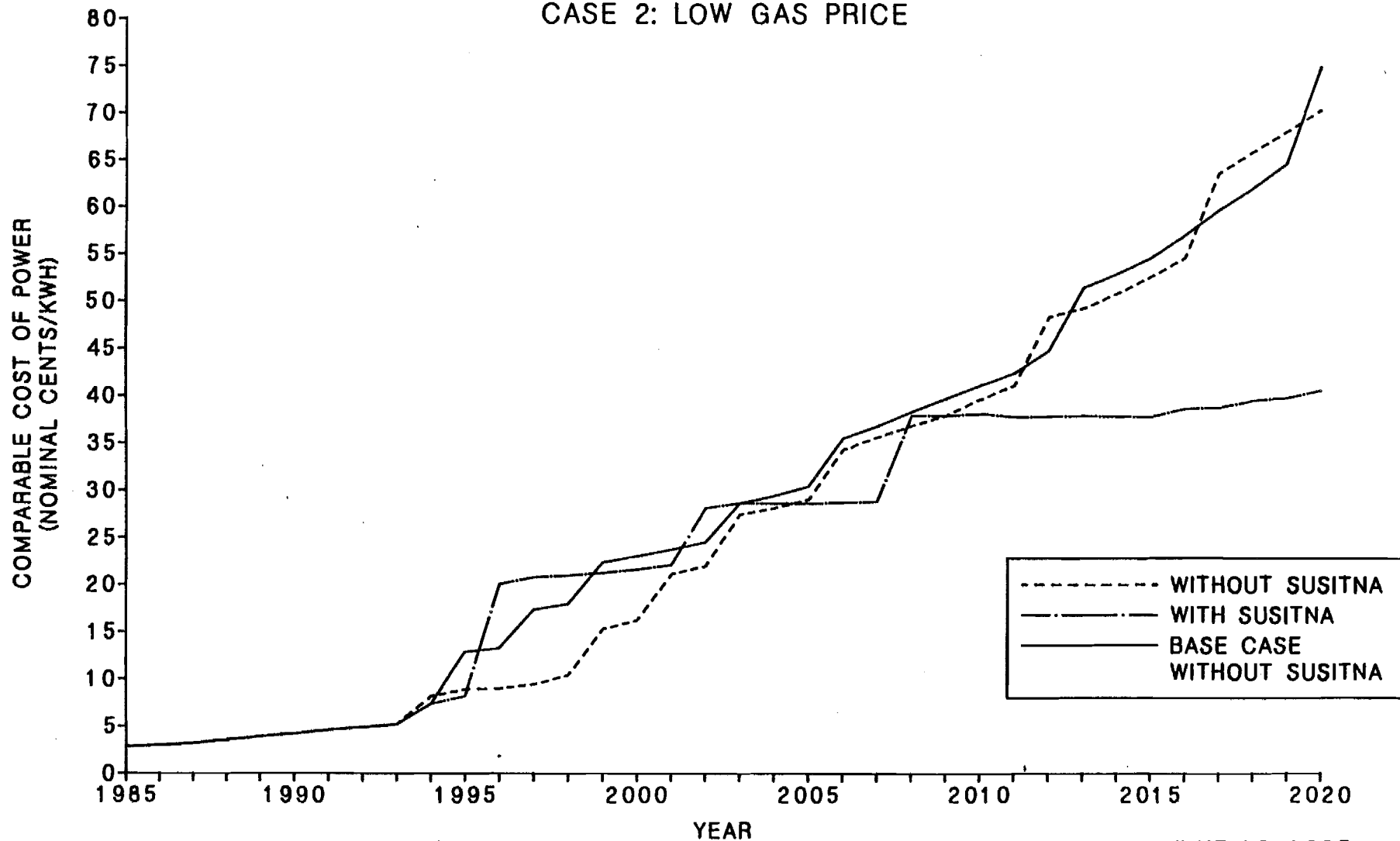
Annual 11.00
Semi-annual 5.36

CASE 2: LOW GAS PRICE

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	200.0	494.7		
1988	146	4,106	3.6	146	4,106	3.6	9	200.0	761.7		
1989	167	4,269	3.9	167	4,269	3.9	-64	200.0	1135.3		
1990	186	4,446	4.2	186	4,446	4.2		15.3	1277.2		
1991	211	4,567	4.6	211	4,567	4.6		0.0	1417.7		
1992	228	4,676	4.9	228	4,676	4.9		0.0	1573.6		
1993	248	4,781	5.2	248	4,781	5.2		0.0	1746.7		
1994	360	4,880	7.4	401	4,880	8.2		0.0	1938.9		
1995	407	4,981	8.2	445	4,981	8.9		0.0	2152.2		
1996	1,022	5,090	20.1	459	5,090	9.0	563	0.0	1795.9	563	0
1997	1,085	5,203	20.8	496	5,203	9.5	589		1372.7	589	0
1998	1,116	5,317	21.0	554	5,317	10.4	561		932.5	561	0
1999	1,158	5,434	21.3	833	5,434	15.3	325		692.3	325	0
2000	1,198	5,552	21.6	902	5,552	16.2	297		456.0	297	0
2001	1,243	5,632	22.1	1,190	5,632	21.1	52		451.1	52	0
2002	1,608	5,713	28.1	1,255	5,713	22.0	353		128.8	353	0
2003	1,656	5,796	28.6	1,588	5,796	27.4	69		70.4	69	0
2004	1,682	5,879	28.6	1,654	5,879	28.1	28		49.1	28	0
2005	1,708	5,964	28.6	1,730	5,964	29.0	0		54.5	0	23
2006	1,736	6,050	28.7	2,076	6,050	34.3	0		60.5	0	340
2007	1,770	6,136	28.8	2,186	6,136	35.6	0		67.2	0	416
2008	2,357	6,225	37.9	2,290	6,225	36.8	68		3.2	68	0
2009	2,395	6,315	37.9	2,392	6,315	37.9	3		.0	3	0
2010	2,438	6,406	38.1	2,539	6,406	39.6	0		.0	0	101
2011	2,449	6,498	37.7	2,673	6,498	41.1	0		.0	0	225
2012	2,471	6,543	37.8	3,165	6,543	48.4	0		.0	0	693
2013	2,537	6,686	37.9	3,293	6,686	49.3	0		.0	0	757
2014	2,565	6,782	37.8	3,453	6,782	50.9	0		.0	0	887
2015	2,600	6,880	37.8	3,625	6,880	52.7	0		.0	0	1,025
2016	2,698	6,979	38.7	3,816	6,979	54.7	0		.0	0	1,118
2017	2,745	7,080	38.8	4,511	7,080	63.7	0		.0	0	1,766
2018	2,837	7,182	39.5	4,741	7,182	66.0	0		.0	0	1,903
2019	2,902	7,286	39.8	4,967	7,286	68.2	0		.0	0	2,065
2020	3,000	7,390	40.6	5,213	7,390	70.5	0		.0	0	2,213
							2908	915.3		2,908	13,533

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 2: LOW GAS PRICE



JUNE 12, 1985

WITH SUSITNA
2. LOW GAS PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
2. LOW GAS PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,
GUS2, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,
JOB NUMBER 42276 06/03/85 11:44 AM
BASED ON DATA PREP JOB 42255 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				
			339*	1563
97				1560
98				1506
99				1349
0				1343
1				1325
2				
			478*	1737
3				1737
4				1735
5				1730
6				1438
7				1374

WITH SUSITNA
2. LOW GAS PRICE

8							753*	2127
9								2040
10			1X	87				2082
11								2082
12								2081
13			2X	87				2123
14								2118
15								2118
16			2X	87				2205
17								2205
18			1X	87				2292
19								2292
20								2292

MW ADD	0	0	522	0	0	0	1570	SUM= 2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM= -1225

2020	0	25	522	0	0	0	1745	SUM= 2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100 PCT

WITHOUT SUSITNA
2. LOW GAS PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTT2, THERMAL LOW GAS FOR THE TOTAL RAILBELT REGION

JOB NUMBER 45073 06/03/85 12:29 PM

BASED ON DATA PREP JOB 44973 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	+TIES
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

229*

1438

95

45*

1480

WITHOUT SUSITNA
2. LOW GAS PRICE

GUT2, THERMAL LOW GAS PRICE FOR THE TOTAL RAILBELT REG.

JOB NUMBER 32082 06/04/85 08:54 AM

BASED ON DATA PREP JOB 32078 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	429	191	20	587	180 SUM= 1480

TOTAL
CAPAR.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				1279
97				1276
98		1X 87		1309
99		200*		1352
0		1X 87		1433
1		200*		1615
2				1549
3		1X 200		1749
4				1747
5				1742
6		1X 200		1650
7		1X 87		

WITHOUT SUSITNA
2. LOW GAS PRICE

8									1673
9									1673
10			1X 87						1715
11									1715
12			1X 200						1914
13									1782
14									1782
15									1782
16									1782
17			1X 200						1982
18									1982
19									1982
20									1982

MW ADD	0	1200	348	0	0	0	0	SUM=	1548
MW RET	0	-48	-429	-191	-20	-358	0	SUM=	-1046

2020	0	1225	348	0	0	229	180	SUM=	1982
PCT TOT.	0.0	61.8	17.6	0.0	0.0	11.6	9.1	SUM=100	PCT

FUEL PRICE 2. LOW GAS PRICE

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
Natural Gas	Anchorage	Anchorage-Cook Inlet In 1999
Natural Gas	Anchorage	Anchorage-North Slope In 1999
Natural Gas	Beluga River-Anchorage	Beluga River-Cook Inlet In 1999

ANCHORAGE
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF=6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.334	3.169
1991	2.420	3.494
1992	2.510	3.852
1993	2.603	4.247
1994	2.700	4.683
1995	2.800	5.163
1996	2.904	5.692
1997	3.011	6.275
1998	3.122	6.917
1999	3.238	7.626
2000	3.357	8.406
2005	4.026	13.688
2010	4.827	22.286
2015	5.788	36.287
2020	6.940	59.083

BELUGA RIVER - ANCHORAGE
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	0.240	0.240
1986	0.240	0.240
1987	0.240	0.240
1988	0.300	0.300
1989	0.300	0.300
1990	0.310	0.310
1991	0.310	0.310
1992	0.320	0.320
1993	0.320	0.320
1994	2.700	4.683
1995	2.800	5.163
1996	2.904	5.692
1997	3.011	6.275
1998	3.122	6.917
1999	3.238	7.626
2000	3.357	8.407
2005	4.026	13.688
2010	4.827	22.287
2015	5.788	36.287
2020	6.940	59.084

Sensitivity
Analysis
Parameters

	NO.	DESCRIPTION
Sensitivity Analysis Run	1	1999 Gas Peak
	2	1996 Gas Peak
	3	Ramped Gas Price
	4	CEA-Enstar Gas Price
	5	APA Coal Price
	6	Nenana 0%
	7	Beluga Low Coal Price
	8	Matanuska
	9	No Coal Export
	10	11.2% Financing (Thermal only)
	11	10% Financing (Both)
	12	5% Inflation
	13	Keetna
	14	Bradley Lake 3rd Unit
	15	Phase I Only
	16	Diamond Coal
Base Analysis (5 TCF Gas)	0	X
2 TCF Gas	1	X X
Low Gas Price	2	X X
Low Gas & Coal Price	3	X X X
Low Coal Price with Diamond Plant	4	X X X
Low Finance	5	X X X
Low Inflation	6	X X X
Matanuska	7	X X X
Phase I	8	X X X
No Coal Export	9	X X X
Keetna	10	X X X

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

12-Jun-85

CASE 3: LOW GAS AND COAL PRICE
WITHOUT SUSITNA

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	O&M (8)	RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)						
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	175,138	17,562	0	118,400	64,400	12,596	427,877	4,676	9.1
1993	25,196	14,567	175,138	17,562	0	132,700	68,400	13,389	446,953	4,781	9.3
1994	25,180	17,783	175,138	17,562	0	225,100	77,700	14,233	552,696	4,880	11.3
1995	25,179	17,783	175,138	21,862	0	257,500	82,400	15,130	594,992	4,981	11.9
1996	25,113	17,783	175,138	21,862	0	271,500	82,300	16,083	609,779	5,090	12.0
1997	24,874	17,783	344,106	21,862	0	268,300	121,800	33,314	832,040	5,203	16.0
1998	24,715	17,783	344,106	21,862	0	297,500	129,900	35,413	871,279	5,317	16.4
1999	24,658	17,783	563,166	21,862	0	271,800	170,200	54,773	1,124,242	5,434	20.7
2000	24,425	17,783	563,166	21,862	0	305,300	182,000	58,224	1,172,760	5,552	21.1
2001	22,014	17,783	563,166	21,862	0	338,500	193,200	61,892	1,218,417	5,632	21.6
2002	22,009	17,783	773,443	21,862	0	301,700	236,700	85,974	1,459,471	5,713	25.5
2003	20,983	17,783	773,443	21,862	0	330,700	253,400	91,390	1,509,561	5,796	26.0
2004	20,970	17,783	773,443	21,862	0	366,400	269,400	97,148	1,567,006	5,879	26.7
2005	20,910	17,783	773,443	21,862	0	401,400	288,500	103,268	1,627,176	5,964	27.3
2006	20,683	17,783	1,041,669	21,862	0	372,000	344,900	135,519	1,954,416	6,050	32.3
2007	20,666	17,783	1,057,677	21,862	0	410,800	369,500	145,547	2,043,834	6,136	33.3
2008	20,651	17,783	1,074,694	21,862	0	453,600	395,900	156,300	2,140,791	6,225	34.4
2009	20,635	17,783	1,092,786	21,862	0	494,800	421,300	167,832	2,236,998	6,315	35.4
2010	20,619	17,783	1,092,786	21,862	0	551,900	448,200	178,405	2,331,555	6,406	36.4
2011	20,597	17,783	1,092,786	21,862	0	608,300	476,800	189,645	2,427,772	6,498	37.4
2012	20,588	17,783	1,114,523	21,862	0	680,800	514,100	203,616	2,573,272	6,543	39.3
2013	14,898	17,783	1,520,472	21,862	0	615,600	615,600	255,407	3,061,622	6,686	45.8
2014	12,637	17,783	1,520,472	21,862	0	676,200	655,600	271,498	3,176,052	6,782	46.8
2015	12,637	17,783	1,520,472	21,862	0	747,100	702,600	288,603	3,311,056	6,880	48.1
2016	12,637	17,783	1,548,236	21,862	0	820,000	743,300	309,369	3,473,188	6,979	49.8
2017	12,637	17,783	1,577,753	21,862	0	910,200	801,600	331,607	3,673,442	7,080	51.9
2018	12,637	17,783	1,577,753	21,862	0	998,300	853,300	352,499	3,834,134	7,182	53.4
2019	12,637	17,783	1,577,753	21,862	0	1,118,800	908,200	374,706	4,031,741	7,286	55.3
2020	12,637	17,783	1,577,753	21,862	0	1,245,300	972,900	398,312	4,246,548	7,390	57.5

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,647,474

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 3: LOW GAS AND COAL PRICE
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)			
1985	24,638	1,974	0	0	0	47,700	23,100	0	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	7.4
1995	25,179	17,783	0	21,862	0	290,700	51,100	657	8.2
1996	25,113	17,783	0	21,862	728,000	141,900	61,700	25,598	20.1
1997	24,874	17,783	0	21,862	766,000	162,100	64,800	27,211	20.8
1998	24,715	17,783	0	21,862	766,000	188,200	68,000	28,925	21.0
1999	24,658	17,783	0	21,862	766,000	228,300	68,600	30,748	21.3
2000	24,425	17,783	0	21,862	766,000	265,100	70,200	32,685	21.6
2001	22,014	17,783	0	21,862	766,000	306,000	74,200	34,744	22.1
2002	22,009	17,783	0	21,862	1,351,000	70,000	68,300	57,033	28.1
2003	20,983	17,783	0	21,862	1,384,000	79,100	71,900	60,626	28.6
2004	20,970	17,783	0	21,862	1,384,000	95,000	77,500	64,445	28.6
2005	20,910	17,783	0	21,862	1,384,000	112,900	81,500	68,505	28.6
2006	20,683	17,783	0	21,862	1,384,000	151,000	67,600	72,821	28.7
2007	20,666	17,783	0	21,862	1,384,000	177,400	70,500	77,409	28.8
2008	20,651	17,783	0	21,862	2,119,000	0	70,800	107,186	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	70,700	113,938	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	9,100	76,200	122,907	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	9,900	78,900	130,650	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	17,700	85,100	138,881	37.8
2013	14,898	17,783	65,450	21,862	2,150,000	22,900	91,800	151,933	37.9
2014	12,637	17,783	65,450	21,862	2,150,000	37,100	99,000	161,505	37.8
2015	12,637	17,783	65,450	21,862	2,150,000	53,400	106,700	171,679	37.8
2016	12,637	17,783	120,980	21,862	2,150,000	71,900	115,100	187,665	38.7
2017	12,637	17,783	120,980	21,862	2,150,000	98,300	124,100	199,488	38.8
2018	12,637	17,783	152,359	21,862	2,150,000	133,900	133,900	214,976	39.5
2019	12,637	17,783	152,359	21,862	2,150,000	174,400	144,400	228,520	39.8
2020	12,637	17,783	152,359	21,862	2,150,000	246,500	155,700	242,917	40.6

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,376,358

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

CASE 3: LOW GAS AND COAL PRICE

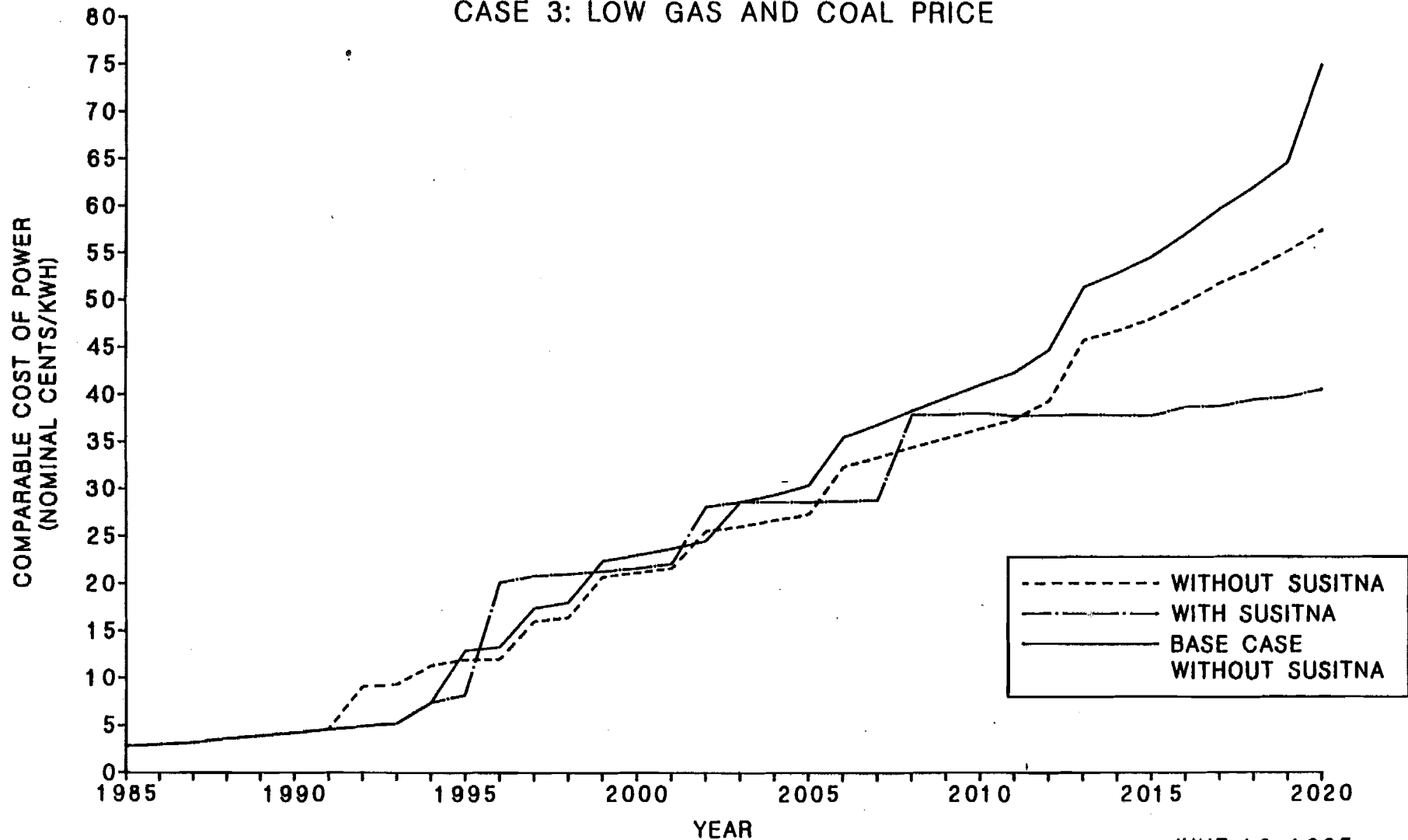
Interest Earnings

Annual 11.00
Semi-annual 5.36

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)	REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)					
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0					
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2					
1987	124	3,938	3.2	124	3,938	3.2	22	178.6	471.0					
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	513.3					
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	637.6					
1990	186	4,446	4.2	186	4,446	4.2		0.0	707.7					
1991	211	4,567	4.6	211	4,567	4.6		0.0	785.6					
1992	228	4,676	4.9	428	4,676	9.2		0.0	872.0					
1993	248	4,781	5.2	447	4,781	9.3		0.0	967.9					
1994	360	4,880	7.4	553	4,880	11.3		0.0	1074.4					
1995	407	4,981	8.2	595	4,981	11.9		0.0	1192.6					
1996	1,022	5,090	20.1	610	5,090	12.0	412	0.0	889.5	412			0	
1997	1,085	5,203	20.8	832	5,203	16.0	253		721.2	253			0	
1998	1,116	5,317	21.0	871	5,317	16.4	244		543.2	244			0	
1999	1,158	5,434	21.3	1,124	5,434	20.7	34		567.4	34			0	
2000	1,198	5,552	21.6	1,173	5,552	21.1	25		603.1	25			0	
2001	1,243	5,632	22.1	1,218	5,632	21.6	24		644.0	24			0	
2002	1,608	5,713	28.1	1,460	5,713	25.5	149		558.4	149			0	
2003	1,656	5,796	28.6	1,510	5,796	26.0	147		465.2	147			0	
2004	1,682	5,879	28.6	1,567	5,879	26.7	115		395.7	115			0	
2005	1,708	5,964	28.6	1,627	5,964	27.3	80		354.6	80			0	
2006	1,736	6,050	28.7	1,954	6,050	32.3	0		393.6	0			219	
2007	1,770	6,136	28.8	2,044	6,136	33.3	0		436.9	0			274	
2008	2,357	6,225	37.9	2,141	6,225	34.4	217		256.9	217			0	
2009	2,395	6,315	37.9	2,237	6,315	35.4	158		118.8	158			0	
2010	2,438	6,406	38.1	2,332	6,406	36.4	106		20.0	106			0	
2011	2,449	6,498	37.7	2,428	6,498	37.4	21		.0	21			0	
2012	2,471	6,543	37.8	2,573	6,543	39.3	0		.0	0			102	
2013	2,537	6,686	37.9	3,062	6,686	45.8	0		.0	0			525	
2014	2,565	6,782	37.8	3,176	6,782	46.8	0		.0	0			611	
2015	2,600	6,880	37.8	3,311	6,880	48.1	0		.0	0			712	
2016	2,698	6,979	38.7	3,473	6,979	49.8	0		.0	0			775	
2017	2,745	7,080	38.8	3,673	7,080	51.9	0		.0	0			928	
2018	2,837	7,182	39.5	3,834	7,182	53.4	0		.0	0			997	
2019	2,902	7,286	39.8	4,032	7,286	55.3	0		.0	0			1,130	
2020	3,000	7,390	40.6	4,247	7,390	57.5	0		.0	0			1,247	
							1984	478.6		1,984	7,519			

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 3: LOW GAS AND COAL PRICE



JUNE 12, 1985

WITH SUSITNA
3. LOW GAS & COAL PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CY	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	TIES
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
3. LOW GAS & COAL PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUS3, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 42378 06/03/85 11:44 AM

BASED ON DATA PREP JOB 42282 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

YR	Y E A R L Y	M W	A D D I T I O N S	TOTAL CAPAB. + TIES
----	-------------	-----	-------------------	------------------------

96				339*
				1563

97				1560
----	--	--	--	------

98				1506
----	--	--	--	------

99				1349
----	--	--	--	------

0				1343
---	--	--	--	------

1				1325
---	--	--	--	------

2				478*
				1737

3				1737
---	--	--	--	------

4				1735
---	--	--	--	------

5				1730
---	--	--	--	------

6				1438
---	--	--	--	------

7				1374
---	--	--	--	------

WITH SUSITNA
3. LOW GAS & COAL PRICE

8							753*		2127
9									2040
10			1X	87					2082
11									2082
12									2081
13			2X	87					2123
14									2118
15									2118
16			2X	87					2205
17									2205
18			1X	87					2292
19									2292
20									2292

MW ADD	0	0	522	0	0	0	1570	SUM=	2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM=	-1225

2020	0	25	522	0	0	0	1745	SUM=	2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100	PCT

WITHOUT SUSITNA
3. LOW GAS & COAL PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTT3, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 46827 06/04/85 01:00 PM

BASED ON DATA PREP JOB 46871 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
85		45*	5*	1177
86				1168
87		23*		1171
88		132*		1303
89				1303
90				90* 1357
91		87*		1400
92		200*		1558
93				1558
94		25*		1583
95			45*	1625

WITHOUT SUSITNA
3. LOW GAS & COAL PRICE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020
GUT3, THERMAL LOW GAS & COAL PRICE FOR THE TOTAL RAILBELT
JOB NUMBER 35474 06/01/85 09:50 AM
BASED ON DATA PREP JOB 35398 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				1424
97	200*			1621
98				1567
99	1X 200			1610
0				1604
1				1586
2	1X 200			1720
3				1720
4				1718
5				1713
6	1X 200			1621
7		1X 87		1644

WITHOUT SUSITNA
3. LOW GAS & COAL PRICE

1X 87

1731

1X 87

1731

1686

1686

1X 87

1772

1X 200

1840

1840

1840

1X 87

1840

1X 87

1927

1927

1927

1927

MW ADD	0	1000	522	0	0	0	0	SUM= 1522
MW RET	0	-48	-603	-191	-20	-358	0	SUM= -1220

2020	0	1225	522	0	0	0	180	SUM= 1927
PCT TOT	0.0	63.6	27.1	0.0	0.0	0.0	9.3	SUM=100 PCT

FUEL PRICE 3. LOW GAS & COAL PRICE

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
Natural Gas	Anchorage	Anchorage-Cook Inlet In 1999
Natural Gas	Anchorage	Anchorage-North Slope In 1999
Natural Gas	Beluga River-Anchorage	Beluga River-Cook Inlet In 1999
Coal	Nenana 0%	APA Nenana
Coal	Diamond	APA Beluga Export

ANCHORAGE
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.286
1987	2.240	2.532
1988	2.170	2.607
1989	2.250	2.874
1990	2.334	3.169
1991	2.420	3.494
1992	2.510	3.852
1993	2.603	4.247
1994	2.700	4.683
1995	2.800	5.163
1996	2.904	5.692
1997	3.011	6.275
1998	3.122	6.917
1999	3.238	7.626
2000	3.357	8.406
2005	4.026	13.688
2010	4.827	22.286
2015	5.788	36.287
2020	6.940	59.083

BELUGA RIVER - ANCHORAGE
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	0.240	0.240
1986	0.240	0.240
1987	0.240	0.240
1988	0.300	0.300
1989	0.300	0.300
1990	0.310	0.310
1991	0.310	0.310
1992	0.320	0.320
1993	0.320	0.320
1994	2.700	4.683
1995	2.800	5.163
1996	2.904	5.692
1997	3.011	6.275
1998	3.122	6.917
1999	3.238	7.626
2000	3.357	8.407
2005	4.026	13.688
2010	4.827	22.287
2015	5.788	36.287
2020	6.940	59.084

NENANA 02
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.910	1.910
1986	1.910	2.031
1987	1.910	2.159
1988	1.910	2.295
1989	1.910	2.440
1990	1.910	2.594
1991	1.910	2.757
1992	1.910	2.931
1993	1.910	3.116
1994	1.910	3.313
1995	1.910	3.522
1996	1.910	3.744
1997	1.910	3.980
1998	1.910	4.232
1999	1.910	4.499
2000	1.910	4.782
2005	1.910	6.494
2010	1.910	8.818
2015	1.910	11.974
2020	1.910	16.260

DIAMOND
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.050	1.050
1986	1.062	1.129
1987	1.073	1.213
1988	1.085	1.304
1989	1.097	1.401
1990	1.109	1.506
1991	1.121	1.619
1992	1.134	1.740
1993	1.146	1.870
1994	1.159	2.010
1995	1.171	2.160
1996	1.184	2.321
1997	1.197	2.495
1998	1.210	2.682
1999	1.224	2.882
2000	1.237	3.098
2005	1.307	4.443
2010	1.380	6.373
2015	1.458	9.140
2020	1.540	13.109

Sensitivity Analysis Parameters

Sensitivity Analysis Parameters		DESCRIPTION	
Sensitivity Analysis Run	NO.	1	1999 Gas Peak
		2	1996 Gas Peak
		3	Ramped Gas Price
		4	CEA-Enstar Gas Price
		5	APA Coal Price
		6	Nenana 0%
		7	Beluga Low Coal Price
		8	Matanuska
		9	No Coal Export
		10	11.2% Financing (Thermal only)
		11	10% Financing (Both)
		12	5% Inflation
		13	Keetna
		14	Bradley Lake 3rd Unit
		15	Phase I Only
		16	Diamond Coal
Base Analysis (5 TCF Gas)	0	X	
2 TCF Gas	1		X
Low Gas Price	2	X	
Low Gas & Coal Price	3	X	
Low Coal Price with Diamond Plant	4	X	
Low Finance	5	X	
Low Inflation	6	X	
Matanuska	7	X	
Phase I	8	X	
No Coal Export	9	X	
Keetna	10	X	

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 4: LOW COAL PRICE WITH DIAMOND PLANT
WITHOUT SUSITNA

12-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)				
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	129,312	17,562	0	107,300	64,400	8,198	366,553	4,676	7.8
1993	25,196	14,567	129,312	17,562	0	121,400	68,400	8,714	385,152	4,781	8.1
1994	25,180	17,783	129,312	17,562	0	214,700	76,800	9,263	490,601	4,880	10.1
1995	25,179	17,783	129,312	21,862	0	248,100	81,400	9,847	533,483	4,981	10.7
1996	25,113	17,783	288,247	21,862	0	246,900	114,200	25,722	739,827	5,090	14.5
1997	24,874	17,783	288,247	21,862	0	278,300	121,800	27,343	780,209	5,203	15.0
1998	24,715	17,783	467,873	21,862	0	268,400	163,900	46,306	1,010,839	5,317	19.0
1999	24,658	17,783	467,873	21,862	0	307,400	170,200	49,224	1,059,000	5,434	19.5
2000	24,425	17,783	700,795	21,862	0	272,300	217,800	70,535	1,325,500	5,552	23.9
2001	22,014	17,783	700,795	21,862	0	298,300	233,400	74,979	1,369,133	5,632	24.3
2002	22,009	17,783	700,795	21,862	0	346,700	238,400	79,702	1,427,251	5,713	25.0
2003	20,983	17,783	713,328	21,862	0	373,900	257,000	85,890	1,490,746	5,796	25.7
2004	20,970	17,783	713,328	21,862	0	412,900	273,300	91,301	1,551,444	5,879	26.4
2005	20,910	17,783	713,328	21,862	0	459,900	292,700	97,053	1,623,536	5,964	27.2
2006	20,683	17,783	981,553	21,862	0	417,100	349,400	128,912	1,937,294	6,050	32.0
2007	20,666	17,783	997,561	21,862	0	469,100	374,300	138,524	2,039,796	6,136	33.2
2008	20,651	17,783	1,300,711	21,862	0	411,600	453,600	176,348	2,402,555	6,225	38.6
2009	20,635	17,783	1,318,803	21,862	0	443,900	480,600	189,142	2,492,725	6,315	39.5
2010	20,619	17,783	1,318,803	21,862	0	490,900	512,200	201,058	2,583,225	6,406	40.3
2011	20,597	17,783	1,318,803	21,862	0	539,200	545,800	213,725	2,677,770	6,498	41.2
2012	20,588	17,783	1,318,803	21,862	0	592,100	581,500	227,190	2,779,825	6,543	42.5
2013	14,898	17,783	1,341,911	21,862	0	665,300	619,400	243,654	2,924,808	6,686	43.7
2014	12,637	17,783	1,341,911	21,862	0	734,000	659,700	259,004	3,046,897	6,782	44.9
2015	12,637	17,783	1,341,911	21,862	0	818,200	702,600	275,321	3,190,314	6,880	46.4
2016	12,637	17,783	1,397,441	21,862	0	930,300	752,900	297,836	3,430,759	6,979	49.2
2017	12,637	17,783	1,911,951	21,862	0	843,000	894,700	365,984	4,067,916	7,080	57.5
2018	12,637	17,783	1,911,951	21,862	0	931,400	953,700	389,041	4,238,373	7,182	59.0
2019	12,637	17,783	1,911,951	21,862	0	1,022,500	1,016,500	413,550	4,416,783	7,286	60.6
2020	12,637	17,783	1,911,951	21,862	0	1,128,600	1,089,700	439,604	4,622,136	7,390	62.5

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,782,563

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 4: LOW COAL PRICE WITH DIAMOND PLANT
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)				
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4.6
1992	25,214	14,567	79,712	17,562	0	107,300	64,400	8,198	316,953	6.8
1993	25,196	14,567	79,712	17,562	0	121,400	68,400	8,714	335,552	7.0
1994	25,180	17,783	79,712	17,562	0	214,700	76,800	9,263	441,001	9.0
1995	25,179	17,783	79,712	21,862	0	248,100	81,400	9,847	483,883	9.7
1996	25,113	17,783	79,712	21,862	728,000	118,300	92,600	35,367	1,118,738	22.0
1997	24,874	17,783	79,712	21,862	766,000	139,700	98,400	37,595	1,185,927	22.8
1998	24,715	17,783	79,712	21,862	766,000	161,500	104,400	39,964	1,215,936	22.9
1999	24,658	17,783	79,712	21,862	766,000	197,900	106,900	42,482	1,257,297	23.1
2000	24,425	17,783	79,712	21,862	766,000	235,000	110,400	45,158	1,300,340	23.4
2001	22,014	17,783	79,712	21,862	766,000	268,900	117,500	48,003	1,341,774	23.8
2002	22,009	17,783	79,712	21,862	1,351,000	51,700	108,300	71,127	1,723,494	30.2
2003	20,983	17,783	79,712	21,862	1,384,000	59,300	115,000	75,608	1,774,249	30.6
2004	20,970	17,783	79,712	21,862	1,384,000	71,700	124,100	80,372	1,800,499	30.6
2005	20,910	17,783	79,712	21,862	1,384,000	81,500	131,700	85,435	1,822,902	30.6
2006	20,683	17,783	79,712	21,862	1,384,000	115,000	119,500	90,817	1,849,358	30.6
2007	20,666	17,783	79,712	21,862	1,384,000	131,300	126,400	96,539	1,878,262	30.6
2008	20,651	17,783	79,712	21,862	2,119,000	0	123,200	127,521	2,509,729	40.3
2009	20,635	17,783	79,712	21,862	2,150,000	0	127,200	135,555	2,552,747	40.4
2010	20,619	17,783	79,712	21,862	2,150,000	6,100	134,200	144,095	2,574,371	40.2
2011	20,597	17,783	79,712	21,862	2,150,000	6,600	141,400	153,173	2,591,127	39.9
2012	20,588	17,783	79,712	21,862	2,150,000	17,700	148,900	162,822	2,619,368	40.0
2013	14,898	17,783	125,929	21,862	2,150,000	19,100	160,600	177,383	2,687,555	40.2
2014	12,637	17,783	125,929	21,862	2,150,000	28,900	173,200	188,558	2,718,869	40.1
2015	12,637	17,783	125,929	21,862	2,150,000	35,600	186,800	200,437	2,751,048	40.0
2016	12,637	17,783	153,694	21,862	2,150,000	62,300	196,600	215,649	2,830,525	40.6
2017	12,637	17,783	153,694	21,862	2,150,000	93,100	206,900	229,235	2,885,211	40.8
2018	12,637	17,783	185,074	21,862	2,150,000	111,500	228,700	246,598	2,974,154	41.4
2019	12,637	17,783	185,074	21,862	2,150,000	132,300	246,600	262,134	3,028,389	41.6
2020	12,637	17,783	185,074	21,862	2,150,000	201,100	259,400	278,648	3,126,504	42.3

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,880,160

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

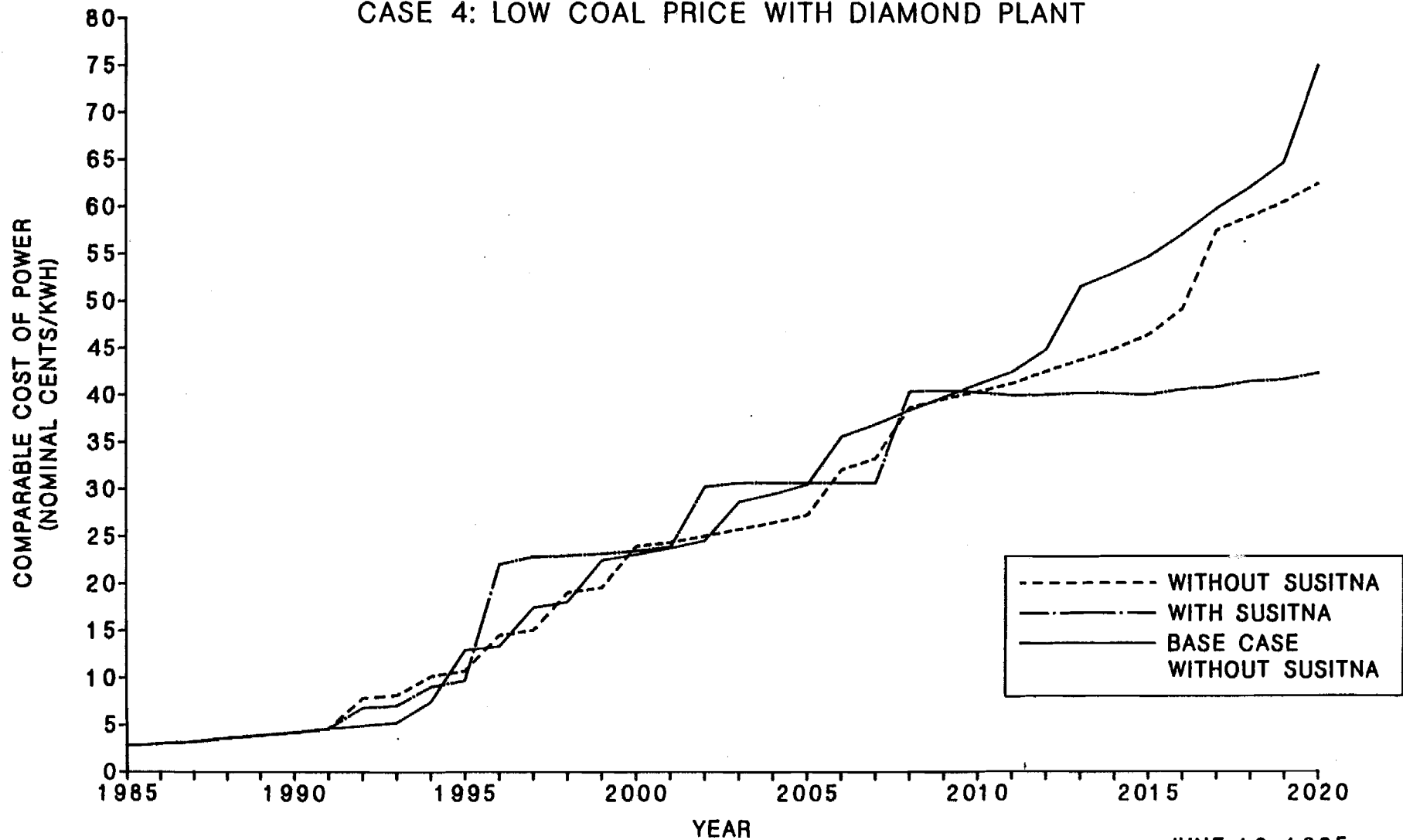
Annual 11.00
Semi-annual 5.36

CASE 4: LOW COAL PRICE WITH DIAMOND PLANT

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	200.0	494.7		
1988	146	4,106	3.6	146	4,106	3.6	9	110.7	662.5		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	803.2		
1990	186	4,446	4.2	186	4,446	4.2		0.0	891.6		
1991	211	4,567	4.6	211	4,567	4.6		0.0	989.7		
1992	317	4,676	6.8	367	4,676	7.8		0.0	1098.5		
1993	336	4,781	7.0	385	4,781	8.1		0.0	1219.4		
1994	441	4,880	9.0	491	4,880	10.1		0.0	1353.5		
1995	484	4,981	9.7	534	4,981	10.7		0.0	1502.4		
1996	1,119	5,090	22.0	740	5,090	14.5	379	0.0	1268.5	379	0
1997	1,186	5,203	22.8	780	5,203	15.0	406		980.6	406	0
1998	1,216	5,317	22.9	1,011	5,317	19.0	205		872.3	205	0
1999	1,257	5,434	23.1	1,059	5,434	19.5	198		759.4	198	0
2000	1,300	5,552	23.4	1,330	5,552	23.9	0		842.9	0	29
2001	1,342	5,632	23.8	1,369	5,632	24.3	0		935.6	0	27
2002	1,724	5,713	30.2	1,427	5,713	25.0	296		726.5	296	0
2003	1,774	5,796	30.6	1,491	5,796	25.7	284		507.7	284	0
2004	1,801	5,879	30.6	1,551	5,879	26.4	249		301.1	249	0
2005	1,823	5,964	30.6	1,624	5,964	27.2	199		124.2	199	0
2006	1,849	6,050	30.6	1,937	6,050	32.0	0		137.8	0	88
2007	1,878	6,136	30.6	2,040	6,136	33.2	0		153.0	0	162
2008	2,510	6,225	40.3	2,403	6,225	38.6	107		57.0	107	0
2009	2,553	6,315	40.4	2,493	6,315	39.5	60		.0	60	0
2010	2,574	6,406	40.2	2,583	6,406	40.3	0		.0	0	9
2011	2,591	6,498	39.9	2,678	6,498	41.2	0		.0	0	87
2012	2,619	6,543	40.0	2,780	6,543	42.5	0		.0	0	160
2013	2,688	6,686	40.2	2,925	6,686	43.7	0		.0	0	237
2014	2,719	6,782	40.1	3,047	6,782	44.9	0		.0	0	328
2015	2,751	6,880	40.0	3,190	6,880	46.4	0		.0	0	439
2016	2,831	6,979	40.6	3,431	6,979	49.2	0		.0	0	600
2017	2,885	7,080	40.8	4,068	7,080	57.5	0		.0	0	1,183
2018	2,974	7,182	41.4	4,238	7,182	59.0	0		.0	0	1,264
2019	3,028	7,286	41.6	4,417	7,286	60.6	0		.0	0	1,388
2020	3,127	7,390	42.3	4,622	7,390	62.5	0		.0	0	1,496
							2383	610.7		2,383	7,496

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 4: LOW COAL PRICE WITH DIAMOND PLANT



JUNE 12, 1985

WITH SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTS, THERMAL BASE FOR THE TOTAL RAILROADLY REGION

JOB NUMBER 39923

06/03/85 11:05 AM

BASED ON DATA PREP JOB

39921 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	CONCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

***** TOTAL CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85		45*		
			5*	1177
86				1168
87		23*		1171
88		132*		1303
89				1303
90				90* 1357
91		87*		1400
92	*	141*	BPP	1499
93				1499
94		25*		1524
95				45* 1566

. WITH SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUS4, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 42476 06/03/85 11:47 AM

BASED ON DATA PREP JOB 42377 DATED 06/03/85

ENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
ECT TRIM	0	0	0	0	0	0	
1995 MW	0	214	603	191	20	358	180 SUM= 1566

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96

339*

1704

97

1701

98

1647

99

1490

0

1484

1

1466

2

478*

1878

3

1878

4

1876

5

1871

6

1579

7

1515

WITH SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

8						753*	2268
9							2181
10							2136
11							2136
12							2135
13							
		2X	87				2177
14							2172
15							2172
16							
		1X	87				2172
17							2172
18							
		1X	87				2259
19							2259
20							2259

MW ADD	0	0	348	0	0	0	1570 SUM= 1918
MW RET	0	-48	-603	-191	-20	-358	-5 SUM= -1225
*****	*****	*****	*****	*****	*****	*****	*****
2020	0	166	348	0	0	0	1745 SUM= 2259
PCT TOT	0.0	7.3	15.4	0.0	0.0	0.0	77.2 SUM=100 PCT

WITHOUT SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELLY REGION

JOB NUMBER 39923 06/03/85 11:05 AM

BASED ON DATA PREP JOB 39921 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
85		45*	5*	1177
86				1168
87		23*		1171
88		132*		1303
89				1303
90				1357
91		87*		1400
92	*	141*	BPP	1499
93				1499
94		25*		1524
95				1566

WITHOUT SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUT4, THERMAL LOW COAL PRICE W/DIAMOND PLANT

JOB NUMBER 26577 06/03/85 07:22 AM

BASED ON DATA PREP JOB 26575 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	214	603	191	20	358	180 SUM= 1566

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96

200*

1565

97

1562

98

200*

1708

99

1551

0

1X 200

1745

1

1727

2

1661

3

1X 87

1748

4

1746

5

1741

6

1X 200

1649

7

1X 87

1672

WITHOUT SUSITNA
4. LOW COAL PRICE WITH DIAMOND PLANT

8		1X 200						1872
9			1X 87					1872
10								1827
11								1827
12								1826
13			1X 87					1781
14								1781
15								1781
16			2X 87					1868
17		1X 200						2068
18								2068
19								2068
20								2068

MW ADD	0	1200	522	0	0	0	0	SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	0	SUM= -1220

2020	0	1366	522	0	0	0	180	SUM= 2068
PCT TOT	0.0	66.1	25.2	0.0	0.0	0.0	8.7	SUM=100 PCT

FUEL PRICE 4. LOW COAL PRICE WITH DIAMOND PLANT

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
Coal	Nenana 0%	APA Nenana
Coal	Diamond	APA Beluga Export

NENANA 0%
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.910	1.910
1986	1.910	2.031
1987	1.910	2.159
1988	1.910	2.295
1989	1.910	2.440
1990	1.910	2.594
1991	1.910	2.757
1992	1.910	2.931
1993	1.910	3.116
1994	1.910	3.313
1995	1.910	3.522
1996	1.910	3.744
1997	1.910	3.980
1998	1.910	4.232
1999	1.910	4.499
2000	1.910	4.782
2005	1.910	6.494
2010	1.910	8.818
2015	1.910	11.974
2020	1.910	16.260

DIAMOND
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.050	1.050
1986	1.062	1.129
1987	1.073	1.213
1988	1.085	1.304
1989	1.097	1.401
1990	1.109	1.506
1991	1.121	1.619
1992	1.134	1.740
1993	1.146	1.870
1994	1.159	2.010
1995	1.171	2.160
1996	1.184	2.321
1997	1.197	2.495
1998	1.210	2.682
1999	1.224	2.882
2000	1.237	3.098
2005	1.307	4.443
2010	1.380	6.373
2015	1.458	9.140
2020	1.540	13.109

Sensitivity
Analysis
Parameters

	DESCRIPTION
NO.	
1	1999 Gas Peak
2	1996 Gas Peak
3	Ramped Gas Price
4	CEA-Enstar Gas Price
5	APA Coal Price
6	Nenana 0%
7	Beluga Low Coal Price
8	Matanuska
9	No Coal Export
10	11.2% Financing (Thermal only)
11	10% Financing (Both)
12	5% Inflation
13	Keetna
14	Bradley Lake 3rd Unit
15	Phase I Only
16	Diamond Coal
Sensitivity Analysis Run	
Base Analysis (5 TCF Gas)	
2 TCF Gas	
Low Gas Price	
Low Gas & Coal Price	
Low Coal Price with Diamond Plant	
Low Finance	
Low Inflation	
Matanuska	
Phase I	
No Coal Export	
Keetna	

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 5: LOW FINANCE
WITHOUT SUSITNA

12-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	O&M (8)	RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)						
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,632	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880	7.4
1995	25,179	17,783	179,503	21,862	0	268,000	82,400	14,141	608,868	4,981	12.2
1996	25,113	17,783	179,503	21,862	0	304,500	82,300	15,032	646,093	5,090	12.7
1997	24,874	17,783	323,375	21,862	0	307,400	121,800	31,218	848,312	5,203	16.3
1998	24,715	17,783	323,375	21,862	0	346,100	129,900	33,185	896,919	5,317	16.9
1999	24,658	17,783	510,082	21,862	0	331,200	170,200	51,291	1,127,077	5,434	20.7
2000	24,425	17,783	510,082	21,862	0	372,600	182,000	54,522	1,183,275	5,552	21.3
2001	22,014	17,783	510,082	21,862	0	417,300	193,200	57,957	1,240,199	5,632	22.0
2002	22,009	17,783	510,082	21,862	0	476,700	196,700	61,609	1,306,745	5,713	22.9
2003	20,983	17,783	703,217	21,862	0	433,200	253,400	85,947	1,536,393	5,796	26.5
2004	20,970	17,783	703,217	21,862	0	480,700	269,400	91,362	1,605,294	5,879	27.3
2005	20,910	17,783	703,217	21,862	0	535,100	288,500	97,118	1,684,490	5,964	28.2
2006	20,683	17,783	930,973	21,862	0	516,300	347,200	127,360	1,982,161	6,050	32.8
2007	20,666	17,783	945,412	21,862	0	578,500	369,500	136,856	2,090,579	6,136	34.1
2008	20,651	17,783	960,761	21,862	0	647,600	395,900	147,044	2,211,601	6,225	35.5
2009	20,635	17,783	977,080	21,862	0	715,300	421,300	157,972	2,331,931	6,315	36.9
2010	20,619	17,783	977,080	21,862	0	805,000	448,200	167,924	2,458,467	6,406	38.4
2011	20,597	17,783	977,080	21,862	0	887,800	476,800	178,503	2,580,425	6,498	39.7
2012	20,588	17,783	996,686	21,862	0	989,200	514,100	191,748	2,751,967	6,543	42.1
2013	14,898	17,783	1,341,360	21,862	0	944,500	615,600	240,337	3,196,339	6,686	47.8
2014	12,637	17,783	1,341,360	21,862	0	1,043,200	655,600	255,478	3,347,919	6,782	49.4
2015	12,637	17,783	1,341,360	21,862	0	1,156,200	702,600	271,573	3,524,014	6,880	51.2
2016	12,637	17,783	1,366,403	21,862	0	1,280,400	743,300	291,236	3,733,621	6,979	53.5
2017	12,637	17,783	1,393,026	21,862	0	1,427,400	801,600	312,299	3,986,607	7,080	56.3
2018	12,637	17,783	1,393,026	21,862	0	1,572,800	853,300	331,974	4,203,382	7,182	58.5
2019	12,637	17,783	1,393,026	21,862	0	1,762,300	908,200	352,888	4,468,697	7,286	61.3
2020	12,637	17,783	1,918,411	21,862	0	1,718,800	1,083,200	430,769	5,203,462	7,390	70.4

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,596,311

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 5: LOW FINANCE
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS		COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)		(GWH) (11)		
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502		2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767		3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938		3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106		3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,263		3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446		4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567		4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676		4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781		5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880		7.4
1995	25,179	17,783	0	21,862	0	290,700	51,100	657	407,281	4,981		8.2
1996	25,113	17,783	0	21,862	728,000	155,300	61,700	25,598	1,035,356	5,090		20.3
1997	24,874	17,783	0	21,862	766,000	181,100	64,800	27,211	1,103,630	5,203		21.2
1998	24,715	17,783	0	21,862	766,000	212,500	68,000	28,925	1,139,785	5,317		21.4
1999	24,658	17,783	0	21,862	766,000	259,900	68,600	30,748	1,189,551	5,434		21.9
2000	24,425	17,783	0	21,862	766,000	305,300	70,200	32,685	1,238,255	5,552		22.3
2001	22,014	17,783	0	21,862	766,000	353,900	74,200	34,744	1,290,503	5,632		22.9
2002	22,009	17,783	0	21,862	1,351,000	81,700	68,300	57,033	1,619,687	5,713		28.3
2003	20,983	17,783	0	21,862	1,384,000	93,500	71,900	60,626	1,670,654	5,796		28.8
2004	20,970	17,783	0	21,862	1,384,000	112,400	77,500	64,445	1,698,960	5,879		28.9
2005	20,910	17,783	0	21,862	1,384,000	131,700	81,500	68,505	1,726,260	5,964		28.9
2006	20,683	17,783	0	21,862	1,384,000	178,100	87,600	72,821	1,762,849	6,050		29.1
2007	20,666	17,783	0	21,862	1,384,000	209,100	70,500	77,409	1,801,320	6,136		29.4
2008	20,651	17,783	0	21,862	2,119,000	0	70,800	107,186	2,357,282	6,225		37.9
2009	20,635	17,783	0	21,862	2,150,000	0	70,700	113,938	2,394,918	6,315		37.9
2010	20,619	17,783	17,348	21,862	2,150,000	12,200	76,200	122,886	2,438,898	6,406		38.1
2011	20,597	17,783	17,348	21,862	2,150,000	13,200	78,900	130,627	2,450,317	6,498		37.7
2012	20,588	17,783	17,348	21,862	2,150,000	21,300	85,100	138,857	2,472,838	6,543		37.8
2013	14,898	17,783	59,035	21,862	2,150,000	30,600	91,800	151,857	2,537,834	6,686		38.0
2014	12,637	17,783	59,035	21,862	2,150,000	45,400	99,000	161,423	2,567,140	6,782		37.9
2015	12,637	17,783	59,035	21,862	2,150,000	66,700	106,700	171,593	2,606,310	6,880		37.9
2016	12,637	17,783	109,121	21,862	2,150,000	105,500	115,100	187,512	2,719,515	6,979		39.0
2017	12,637	17,783	109,121	21,862	2,150,000	134,500	124,100	199,325	2,769,328	7,080		39.1
2018	12,637	17,783	137,425	21,862	2,150,000	184,000	133,900	214,769	2,872,376	7,182		40.0
2019	12,637	17,783	137,425	21,862	2,150,000	240,600	144,400	228,300	2,953,006	7,286		40.5
2020	12,637	17,783	137,425	21,862	2,150,000	337,300	155,700	242,683	3,075,389	7,390		41.6

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,443,327

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

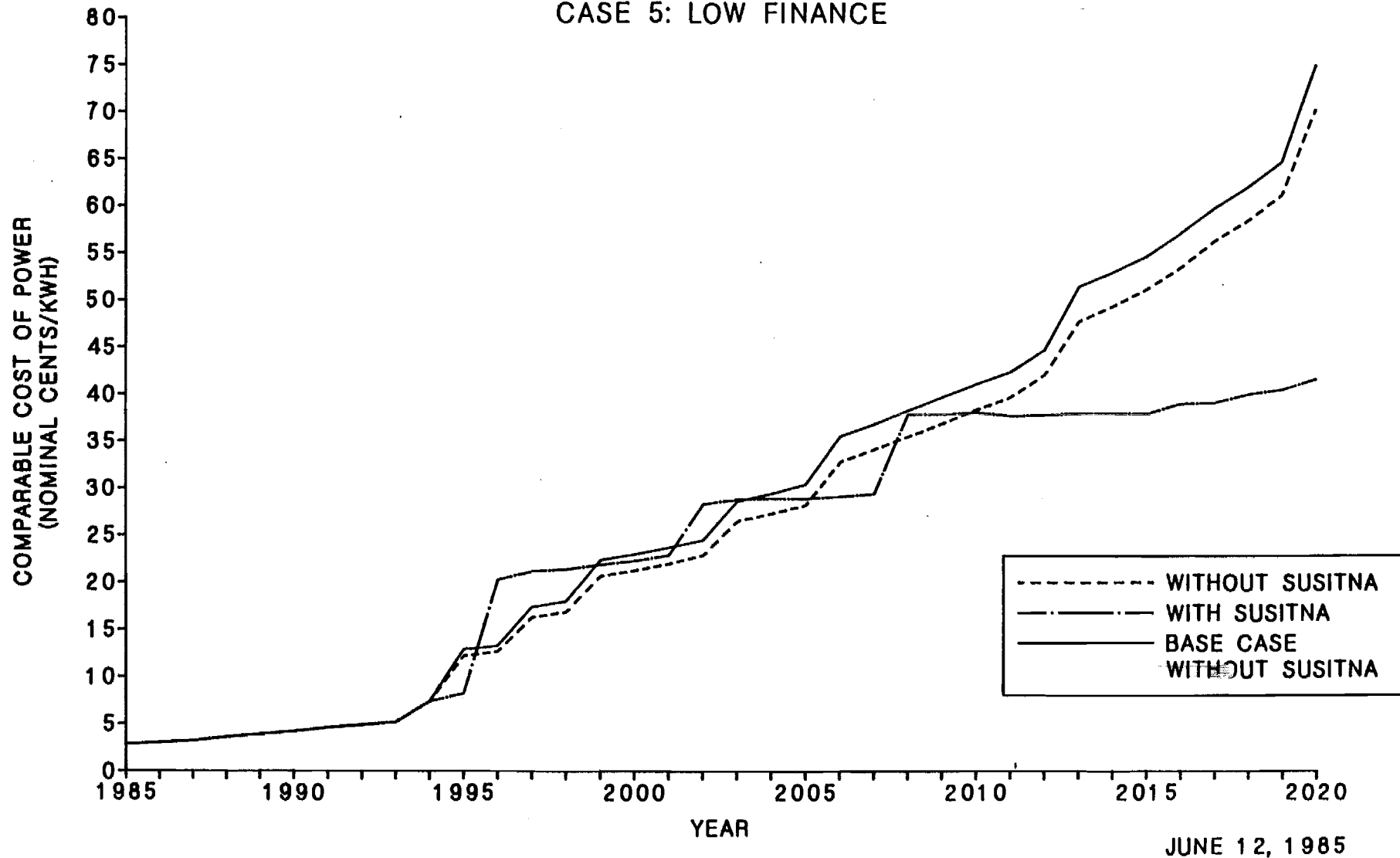
Annual 11.00
Semi-annual 5.36

CASE 5: LOW FINANCE

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	185.5	478.7		
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	521.8		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	647.1		
1990	186	4,446	4.2	186	4,446	4.2		0.0	718.2		
1991	211	4,567	4.6	211	4,567	4.6		0.0	797.3		
1992	228	4,676	4.9	228	4,676	4.9		0.0	885.0		
1993	248	4,781	5.2	248	4,781	5.2		0.0	982.3		
1994	360	4,880	7.4	360	4,880	7.4		0.0	1090.4		
1995	407	4,981	8.2	609	4,981	12.2		0.0	1210.3		
1996	1,035	5,090	20.3	646	5,090	12.7	389	0.0	933.3	389	0
1997	1,104	5,203	21.2	848	5,203	16.3	255		767.0	255	0
1998	1,140	5,317	21.4	897	5,317	16.9	243		595.4	243	0
1999	1,190	5,434	21.9	1,127	5,434	20.7	63		595.1	63	0
2000	1,238	5,552	22.3	1,183	5,552	21.3	55		602.6	55	0
2001	1,291	5,632	22.9	1,240	5,632	22.0	50		615.9	50	0
2002	1,620	5,713	28.4	1,307	5,713	22.9	313		353.8	313	0
2003	1,671	5,796	28.8	1,536	5,796	26.5	134		251.3	134	0
2004	1,699	5,879	28.9	1,605	5,879	27.3	94		180.2	94	0
2005	1,726	5,964	28.9	1,685	5,964	28.2	42		156.0	42	0
2006	1,763	6,050	29.1	1,982	6,050	32.8	0		173.1	0	219
2007	1,801	6,136	29.4	2,091	6,136	34.1	0		192.2	0	289
2008	2,357	6,225	37.9	2,212	6,225	35.5	146		59.8	146	0
2009	2,395	6,315	37.9	2,332	6,315	36.9	63		.0	63	0
2010	2,439	6,406	38.1	2,459	6,406	38.4	0		.0	0	20
2011	2,450	6,498	37.7	2,580	6,498	39.7	0		.0	0	130
2012	2,473	6,543	37.8	2,752	6,543	42.1	0		.0	0	279
2013	2,538	6,686	38.0	3,196	6,686	47.8	0		.0	0	659
2014	2,567	6,782	37.9	3,348	6,782	49.4	0		.0	0	781
2015	2,606	6,880	37.9	3,524	6,880	51.2	0		.0	0	918
2016	2,720	6,979	39.0	3,734	6,979	53.5	0		.0	0	1,014
2017	2,769	7,080	39.1	3,987	7,080	56.3	0		.0	0	1,217
2018	2,872	7,182	40.0	4,203	7,182	58.5	0		.0	0	1,331
2019	2,953	7,286	40.5	4,469	7,286	61.3	0		.0	0	1,516
2020	3,075	7,390	41.6	5,204	7,390	70.4	0		.0	0	2,128
							1847	485.5		1,847	10,501

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 5: LOW FINANCE



JUNE 12, 1985

WITH SUSITNA
5. LOW FINANCE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1989	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
5. LOW FINANCE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,
GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,
JOB NUMBER 36638 06/01/85 10:09 AM
BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96			339*	1563
97				1560
98				1506
99				1349
0				1343
1				1325
2			47A*	1737
3				1737
4				1735
5				1730
6				1438
7				1374

WITH SUSITNA
5. LOW FINANCE

8							753*	2127
9								2040
10		1X	87					2082
11								2082
12								2081
13		2X	87					2123
14								2118
15								2118
16		2X	87					2205
17								2205
18		1X	87					2292
19								2292
20								2292

MW ADD	0	0	522	0	0	0	1570	SUM= 2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM= -1225

2020	0	25	522	0	0	0	1745	SUM= 2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100 PCT

WITHOUT SUSITNA
5. LOW FINANCE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

200*

45*

1625

WITHOUT SUSITNA
5. LOW FINANCE

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 30250 06/01/85 08:23 AM

BASED ON DATA PREP JOB 30196 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				1424
97	200*			1621
98				1567
99	1X 200			1610
0				1604
1				1586
2				1520
3	1X 200			1720
4				1718
5				1713
6	1X 200			1621
7		1X 87		1644

WITHOUT SUSITNA
5. LOW FINANCE

1X 87

1731

1X 87

1731

1686

1686

1X 87

1772

1X 200

1840

1840

1840

1X 87

1840

1X 87

1927

1927

1927

1X 200

2127

MW ADD	0	1200	522	0	0	0	0 SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	0 SUM= -1220
*****	*****	*****	*****	*****	*****	*****	*****
2020	0	1425	522	0	0	0	180 SUM= 2127
PCT TOT	0.0	67.0	24.5	0.0	0.0	0.0	8.5 SUM=100 PCT

FUEL PRICE 5. LOW FINANCE

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
For Low Finance analysis fuel prices are the same as the Base Analysis.		

Sensitivity
Analysis
Parameters

Sensitivity Analysis Run	NO.	DESCRIPTION															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Base Analysis (5 TCF Gas)	0	X		X							X				X		
2 TCF Gas	1		X	X							X				X		
Low Gas Price	2	X			X	X					X				X		
Low Gas & Coal Price	3	X			X						X				X		
Low Coal Price with Diamond Plant	4	X		X				X	X		X				X		X
Low Finance	5	X		X		X						X			X		
Low Inflation	6	X		X		X							X		X		
Matanuska	7	X		X				X			X				X		
Phase I	8	X		X							X				X	X	
No Coal Export	9	X		X						X	X				X		
Keetna	10	X		X							X			X	X		

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 6: LOW INFLATION
WITHOUT SUSITNA

12-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	O&M (8)	RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)						
1985	24,638	1,754	0	0	0	47,700	23,100	0	97,192	3,502	2.8
1986	24,692	2,024	0	0	0	60,800	24,500	0	112,016	3,767	3.0
1987	24,821	2,614	0	0	0	68,000	26,000	0	121,435	3,938	3.1
1988	24,910	8,572	0	0	0	78,900	28,400	0	140,782	4,106	3.4
1989	25,275	8,572	0	0	0	95,200	30,000	0	159,047	4,269	3.7
1990	25,224	8,572	0	17,562	0	92,400	32,200	484	176,442	4,446	4.0
1991	25,218	12,280	0	17,562	0	107,300	34,700	508	197,568	4,567	4.3
1992	25,214	12,280	0	17,562	0	120,100	36,000	534	211,690	4,676	4.5
1993	25,196	12,280	0	17,562	0	134,000	37,900	560	227,498	4,781	4.8
1994	25,180	14,767	0	17,562	0	224,000	42,900	588	324,997	4,880	6.7
1995	25,179	14,767	162,862	21,862	0	236,700	72,800	13,177	547,346	4,981	11.0
1996	25,113	14,767	162,862	21,862	0	265,600	71,800	13,836	575,839	5,090	11.3
1997	24,874	14,767	292,470	21,862	0	264,900	105,000	28,373	752,246	5,203	14.5
1998	24,715	14,767	292,470	21,862	0	294,600	110,600	29,792	788,806	5,317	14.8
1999	24,658	14,767	455,451	21,862	0	278,400	143,100	45,563	983,800	5,434	18.1
2000	24,425	14,767	455,451	21,862	0	309,400	151,100	47,841	1,024,846	5,552	18.5
2001	22,014	14,767	455,451	21,862	0	342,200	158,400	50,233	1,064,927	5,632	18.9
2002	22,009	14,767	455,451	21,862	0	386,100	159,300	52,744	1,112,233	5,713	19.5
2003	20,983	14,767	617,944	21,862	0	346,500	202,800	72,741	1,297,597	5,796	22.4
2004	20,970	14,767	617,944	21,862	0	379,800	212,900	76,378	1,344,621	5,879	22.9
2005	20,910	14,767	617,944	21,862	0	417,600	225,100	80,197	1,398,380	5,964	23.4
2006	20,683	14,767	801,864	21,862	0	397,900	267,600	103,854	1,628,531	6,050	26.9
2007	20,666	14,767	812,753	21,862	0	440,400	281,300	110,165	1,701,913	6,136	27.7
2008	20,651	14,767	824,186	21,862	0	486,900	297,700	116,847	1,782,913	6,225	28.6
2009	20,635	14,767	836,192	21,862	0	531,200	312,800	123,922	1,861,377	6,315	29.5
2010	20,619	14,767	836,192	21,862	0	590,400	328,700	130,118	1,942,657	6,406	30.3
2011	20,597	14,767	836,192	21,862	0	643,100	345,400	136,624	2,018,541	6,498	31.1
2012	20,588	14,767	850,089	21,862	0	707,800	367,800	144,881	2,127,787	6,543	32.5
2013	14,898	14,767	1,104,907	21,862	0	667,400	435,000	179,348	2,438,181	6,686	36.5
2014	12,637	14,767	1,104,907	21,862	0	728,100	457,600	188,315	2,528,188	6,782	37.3
2015	12,637	14,767	1,104,907	21,862	0	797,100	484,400	197,731	2,633,404	6,880	38.3
2016	12,637	14,767	1,121,799	21,862	0	871,800	506,100	209,351	2,753,317	6,979	39.5
2017	12,637	14,767	1,139,536	21,862	0	959,900	539,100	221,640	2,909,442	7,080	41.1
2018	12,637	14,767	1,139,536	21,862	0	1,044,600	566,800	232,722	3,032,924	7,182	42.2
2019	12,637	14,767	1,139,536	21,862	0	1,156,100	595,800	244,358	3,185,060	7,286	43.7
2020	12,637	14,767	1,494,964	21,862	0	1,113,700	701,800	294,546	3,654,275	7,390	49.4

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

7,223,283

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 6: LOW INFLATION
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS	COMPARABLE COST OF POWER
	SERVICE (2)	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)		(GWH) (11)	(C/KWH) (12)
1985	24,638	1,754	0	0	0	47,700	23,100	0	97,192	3,502	2.8
1986	24,692	2,024	0	0	0	60,800	24,500	0	112,016	3,767	3.0
1987	24,821	2,614	0	0	0	68,000	26,000	0	121,435	3,938	3.1
1988	24,910	8,572	0	0	0	78,900	28,400	0	140,782	4,106	3.4
1989	25,275	8,572	0	0	0	95,200	30,000	0	159,047	4,269	3.7
1990	25,224	8,572	0	17,562	0	92,400	32,200	484	176,442	4,446	4.0
1991	25,218	12,280	0	17,562	0	107,300	34,700	508	197,568	4,567	4.3
1992	25,214	12,280	0	17,562	0	120,100	36,000	534	211,690	4,676	4.5
1993	25,196	12,280	0	17,562	0	134,000	37,900	560	227,498	4,781	4.8
1994	25,180	14,767	0	17,562	0	224,000	42,900	588	321,997	4,880	6.7
1995	25,179	14,767	0	21,862	0	256,800	45,200	618	364,426	4,981	7.3
1996	25,113	14,767	0	21,862	534,000	135,500	53,800	21,349	806,391	5,090	15.8
1997	24,874	14,767	0	21,862	564,000	156,100	55,900	22,416	859,919	5,203	16.5
1998	24,715	14,767	0	21,862	564,000	180,900	57,900	23,537	887,681	5,317	16.7
1999	24,658	14,767	0	21,862	564,000	218,500	57,700	24,714	926,201	5,434	17.0
2000	24,425	14,767	0	21,862	564,000	253,500	58,300	25,949	962,803	5,552	17.3
2001	22,014	14,767	0	21,862	564,000	290,200	60,800	27,247	1,000,890	5,632	17.8
2002	22,009	14,767	0	21,862	966,000	66,200	55,400	44,209	1,190,447	5,713	20.8
2003	20,983	14,767	0	21,862	989,000	74,800	57,500	46,420	1,225,332	5,796	21.1
2004	20,970	14,767	0	21,862	989,000	88,800	61,300	48,741	1,245,440	5,879	21.2
2005	20,910	14,767	0	21,862	989,000	102,800	63,600	51,178	1,264,117	5,964	21.2
2006	20,683	14,767	0	21,862	989,000	137,300	52,100	53,737	1,289,449	6,050	21.3
2007	20,666	14,767	0	21,862	989,000	159,100	53,700	56,423	1,315,518	6,136	21.4
2008	20,651	14,767	0	21,862	1,448,000	0	53,200	77,245	1,635,725	6,225	26.3
2009	20,635	14,767	0	21,862	1,479,000	0	52,500	81,107	1,669,871	6,315	26.4
2010	20,619	14,767	12,605	21,862	1,479,000	8,900	55,900	86,456	1,700,109	6,406	26.5
2011	20,597	14,767	12,605	21,862	1,479,000	9,500	57,200	90,779	1,706,310	6,498	26.3
2012	20,588	14,767	12,605	21,862	1,479,000	15,200	60,900	95,318	1,720,240	6,543	26.3
2013	14,898	14,767	27,198	21,862	1,479,000	21,600	64,900	101,582	1,745,806	6,686	26.1
2014	12,637	14,767	27,198	21,862	1,479,000	31,700	69,100	106,661	1,762,924	6,782	26.0
2015	12,637	14,767	27,198	21,862	1,479,000	46,000	73,600	111,994	1,787,057	6,880	26.0
2016	12,637	14,767	60,982	21,862	1,479,000	71,800	78,400	121,062	1,860,510	6,979	26.7
2017	12,637	14,767	60,982	21,862	1,479,000	90,400	83,500	127,115	1,890,263	7,080	26.7
2018	12,637	14,767	79,606	21,862	1,479,000	122,200	88,900	135,383	1,954,354	7,182	27.2
2019	12,637	14,767	79,606	21,862	1,479,000	157,800	94,700	142,152	2,002,524	7,286	27.5
2020	12,637	14,767	79,606	21,862	1,479,000	218,500	100,900	149,259	2,076,531	7,390	28.1

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,394,418

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

Annual 9.50

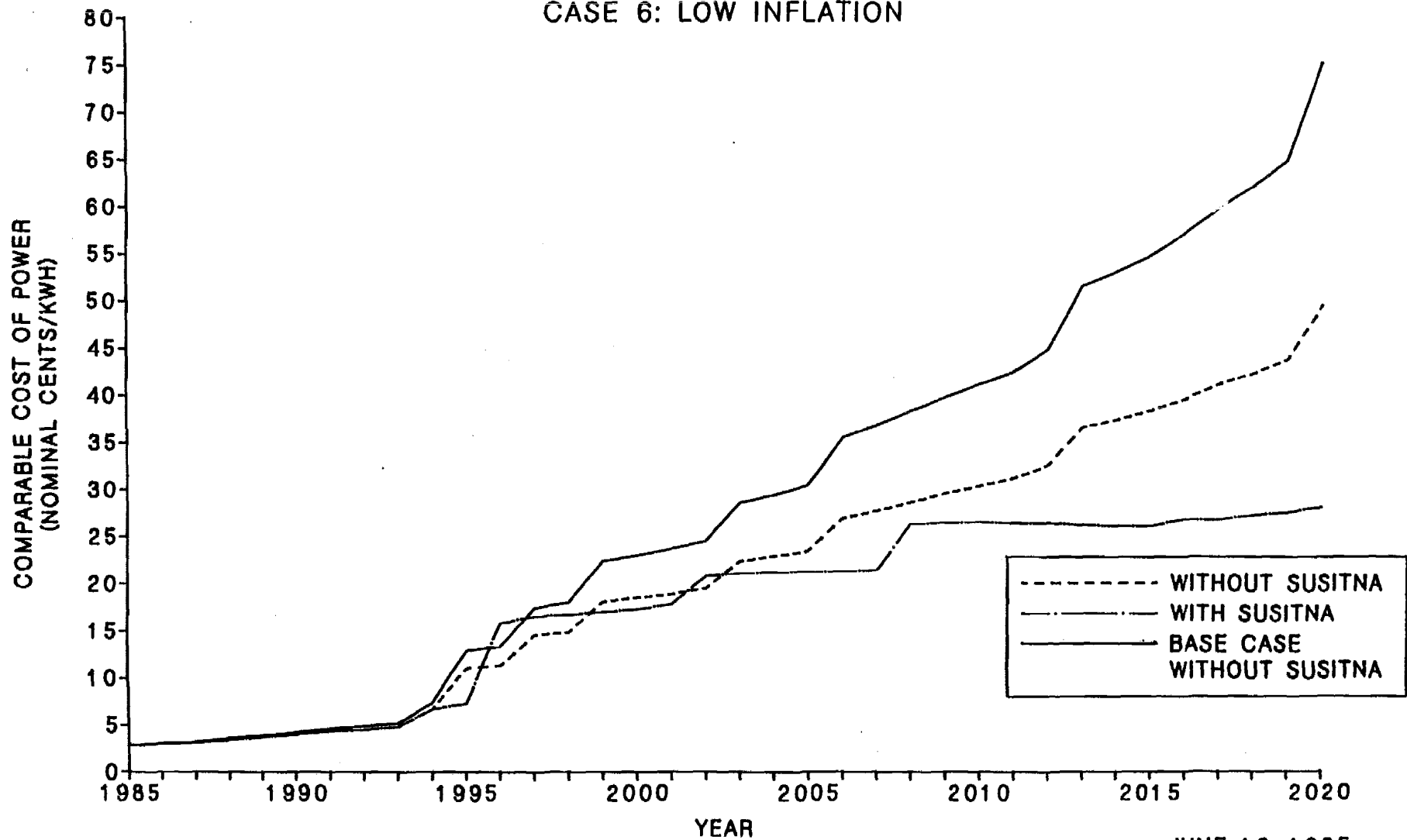
Semi-annual 4.64

CASE 6: LOW INFLATION

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	112	3,767	3.0	112	3,767	3.0	34	103.9	170.1		
1987	121	3,938	3.1	121	3,938	3.1	22	0.0	163.6		
1988	141	4,106	3.4	141	4,106	3.4	9	0.0	169.7		
1989	159	4,269	3.7	159	4,269	3.7	-64	0.0	253.2		
1990	176	4,446	4.0	176	4,446	4.0		0.0	277.3		
1991	198	4,567	4.3	198	4,567	4.3		0.0	303.6		
1992	212	4,676	4.5	212	4,676	4.5		0.0	332.5		
1993	228	4,781	4.8	228	4,781	4.8		0.0	364.1		
1994	325	4,880	6.7	325	4,880	6.7		0.0	398.7		
1995	364	4,981	7.3	547	4,981	11.0		0.0	436.5		
1996	806	5,090	15.8	576	5,090	11.3	231	0.0	236.7	231	0
1997	860	5,203	16.5	752	5,203	14.5	108		146.5	108	0
1998	888	5,317	16.7	789	5,317	14.8	99		56.9	99	0
1999	926	5,434	17.0	984	5,434	18.1	0		62.3	0	58
2000	963	5,552	17.3	1,025	5,552	18.5	0		68.3	0	62
2001	1,001	5,632	17.8	1,065	5,632	18.9	0		74.7	0	64
2002	1,190	5,713	20.8	1,112	5,713	19.5	78		.0	78	0
2003	1,225	5,796	21.1	1,298	5,796	22.4	0		.0	0	72
2004	1,245	5,879	21.2	1,345	5,879	22.9	0		.0	0	99
2005	1,264	5,964	21.2	1,398	5,964	23.4	0		.0	0	134
2006	1,289	6,050	21.3	1,629	6,050	26.9	0		.0	0	339
2007	1,316	6,136	21.4	1,702	6,136	27.7	0		.0	0	386
2008	1,636	6,225	26.3	1,783	6,225	28.6	0		.0	0	147
2009	1,670	6,315	26.4	1,861	6,315	29.5	0		.0	0	192
2010	1,700	6,406	26.5	1,943	6,406	30.3	0		.0	0	243
2011	1,706	6,498	26.3	2,019	6,498	31.1	0		.0	0	312
2012	1,720	6,543	26.3	2,128	6,543	32.5	0		.0	0	408
2013	1,746	6,686	26.1	2,438	6,686	36.5	0		.0	0	692
2014	1,763	6,782	26.0	2,528	6,782	37.3	0		.0	0	765
2015	1,787	6,880	26.0	2,633	6,880	38.3	0		.0	0	846
2016	1,861	6,979	26.7	2,758	6,979	39.5	0		.0	0	898
2017	1,890	7,080	26.7	2,909	7,080	41.1	0		.0	0	1,019
2018	1,954	7,182	27.2	3,033	7,182	42.2	0		.0	0	1,079
2019	2,003	7,286	27.5	3,185	7,286	43.7	0		.0	0	1,183
2020	2,077	7,390	28.1	3,654	7,390	49.4	0		.0	0	1,578
							515	203.9		515	10,576

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 6: LOW INFLATION



JUNE 12, 1985

WITH SUSITNA
6. LOW INFLATION

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1989	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	TIES
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
6. LOW INFLATION

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 36638 06/01/85 10:09 AM

BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96			339*	1563
----	--	--	------	------

97				1560
----	--	--	--	------

98				1506
----	--	--	--	------

99				1349
----	--	--	--	------

0				1343
---	--	--	--	------

1				1325
---	--	--	--	------

2			478*	1737
---	--	--	------	------

3				1737
---	--	--	--	------

4				1735
---	--	--	--	------

5				1730
---	--	--	--	------

6				1438
---	--	--	--	------

7				1374
---	--	--	--	------

WITH SUSITNA
6. LOW INFLATION

8							753*	2127
9								2040
10		1X	87					2082
11								2082
12								2081
13		2X	87					2123
14								2118
15								2118
16		2X	87					2205
17								2205
18		1X	87					2292
19								2292
20								2292

MW ADD	0	0	522	0	0	0	1570	SUM= 2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM= -1225

2020	0	25	522	0	0	0	1745	SUM= 2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100 PCT

WITHOUT SUSITNA
6. LOW INFLATION

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR YEARLY MW ADDITIONS + TIES
** *****

85			45*		5*		1177
86							1168
87			23*				1171
88			132*				1303
89							1303
90						90*	1357
91			87*				1400
92							1358
93							1358
94			25*				1383
95			200*			45*	1625

WITHOUT SUSITNA
6. LOW INFLATION

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 30250 06/01/85 08:23 AM

BASED ON DATA PREP JOB 30196 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

YR	YEARLY	MW	ADDITIONS	TIES	TOTAL CAPAB.
**	*****	*****	*****	*****	*****

96					1424
97		200*			1621
98					1567
99		1X 200			1610
0					1604
1					1586
2					1520
3		1X 200			1720
4					1718
5					1713
6		1X 200			1621
7					
		1X 87			1644

WITHOUT SUSITNA
6. LOW INFLATION

8	1X 87	1731
9	1X 87	1731
10		1686
11		1686
12	1X 87	1772
13	1X 200	1840
14		1840
15		1840
16	1X 87	1840
17	1X 87	1927
18		1927
19		1927
20	1X 200	2127
***** ***** MW ADD 0 1200 522 0 0 0 0 SUM= 1722 MW RET 0 -48 -603 -191 -20 -358 0 SUM= -1220 ***** 2020 0 1425 522 0 0 0 180 SUM= 2127 PCT TOT 0.0 67.0 24.5 0.0 0.0 0.0 8.5 SUM=100 PCT		

FUEL PRICE 6. LOW INFLATION

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
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Base Case Fuels inflated at 5%.

ANCHORAGE - APA COOK INLET
IN 1999
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.258
1987	2.240	2.470
1988	2.170	2.512
1989	2.250	2.735
1990	2.368	3.022
1991	2.492	3.340
1992	2.623	3.691
1993	2.761	4.079
1994	2.906	4.508
1995	3.058	4.982
1996	3.219	5.506
1997	3.388	6.084
1998	3.566	6.724
1999	3.753	7.431
2000	3.950	8.212
2005	4.840	12.843
2010	5.930	20.082
2015	6.851	29.608
2020	7.910	43.634

ANCHORAGE - APA NORTH SLOPE
 IN 1999
 - NATURAL GAS
 (\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	2.000	2.000
1986	2.150	2.258
1987	2.240	2.470
1988	2.170	2.512
1989	2.250	2.735
1990	2.416	3.084
1991	2.595	3.477
1992	2.787	3.921
1993	2.993	4.422
1994	3.214	4.986
1995	3.451	5.622
1996	3.707	6.339
1997	3.981	7.148
1998	4.275	8.061
1999	4.591	9.089
2000	4.930	10.249
2005	6.140	16.292
2010	7.370	24.958
2015	8.511	36.783
2020	9.831	54.226

BELUGA RIVER - APA COOK INLET
IN 1999
NATURAL GAS
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	0.240	0.240
1986	0.240	0.252
1987	0.240	0.265
1988	0.300	0.347
1989	0.300	0.365
1990	0.310	0.396
1991	0.310	0.415
1992	0.320	0.450
1993	0.320	0.473
1994	2.906	4.508
1995	3.059	4.982
1996	3.219	5.506
1997	3.388	6.085
1998	3.566	6.724
1999	3.753	7.431
2000	3.950	8.212
2005	4.840	12.843
2010	5.930	20.082
2015	6.851	29.608
2020	7.911	43.635

APA NENANA
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	1.910	1.910
1986	1.939	2.036
1987	1.969	2.170
1988	1.999	2.314
1989	2.029	2.466
1990	2.060	2.629
1991	2.091	2.802
1992	2.123	2.987
1993	2.155	3.183
1994	2.187	3.393
1995	2.220	3.616
1996	2.253	3.854
1997	2.287	4.106
1998	2.321	4.376
1999	2.355	4.663
2000	2.390	4.969
2005	2.570	6.819
2010	2.760	9.347
2015	2.977	12.865
2020	3.210	17.708

APA BELUGA EXPORT
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	1.670	1.670
1986	1.670	1.754
1987	1.670	1.841
1988	1.670	1.933
1989	1.670	2.030
1990	1.670	2.131
1991	1.670	2.238
1992	1.670	2.350
1993	1.670	2.467
1994	1.670	2.591
1995	1.670	2.720
1996	1.670	2.856
1997	1.670	2.999
1998	1.670	3.149
1999	1.670	3.306
2000	1.670	3.472
2005	1.920	5.094
2010	2.160	7.315
2015	2.310	9.983
2020	2.470	13.625

FMUS
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	2.130	2.130
1986	2.425	2.546
1987	2.760	3.043
1988	3.141	3.636
1989	3.576	4.346
1990	4.070	5.194
1991	4.130	5.535
1992	4.191	5.898
1993	4.253	6.284
1994	4.316	6.696
1995	4.380	7.135
1996	4.446	7.604
1997	4.513	8.105
1998	4.581	8.638
1999	4.650	9.207
2000	4.720	9.813
2005	5.080	13.479
2010	5.450	18.456
2015	5.879	25.407
2020	6.341	34.974

GVEA
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	1.440	1.440
1986	1.440	1.512
1987	1.440	1.588
1988	1.440	1.667
1989	1.440	1.750
1990	1.440	1.838
1991	1.440	1.930
1992	1.440	2.026
1993	1.440	2.128
1994	1.440	2.234
1995	1.440	2.346
1996	1.440	2.463
1997	1.440	2.586
1998	1.440	2.715
1999	1.440	2.851
2000	1.440	2.994
2005	1.440	3.821
2010	1.440	4.876
2015	1.440	6.224
2020	1.440	7.943

GVEA
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	4.350	4.350
1986	4.419	4.640
1987	4.489	4.949
1988	4.560	5.279
1989	4.630	5.628
1990	4.700	5.999
1991	4.700	6.298
1992	4.700	6.613
1993	4.700	6.944
1994	4.700	7.291
1995	4.700	7.656
1996	4.759	8.139
1997	4.818	8.652
1998	4.878	9.198
1999	4.939	9.778
2000	5.000	10.395
2005	5.250	13.930
2010	5.513	18.668
2015	5.789	25.018
2020	6.078	33.526

FMUS
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	6.590	6.590
1986	6.590	6.920
1987	6.590	7.265
1988	6.590	7.629
1989	6.790	8.253
1990	6.990	8.921
1991	7.206	9.657
1992	7.429	10.454
1993	7.659	11.316
1994	7.896	12.249
1995	8.140	13.259
1996	8.486	14.513
1997	8.846	15.886
1998	9.221	17.388
1999	9.613	19.032
2000	10.021	20.832
2005	12.277	32.573
2010	15.040	50.932
2015	17.367	75.057
2020	20.052	110.609

SES
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	7.210	7.210
1986	7.210	7.571
1987	7.210	7.949
1988	7.210	8.346
1989	7.430	9.031
1990	7.650	9.764
1991	7.887	10.569
1992	8.131	11.441
1993	8.383	12.385
1994	8.642	13.407
1995	8.910	14.514
1996	9.289	15.887
1997	9.683	17.389
1998	10.094	19.035
1999	10.523	20.835
2000	10.970	22.806
2005	13.434	35.644
2010	16.451	55.708
2015	18.998	82.110
2020	21.941	121.025

HEA
FUEL OIL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-5.00%) ***** (\$)
1985	7.780	7.780
1986	7.780	8.169
1987	7.780	8.577
1988	7.780	9.006
1989	8.010	9.736
1990	8.250	10.529
1991	8.506	11.398
1992	8.769	12.339
1993	9.041	13.358
1994	9.321	14.460
1995	9.610	15.654
1996	10.018	17.134
1997	10.443	18.755
1998	10.887	20.528
1999	11.344	22.470
2000	11.831	24.595
2005	14.491	38.450
2010	17.750	60.109
2015	20.503	88.613
2020	23.683	130.633

Sensitivity
Analysis
Parameters

	DESCRIPTION	NO.	Sensitivity Analysis Run
	1999 Gas Peak	1	
	1996 Gas Peak	2	
	Ramped Gas Price	3	
	CEA-Enstar Gas Price	4	
	APA Coal Price	5	
	Nenana 0%	6	
	Beluga Low Coal Price	7	
	Matanuska	8	
	No Coal Export	9	
	11.2% Financing (Thermal only)	10	
	10% Financing (Both)	11	
	5% Inflation	12	
	Keetna	13	
	Bradley Lake 3rd Unit	14	
	Phase I Only	15	
	Diamond Coal	16	
Base Analysis (5 TCF Gas)		0	X
2 TCF Gas		1	X
Low Gas Price		2	X
Low Gas & Coal Price		3	X
Low Coal Price with Diamond Plant		4	X
Low Finance		5	X
Low Inflation		6	X
Matanuska		7	X
Phase I		8	X
No Coal Export		9	X
Keetna		10	X

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 7: MATANUSKA
WITHOUT SUSITNA

12-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)		ENERGY REQUIREMENTS (11)		COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	TOTAL (10)	(GWH)		
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	148,003	17,562	0	118,400	56,200	9,992	389,938	4,676	8.3
1993	25,196	14,567	148,003	17,562	0	133,500	60,300	10,621	409,750	4,781	8.6
1994	25,180	17,783	148,003	17,562	0	228,600	68,100	11,291	516,519	4,880	10.6
1995	25,179	17,783	148,003	21,862	0	263,200	72,000	12,002	560,029	4,981	11.2
1996	25,113	17,783	148,003	21,862	0	300,300	72,000	12,758	597,819	5,090	11.7
1997	24,874	17,783	148,003	21,862	0	340,900	76,000	13,562	642,984	5,203	12.4
1998	24,715	17,783	327,631	21,862	0	348,500	117,800	31,657	889,948	5,317	16.7
1999	24,658	17,783	327,631	21,862	0	413,000	121,400	33,652	959,986	5,434	17.7
2000	24,425	17,783	530,655	21,862	0	408,500	167,700	55,258	1,226,182	5,552	22.1
2001	22,014	17,783	530,655	21,862	0	449,700	179,300	58,739	1,280,053	5,632	22.7
2002	22,009	17,783	789,699	21,862	0	425,000	223,400	82,622	1,582,375	5,713	27.7
2003	20,983	17,783	789,699	21,862	0	472,700	239,100	87,828	1,649,955	5,796	28.5
2004	20,970	17,783	789,699	21,862	0	521,400	253,900	93,361	1,718,975	5,879	29.2
2005	20,910	17,783	789,699	21,862	0	572,800	271,800	99,242	1,794,096	5,964	30.1
2006	20,683	17,783	1,072,983	21,862	0	552,300	331,400	132,641	2,149,652	6,050	35.5
2007	20,666	17,783	1,088,990	21,862	0	615,000	352,500	142,488	2,259,289	6,136	36.8
2008	20,651	17,783	1,088,990	21,862	0	686,900	377,500	151,465	2,365,151	6,225	38.0
2009	20,635	17,783	1,107,082	21,862	0	757,700	401,500	162,691	2,489,253	6,315	39.4
2010	20,619	17,783	1,126,315	21,862	0	844,600	429,900	174,731	2,635,810	6,406	41.1
2011	20,597	17,783	1,485,505	21,862	0	799,000	522,800	220,215	3,087,763	6,498	47.5
2012	20,588	17,783	1,485,505	21,862	0	879,300	560,200	234,089	3,219,327	6,543	49.2
2013	14,898	17,783	1,485,505	21,862	0	978,900	588,800	248,837	3,356,585	6,686	50.2
2014	12,637	17,783	1,485,505	21,862	0	1,080,300	630,900	264,513	3,513,501	6,782	51.8
2015	12,637	17,783	1,485,505	21,862	0	1,191,800	671,500	281,178	3,682,265	6,880	53.5
2016	12,637	17,783	1,541,035	21,862	0	1,342,700	719,300	304,061	3,959,378	6,979	56.7
2017	12,637	17,783	1,541,035	21,862	0	1,494,600	765,400	323,217	4,176,534	7,080	59.0
2018	12,637	17,783	2,094,225	21,862	0	1,450,100	914,700	396,611	4,907,917	7,182	68.3
2019	12,637	17,783	2,094,225	21,862	0	1,593,900	974,400	421,597	5,136,404	7,286	70.5
2020	12,637	17,783	2,094,225	21,862	0	1,757,700	1,044,300	448,158	5,396,665	7,390	73.0

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

7,044,127

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 7: MATANUSKA
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS	COMPARABLE COST OF POWER
	SERVICE (2)	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)		(GWH) (11)	(C/KWH) (12)
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	98,403	17,562	0	118,400	56,200	9,992	340,338	4,676	7.3
1993	25,196	14,567	98,403	17,562	0	133,500	60,300	10,621	360,150	4,781	7.5
1994	25,180	17,783	98,403	17,562	0	228,600	68,100	11,291	466,919	4,880	9.6
1995	25,179	17,783	98,403	21,862	0	263,200	72,000	12,002	510,429	4,981	10.2
1996	25,113	17,783	98,403	21,862	0	300,300	72,000	12,758	548,219	5,090	10.8
1997	24,874	17,783	98,403	21,862	0	340,900	76,000	13,562	593,384	5,203	11.4
1998	24,715	17,783	98,403	21,862	803,000	179,700	92,300	42,016	1,279,779	5,317	24.1
1999	24,658	17,783	98,403	21,862	849,000	216,400	95,000	44,663	1,367,769	5,434	25.2
2000	24,425	17,783	98,403	21,862	849,000	255,100	101,800	47,477	1,415,850	5,552	25.5
2001	22,014	17,783	98,403	21,862	849,000	290,500	106,600	50,468	1,456,630	5,632	25.9
2002	22,009	17,783	98,403	21,862	849,000	350,000	100,000	53,647	1,512,705	5,713	26.5
2003	20,983	17,783	98,403	21,862	849,000	399,000	106,100	57,027	1,570,159	5,796	27.1
2004	20,970	17,783	98,403	21,862	1,522,000	85,300	106,600	83,420	1,956,338	5,879	33.3
2005	20,910	17,783	98,403	21,862	1,550,000	96,200	112,900	88,675	2,006,734	5,964	33.6
2006	20,683	17,783	98,403	21,862	1,550,000	130,800	110,500	94,262	2,044,293	6,000	33.8
2007	20,666	17,783	98,403	21,862	1,550,000	148,300	114,200	100,200	2,071,415	6,136	33.8
2008	20,651	17,783	98,403	21,862	1,550,000	191,400	112,700	106,513	2,119,312	6,225	34.0
2009	20,635	17,783	98,403	21,862	1,550,000	212,000	115,900	113,223	2,149,807	6,315	34.0
2010	20,619	17,783	98,403	21,862	2,374,000	6,100	109,800	148,256	2,796,824	6,406	43.7
2011	20,597	17,783	98,403	21,862	2,408,000	6,600	115,100	157,597	2,845,942	6,498	43.8
2012	20,588	17,783	98,403	21,862	2,408,000	17,700	124,100	167,525	2,875,962	6,543	44.0
2013	14,898	17,783	144,620	21,862	2,408,000	22,900	133,800	182,382	2,946,245	6,686	44.1
2014	12,637	17,783	144,620	21,862	2,408,000	33,000	144,300	193,872	2,976,074	6,782	43.9
2015	12,637	17,783	144,620	21,862	2,408,000	48,900	151,200	206,086	3,011,088	6,880	43.8
2016	12,637	17,783	172,385	21,862	2,408,000	76,700	158,300	221,654	3,089,321	6,979	44.3
2017	12,637	17,783	172,385	21,862	2,408,000	103,400	170,700	235,618	3,142,385	7,080	44.4
2018	12,637	17,783	203,765	21,862	2,408,000	128,300	189,600	253,383	3,235,330	7,182	45.0
2019	12,637	17,783	203,765	21,862	2,408,000	156,400	204,500	269,346	3,294,293	7,286	45.2
2020	12,637	17,783	203,765	21,862	2,408,000	233,500	214,000	286,315	3,397,862	7,390	46.0

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,756,193

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

CASE 7: MATANUSKA

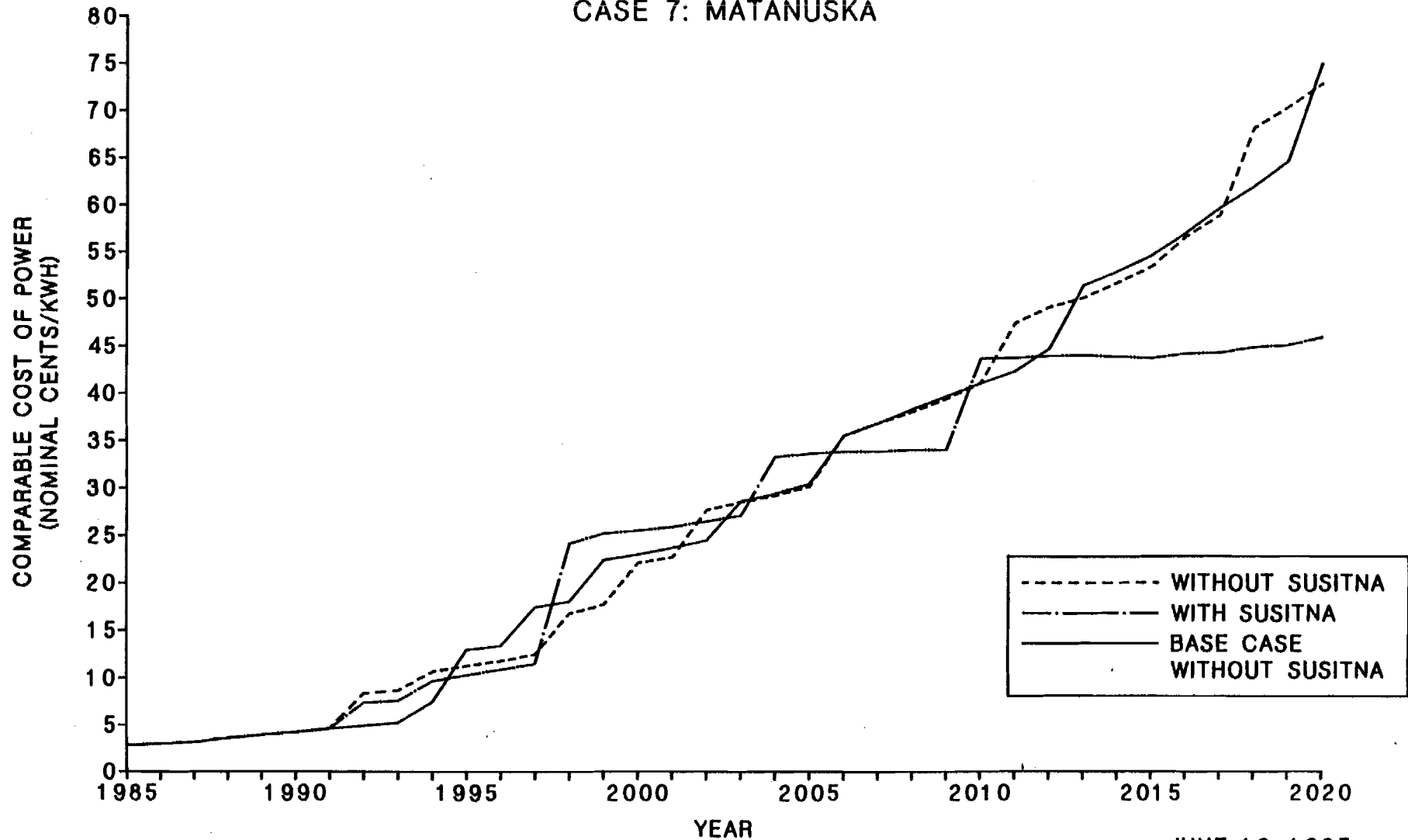
Interest Earnings

Annual 11.00
Semi-annual 5.36

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	108.6	393.2		
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	427.0		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	541.8		
1990	186	4,446	4.2	186	4,446	4.2		0.0	601.4		
1991	211	4,567	4.6	211	4,567	4.6		0.0	667.6		
1992	340	4,676	7.3	390	4,676	8.3		0.0	741.0		
1993	360	4,781	7.5	410	4,781	8.6		0.0	822.5		
1994	467	4,880	9.6	517	4,880	10.6		0.0	913.0		
1995	510	4,981	10.2	560	4,981	11.2		0.0	1013.4		
1996	548	5,090	10.8	598	5,090	11.7	0	0.0	1124.9	0	50
1997	593	5,203	11.4	643	5,203	12.4	0		1248.6	0	50
1998	1,280	5,317	24.1	890	5,317	16.7	390		975.2	390	0
1999	1,368	5,434	25.2	960	5,434	17.7	408		652.8	408	0
2000	1,416	5,552	25.5	1,226	5,552	22.1	190		524.9	190	0
2001	1,457	5,632	25.9	1,280	5,632	22.7	177		396.7	177	0
2002	1,513	5,713	26.5	1,582	5,713	27.7	0		440.3	0	70
2003	1,570	5,796	27.1	1,650	5,796	28.5	0		488.7	0	80
2004	1,956	5,879	33.3	1,719	5,879	29.2	237		292.5	237	0
2005	2,007	5,964	33.6	1,794	5,964	30.1	213		100.7	213	0
2006	2,044	6,050	33.8	2,150	6,050	35.5	0		111.7	0	105
2007	2,071	6,136	33.8	2,259	6,136	36.8	0		124.0	0	188
2008	2,119	6,225	34.0	2,365	6,225	38.0	0		137.7	0	246
2009	2,150	6,315	34.0	2,489	6,315	39.4	0		152.8	0	340
2010	2,797	6,406	43.7	2,636	6,406	41.1	161		.0	161	0
2011	2,846	6,498	43.8	3,088	6,498	47.5	0		.0	0	242
2012	2,876	6,543	44.0	3,219	6,543	49.2	0		.0	0	343
2013	2,946	6,686	44.1	3,357	6,686	50.2	0		.0	0	410
2014	2,976	6,782	43.9	3,514	6,782	51.8	0		.0	0	537
2015	3,011	6,880	43.8	3,682	6,880	53.5	0		.0	0	671
2016	3,089	6,979	44.3	3,959	6,979	56.7	0		.0	0	870
2017	3,142	7,080	44.4	4,177	7,080	59.0	0		.0	0	1,034
2018	3,235	7,182	45.0	4,908	7,182	68.3	0		.0	0	1,673
2019	3,294	7,286	45.2	5,136	7,286	70.5	0		.0	0	1,842
2020	3,398	7,390	46.0	5,397	7,390	73.0	0		.0	0	1,999
							1775	408.6		1,775	10,749

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 7: MATANUSKA



JUNE 12, 1985

WITH SUSITNA
7. MATANUSKA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTT, THERMAL W/ MATANUSKA COAL FOR THE TOTAL RAILBELT

JOB NUMBER 48544

06/03/85 01:28 PM

BASED ON DATA- PREP JOB

48534 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

153*

MPP

1511

93

1511

94

25*

1536

95

45*

1578

WITH SUSITNA
7. MATANUSKA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,
GUS7, SUSITNA W/ MATANUSKA, FOR THE TOTAL RAILBELT REGION,
JOB NUMBER 51075 06/03/85 02:10 PM
BASED ON DATA PREP JOB 51014 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	226	603	191	20	358	180 SUM= 1578

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96				1377
97				1374
98			539*	1659
99				1502
0				1496
1				1478
2				1412
3				1412
4			478*	1888
5				1883
6				1591
7				1527

WITH SUSITNA
7. MATANUSKA

8										1527
9										1440
10									753*	2148
11										2148
12										2147
13			2X	87						2189
14										2184
15										2184
16										2184
17										2184
18										2271
19										2271
20										2271

MW ADD 0 0 348 0 0 0 1570 SUM= 1918
MF RET 0 -48 -603 -191 -20 -358 -5 SUM= -1225

2020 0 178 348 0 0 0 1745 SUM= 2271
PCT TOT 0.0 7.8 15.3 0.0 0.0 0.0 76.8 SUM=100 PCT

WITHOUT SUSITNA

7. MATANUSKA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL W/ MATANUSKA COAL FOR THE TOTAL RAILBELT

JOB NUMBER 48544 06/03/85 01:28 PM

BASED ON DATA- PREP JOB 48534 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
85		45*		
			5*	
				1177
86				1168
87		23*		1171
88		132*		1303
89				1303
90				90*
				1357
91		87*		1400
92	*	153*	MPP	1511
93				1511
94		25*		1536
95				45*

1578

WITHOUT SUSITNA

7. MATANUSKA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUT7, THERMAL W/MATANUSKA COAL FOR THE TOTAL RAILBELT

JOB NUMBER 49514 06/03/85 01:43 PM

BASED ON DATA PREP JOB 49478 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	226	603	191	20	358	180 SUM= 1578

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****
96				1377
97				1374
98	200*			1520
99				1363
0	200*			1557
1				1539
2	1X 200			1673
3				1673
4				1671
5				1666
6	1X 200			
		1X 87		1661
7		1X 87		1684

WITHOUT SUSITNA
7. MATANUSKA

8										1684
9			1X 87							1684
10			1X 87							1726
11			1X 200							1926
12										1925
13										1793
14										1793
15										1793
16			2X 87							1880
17										1880
18			1X 200							2080
19										2080
20										2080

MW ADD	0	1200	522	0	0	0	0	0	SUM=	1722
MW RET	0	-48	-603	-191	-20	-358	0	0	SUM=	-1220

2020	0	1378	522	0	0	0	180	0	SUM=	2060
PCT TOT	0.0	66.3	25.1	0.0	0.0	0.0	8.7	0.0	SUM=	100 PCT

FUEL PRICE 7. MATANUSKA

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
Coal	Matanuska	

MATANUSKA
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.790	1.790
1986	1.810	1.924
1987	1.830	2.068
1988	1.850	2.222
1989	1.870	2.389
1990	1.891	2.567
1991	1.911	2.759
1992	1.932	2.966
1993	1.954	3.188
1994	1.975	3.426
1995	1.997	3.682
1996	2.019	3.958
1997	2.041	4.254
1998	2.064	4.572
1999	2.086	4.914
2000	2.109	5.281
2005	2.228	7.575
2010	2.353	10.864
2015	2.485	15.582
2020	2.625	22.348

Sensitivity Analysis Parameters

Sensitivity Analysis Parameters																	
		DESCRIPTION															
Sensitivity Analysis Run	NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		1999 Gas Peak	1996 Gas Peak	Ramped Gas Price	CEA-Enstar Gas Price	APA Coal Price	Nenana 0%	Beluga Low Coal Price	Matanuska	No Coal Export	11.2% Financing (Thermal only)	10% Financing (Both)	5% Inflation	Keetna	Bradley Lake 3rd Unit	Phase I Only	Diamond Coal
	Base Analysis (5 TCF Gas)	0	X		X	X					X				X		
	2 TCF Gas	1		X	X	X					X				X		
	Low Gas Price	2	X			X	X				X				X		
	Low Gas & Coal Price	3	X			X		X	X		X				X		
	Low Coal Price with Diamond Plant	4	X		X			X	X		X				X		X
	Low Finance	5	X		X	X	X					X			X		
	Low Inflation	6	X		X	X	X						X		X		
	Matanuska	7	X		X	X	X		X		X				X		
	Phase I	8	X		X		X				X				X	X	
	No Coal Export	9	X		X		X				X	X			X		
	Keetna	10	X		X		X				X		X	X	X		

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 8: BASE CASE ANALYSIS
WITHOUT SUSITNA

11-Jun-85

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS ON NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)		TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)				
1985	24,638	1,974	0	0	0	47,500	23,000	0	97,112	3,502	2.8
1986	24,692	2,289	0	0	0	61,300	24,800	0	113,081	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,700	0	124,210	3,938	3.2
1988	24,910	9,946	0	0	0	81,800	29,200	0	145,856	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,400	0	166,721	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,400	33,900	484	185,516	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,800	37,400	514	211,061	4,567	4.6
1992	25,214	14,567	0	17,562	0	130,800	39,300	547	227,990	4,676	4.9
1993	25,196	14,567	0	17,562	0	147,800	42,100	581	247,806	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,100	47,700	618	358,943	4,880	7.4
1995	25,179	17,783	210,429	21,862	0	267,600	82,400	15,134	640,387	4,981	12.9
1996	25,113	17,783	210,429	21,862	0	304,400	82,300	16,087	677,975	5,090	13.3
1997	24,874	17,783	379,398	21,862	0	307,800	121,900	33,319	906,936	5,203	17.4
1998	24,715	17,783	379,398	21,862	0	346,500	129,600	35,418	955,276	5,317	18.0
1999	24,658	17,783	598,457	21,862	0	330,700	170,000	54,778	1,218,238	5,434	22.4
2000	24,425	17,783	598,457	21,862	0	372,600	181,500	58,229	1,274,857	5,552	23.0
2001	22,014	17,783	598,457	21,862	0	417,600	193,300	61,898	1,332,914	5,632	23.7
2002	22,009	17,783	598,457	21,862	0	476,800	196,100	65,797	1,398,809	5,713	24.5
2003	20,983	17,783	822,008	21,862	0	432,600	253,300	91,400	1,659,936	5,796	28.6
2004	20,970	17,783	822,008	21,862	0	481,000	270,200	97,158	1,730,981	5,879	29.4
2005	20,910	17,783	822,008	21,862	0	536,200	288,300	103,279	1,810,342	5,964	30.4
2006	20,683	17,783	1,090,234	21,862	0	516,900	346,300	135,530	2,149,292	6,050	35.5
2007	20,666	17,783	1,106,242	21,862	0	579,500	369,300	145,559	2,260,911	6,136	36.8
2008	20,651	17,783	1,123,259	21,862	0	646,700	397,100	156,313	2,383,669	6,225	38.3
2009	20,635	17,783	1,141,351	21,862	0	715,300	422,100	167,845	2,506,876	6,315	39.7
2010	20,619	17,783	1,141,351	21,862	0	804,300	447,800	178,419	2,632,134	6,406	41.1
2011	20,597	17,783	1,141,351	21,862	0	887,400	478,100	189,660	2,756,753	6,498	42.4
2012	20,588	17,783	1,163,088	21,862	0	989,300	513,400	203,632	2,929,653	6,543	44.8
2013	14,898	17,783	1,569,037	21,862	0	945,800	615,700	255,425	3,440,505	6,686	51.5
2014	12,637	17,783	1,569,037	21,862	0	1,042,600	657,000	271,517	3,592,435	6,782	53.0
2015	12,637	17,783	1,569,037	21,862	0	1,155,400	700,900	288,622	3,766,241	6,880	54.7
2016	12,637	17,783	1,596,802	21,862	0	1,281,700	745,100	309,390	3,985,274	6,979	57.1
2017	12,637	17,783	1,626,318	21,862	0	1,426,300	800,000	331,629	4,236,530	7,080	59.8
2018	12,637	17,783	1,626,318	21,862	0	1,572,800	853,400	352,522	4,457,322	7,182	62.1
2019	12,637	17,783	1,626,318	21,862	0	1,760,100	909,700	374,731	4,723,131	7,286	64.8
2020	12,637	17,783	2,244,503	21,862	0	1,715,400	1,081,200	457,674	5,551,059	7,390	75.1

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,989,973

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 8: PHASE I
WITH SUSITNA

12-Jun-85

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				RENEWALS AND REPLACEMENTS			ENERGY REQUIREMENTS		COMPARABLE COST OF POWER
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)	TOTAL (10)	(GMH) (11)	(C/KWH) (12)
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880	7.4
1995	25,179	17,783	0	21,862	0	290,700	51,100	657	407,281	4,981	8.2
1996	25,113	17,783	0	21,862	728,000	152,200	61,700	25,598	1,032,256	5,090	20.3
1997	24,874	17,783	0	21,862	766,000	177,700	66,000	27,211	1,101,430	5,203	21.2
1998	24,715	17,783	0	21,862	766,000	211,300	69,200	28,925	1,139,785	5,317	21.4
1999	24,658	17,783	0	21,862	766,000	258,600	68,600	30,748	1,188,251	5,434	21.9
2000	24,425	17,783	0	21,862	766,000	303,800	70,200	32,685	1,236,755	5,552	22.3
2001	22,014	17,783	0	21,862	766,000	352,400	74,200	34,744	1,289,003	5,632	22.9
2002	22,009	17,783	229,449	21,862	766,000	358,400	115,000	58,956	1,589,458	5,713	27.8
2003	20,983	17,783	229,449	21,862	766,000	409,800	122,200	62,670	1,650,746	5,796	28.5
2004	20,970	17,783	488,767	21,862	766,000	370,200	180,300	91,508	1,957,390	5,879	33.3
2005	20,910	17,783	488,767	21,862	766,000	409,700	192,300	97,273	2,014,595	5,964	33.8
2006	20,683	17,783	834,351	21,862	766,000	374,200	248,000	130,548	2,413,427	6,050	39.9
2007	20,666	17,783	850,358	21,862	766,000	423,000	265,000	140,263	2,504,932	6,136	40.8
2008	20,651	17,783	850,358	21,862	766,000	477,200	283,100	149,099	2,586,054	6,225	41.5
2009	20,635	17,783	868,450	21,862	766,000	528,700	299,700	160,177	2,683,307	6,315	42.5
2010	20,619	17,783	887,683	21,862	766,000	600,700	323,200	172,058	2,809,906	6,406	43.9
2011	20,597	17,783	887,683	21,862	766,000	683,900	345,200	182,898	2,925,923	6,498	45.0
2012	20,588	17,783	887,683	21,862	766,000	769,400	368,700	194,421	3,046,437	6,543	46.6
2013	14,898	17,783	1,293,632	21,862	766,000	673,000	462,700	245,633	3,495,508	6,686	52.3
2014	12,637	17,783	1,293,632	21,862	766,000	754,600	494,800	261,108	3,622,422	6,782	53.4
2015	12,637	17,783	1,319,749	21,862	766,000	849,400	529,200	279,989	3,796,620	6,880	55.2
2016	12,637	17,783	1,347,514	21,862	766,000	973,500	565,900	300,213	4,005,409	6,979	57.4
2017	12,637	17,783	1,347,514	21,862	766,000	1,101,600	599,900	319,127	4,186,422	7,080	59.1
2018	12,637	17,783	1,347,514	21,862	766,000	1,243,700	641,400	339,232	4,390,127	7,182	61.1
2019	12,637	17,783	1,347,514	21,862	766,000	1,395,400	685,700	360,603	4,607,499	7,286	63.2
2020	12,637	17,783	1,965,699	21,862	766,000	1,245,300	849,700	442,656	5,321,637	7,390	72.0

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

7,320,705

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

Annual 11.00
Semi-annual 5.36

CASE 8: PHASE I

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	200.0	494.7		
1988	146	4,106	3.6	146	4,106	3.6	9	15.7	557.1		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	686.2		
1990	186	4,446	4.2	186	4,446	4.2		0.0	761.7		
1991	211	4,567	4.6	211	4,567	4.6		0.0	845.4		
1992	228	4,676	4.9	228	4,676	4.9		0.0	938.4		
1993	248	4,781	5.2	248	4,781	5.2		0.0	1041.7		
1994	360	4,880	7.4	359	4,880	7.4		0.0	1156.3		
1995	407	4,981	8.2	640	4,981	12.9		0.0	1283.5		
1996	1,032	5,090	20.3	678	5,090	13.3	354	0.0	1051.4	354	0
1997	1,101	5,203	21.2	907	5,203	17.4	195		962.1	195	0
1998	1,140	5,317	21.4	955	5,317	18.0	185		873.5	185	0
1999	1,188	5,434	21.9	1,218	5,434	22.4	0		969.6	0	30
2000	1,237	5,552	22.3	1,275	5,552	23.0	0		1076.3	0	38
2001	1,289	5,632	22.9	1,333	5,632	23.7	0		1194.7	0	44
2002	1,590	5,713	27.8	1,399	5,713	24.5	191		1125.2	191	0
2003	1,651	5,796	28.5	1,660	5,796	28.6	0		1248.9	0	9
2004	1,957	5,879	33.3	1,731	5,879	29.4	226		1147.8	226	0
2005	2,015	5,964	33.8	1,810	5,964	30.4	204		1058.8	204	0
2006	2,413	6,050	39.9	2,149	6,050	35.5	264		897.0	264	0
2007	2,505	6,136	40.8	2,261	6,136	36.8	244		738.6	244	0
2008	2,586	6,225	41.5	2,384	6,225	38.3	202		606.6	202	0
2009	2,683	6,315	42.5	2,507	6,315	39.7	176		487.5	176	0
2010	2,810	6,406	43.9	2,632	6,406	41.1	178		353.8	178	0
2011	2,926	6,498	45.0	2,757	6,498	42.4	169		214.6	169	0
2012	3,046	6,543	46.6	2,930	6,543	44.8	117		115.2	117	0
2013	3,496	6,686	52.3	3,441	6,686	51.5	55		70.0	55	0
2014	3,622	6,782	53.4	3,592	6,782	53.0	30		46.1	30	0
2015	3,797	6,880	55.2	3,766	6,880	54.7	30		19.1	30	0
2016	4,005	6,979	57.4	3,985	6,979	57.1	20		.0	20	0
2017	4,186	7,080	59.1	4,237	7,080	59.8	0		.0	0	50
2018	4,390	7,182	61.1	4,457	7,182	62.1	0		.0	0	67
2019	4,608	7,286	63.2	4,723	7,286	64.8	0		.0	0	116
2020	5,322	7,390	72.0	5,551	7,390	75.1	0		.0	0	230
							2841	515.7		2,841	584

WITH SUSITNA
8. PHASE I

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	TIES
**	*****	*****	*****	*****
85		45*	5*	1177
86				1168
87	23*			1171
88		132*		1303
89				1303
90			90*	1357
91		87*		1400
92				1358
93				1358
94	25*			1383
95			45*	1425

WITH SUSITNA
8. PHASE I

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,
GUS8, SUSITNA STAGE I ONLY, FOR THE TOTAL RAILBELT REGION,
JOB NUMBER 51149 06/03/85 02:11 PM
BASED ON DATA PREP JOB 51124 DATED 06/03/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96

Watana Stage I only

339*

1563

97

1560

98

1506

99

1349

0

1343

1

1325

2

200*

1459

3

1459

4

200*

1657

5

1652

6

1X 200

IX 87

1647

7

IX 87

1670

WITH SUSITNA
8. PHASE I

8		1670
9	1X 87	1670
10	1X 87	1712
11		1712
12		1711
13	1X 200	1779
14		1779
15	1X 87	1866
16	1X 87	1866
17		1866
18		1866
19		1866
20	1X 200	2066

2066

*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MW ADD	0	1000	522	0	0	0	339	SUM=	1861
MW RET	0	-48	-603	-191	-20	-358	0	SUM=	-1220
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2020	0	1025	522	0	0	0	519	SUM=	2066
PCT TOT	0.0	49.6	25.3	0.0	0.0	0.0	25.1	SUM=100	PCT

WITHOUT SUSITNA

8. PHASE I

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

200*

45*

1625

WITHOUT SUSITNA
8. PHASE I

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 30250 06/01/85 08:23 AM

BASED ON DATA PREP JOB 30196 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

96

1424

97

200*

1621

98

1567

99

1X 200

1610

0

1604

1

1586

2

1520

3

1X 200

1720

4

1718

5

1713

6

1X 200

1621

7

1X 87

1644

WITHOUT SUSITNA
8. PHASE I

1X 87

1731

1X 87

1751

1686

1686

1X 87

1772

1X 200

1840

1840

1840

1X 87

1840

1X 87

1927

1927

1927

1x 200

2127

MW ADD	0	1200	522	0	0	0	SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	SUM= -1220
*****	*****	*****	*****	*****	*****	*****	*****
2020	0	1425	522	0	0	0	SUM= 2127
PCT TOT	0.0	67.0	24.5	0.0	0.0	0.0	SUM=100 PCT

FUEL PRICE 8. PHASE I

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
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For Phase I Analysis fuel prices are the same as the Base Analysis.

Sensitivity
Analysis
Parameters

Sensitivity Analysis Run	NO.	DESCRIPTION
Base Analysis (5 TCF Gas)	0	X
2 TCF Gas	1	X
Low Gas Price	2	X
Low Gas & Coal Price	3	X
Low Coal Price with Diamond Plant	4	X
Low Finance	5	X
Low Inflation	6	X
Matanuska	7	X
Phase I	8	X
No Coal Export	9	X
Keetna	10	X
	11	X
	12	X
	13	X
	14	X
	15	X
	16	X
	17	X
	18	X
	19	X
	20	X
	21	X
	22	X
	23	X
	24	X
	25	X
	26	X
	27	X
	28	X
	29	X
	30	X
	31	X
	32	X
	33	X
	34	X
	35	X
	36	X
	37	X
	38	X
	39	X
	40	X
	41	X
	42	X
	43	X
	44	X
	45	X
	46	X
	47	X
	48	X
	49	X
	50	X
	51	X
	52	X
	53	X
	54	X
	55	X
	56	X
	57	X
	58	X
	59	X
	60	X
	61	X
	62	X
	63	X
	64	X
	65	X
	66	X
	67	X
	68	X
	69	X
	70	X
	71	X
	72	X
	73	X
	74	X
	75	X
	76	X
	77	X
	78	X
	79	X
	80	X
	81	X
	82	X
	83	X
	84	X
	85	X
	86	X
	87	X
	88	X
	89	X
	90	X
	91	X
	92	X
	93	X
	94	X
	95	X
	96	X
	97	X
	98	X
	99	X
	100	X
	101	X
	102	X
	103	X
	104	X
	105	X
	106	X
	107	X
	108	X
	109	X
	110	X
	111	X
	112	X
	113	X
	114	X
	115	X
	116	X
	117	X
	118	X
	119	X
	120	X
	121	X
	122	X
	123	X
	124	X
	125	X
	126	X
	127	X
	128	X
	129	X
	130	X
	131	X
	132	X
	133	X
	134	X
	135	X
	136	X
	137	X
	138	X
	139	X
	140	X
	141	X
	142	X
	143	X
	144	X
	145	X
	146	X
	147	X
	148	X
	149	X
	150	X
	151	X
	152	X
	153	X
	154	X
	155	X
	156	X
	157	X
	158	X
	159	X
	160	X
	161	X
	162	X
	163	X
	164	X
	165	X
	166	X
	167	X
	168	X
	169	X
	170	X
	171	X
	172	X
	173	X
	174	X
	175	X
	176	X
	177	X
	178	X
	179	X
	180	X
	181	X
	182	X
	183	X
	184	X
	185	X
	186	X
	187	X
	188	X
	189	X
	190	X
	191	X
	192	X
	193	X
	194	X
	195	X
	196	X
	197	X
	198	X
	199	X
	200	X
	201	X
	202	X
	203	X
	204	X
	205	X
	206	X
	207	X
	208	X
	209	X
	210	X
	211	X
	212	X
	213	X
	214	X
	215	X
	216	X
	217	X
	218	X
	219	X
	220	X
	221	X
	222	X
	223	X
	224	X
	225	X
	226	X
	227	X
	228	X
	229	X
	230	X
	231	X
	232	X
	233	X
	234	X
	235	X
	236	X
	237	X
	238	X
	239	X
	240	X
	241	X
	242	X
	243	X
	244	X
	245	X
	246	X
	247	X
	248	X
	249	X
	250	X
	251	X
	252	X
	253	X
	254	X
	255	X
	256	X
	257	X
	258	X
	259	X
	260	X
	261	X
	262	X
	263	X
	264	X
	265	X
	266	X
	267	X
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	526	X
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	534	X
	535	X
	53	

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

12-Jun-85

CASE 9: NO COAL EXPORT
WITHOUT SUSITNA

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS		ENERGY REQUIREMENTS		COMPARABLE COST OF POWER
	SERVICE (2)	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)	FUEL (7)	O&M (8)	(9)	TOTAL (10)	(GWH) (11)	(C/KWH) (12)
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,692	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,708	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880	7.4
1995	25,179	17,783	0	21,862	0	290,700	51,100	657	407,281	4,981	8.2
1996	25,113	17,783	0	21,862	0	337,400	48,300	698	451,156	5,090	8.9
1997	24,874	17,783	236,368	21,862	0	345,400	87,200	16,960	750,448	5,203	14.4
1998	24,715	17,783	245,597	21,862	0	395,900	93,500	18,888	818,245	5,317	15.4
1999	24,658	17,783	436,559	21,862	0	409,000	134,600	38,407	1,082,869	5,434	19.9
2000	24,425	17,783	436,559	21,862	0	460,100	144,800	40,827	1,146,355	5,552	20.6
2001	22,014	17,783	684,152	21,862	0	440,500	194,700	62,758	1,443,769	5,632	25.6
2002	22,009	17,783	684,152	21,862	0	500,000	198,300	66,711	1,510,817	5,713	26.4
2003	20,983	17,783	684,152	21,862	0	560,800	210,300	70,914	1,586,794	5,796	27.4
2004	20,970	17,783	684,152	21,862	0	614,500	224,900	75,382	1,659,549	5,879	28.2
2005	20,910	17,783	936,458	21,862	0	574,900	290,600	104,348	1,966,861	5,964	33.0
2006	20,683	17,783	951,516	21,862	0	674,100	299,800	112,323	2,098,068	6,050	34.7
2007	20,666	17,783	967,524	21,862	0	753,600	320,900	120,890	2,223,225	6,136	36.2
2008	20,651	17,783	1,270,673	21,862	0	702,600	398,500	157,603	2,589,672	6,225	41.6
2009	20,635	17,783	1,270,673	21,862	0	777,500	421,300	167,532	2,697,285	6,315	42.7
2010	20,619	17,783	1,289,906	21,862	0	862,900	451,300	179,877	2,844,248	6,406	44.4
2011	20,597	17,783	1,289,906	21,862	0	947,000	480,100	191,209	2,968,458	6,498	45.7
2012	20,588	17,783	1,311,643	21,862	0	1,049,500	514,100	205,279	3,140,755	6,543	48.0
2013	14,898	17,783	1,717,592	21,862	0	1,020,900	615,600	257,176	3,665,811	6,686	54.8
2014	12,637	17,783	1,717,592	21,862	0	1,121,600	655,600	273,378	3,820,452	6,782	56.3
2015	12,637	17,783	1,717,592	21,862	0	1,240,700	702,600	290,601	4,003,775	6,880	58.2
2016	12,637	17,783	1,745,357	21,862	0	1,361,900	743,300	311,493	4,214,332	6,979	60.4
2017	12,637	17,783	1,774,874	21,862	0	1,510,100	801,600	333,865	4,472,721	7,080	63.2
2018	12,637	17,783	1,774,874	21,862	0	1,662,000	853,300	354,899	4,697,354	7,182	65.4
2019	12,637	17,783	1,774,874	21,862	0	1,846,500	908,200	377,257	4,959,113	7,286	68.1
2020	12,637	17,783	1,774,874	21,862	0	2,049,600	972,900	401,024	5,250,680	7,390	71.0

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,881,069

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 9: NO COAL EXPORT
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	RENEWALS AND REPLACEMENTS		TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)
		UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)		O&M (8)	(9)			
1985	24,638	1,974	0	0	0	47,500	23,000	0	97,112	3,502	2.8
1986	24,692	2,289	0	0	0	61,300	24,800	0	112,081	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,700	0	124,210	3,938	3.2
1988	24,910	9,946	0	0	0	81,800	29,200	0	145,856	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,400	0	166,721	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,400	33,900	484	185,516	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,800	37,400	514	211,061	4,567	4.6
1992	25,214	14,567	0	17,562	0	130,800	39,300	547	227,990	4,676	4.9
1993	25,196	14,567	0	17,562	0	147,800	42,100	581	247,806	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,100	47,700	618	358,943	4,880	7.4
1995	25,179	17,783	0	21,862	0	291,000	50,700	657	407,181	4,981	8.2
1996	25,113	17,783	0	21,862	728,000	155,600	61,200	25,598	1,035,156	5,090	20.3
1997	24,874	17,783	0	21,862	766,000	180,700	65,400	27,211	1,103,830	5,203	21.2
1998	24,715	17,783	0	21,862	766,000	212,200	68,500	28,925	1,139,985	5,317	21.4
1999	24,658	17,783	0	21,862	766,000	259,800	69,000	30,748	1,189,851	5,434	21.9
2000	24,425	17,783	0	21,862	766,000	305,200	70,600	32,685	1,238,555	5,552	22.3
2001	22,014	17,783	0	21,862	766,000	353,200	74,500	34,744	1,290,103	5,632	22.9
2002	22,009	17,783	0	21,862	1,351,000	82,100	68,200	57,033	1,619,987	5,713	28.4
2003	20,983	17,783	0	21,862	1,384,000	94,200	72,500	60,626	1,671,954	5,796	28.8
2004	20,970	17,783	0	21,862	1,384,000	112,900	77,400	64,445	1,699,360	5,879	28.9
2005	20,910	17,783	0	21,862	1,384,000	132,600	82,300	68,505	1,727,960	5,964	29.0
2006	20,683	17,783	0	21,862	1,384,000	177,800	67,200	72,821	1,762,149	6,050	29.1
2007	20,666	17,783	0	21,862	1,384,000	210,200	69,900	77,409	1,801,820	6,136	29.4
2008	20,651	17,783	0	21,862	2,119,000	0	69,900	107,186	2,356,382	6,225	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	69,500	113,938	2,393,718	6,315	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	11,100	75,700	122,907	2,439,204	6,406	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	12,300	80,500	130,650	2,452,925	6,498	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	23,000	85,600	138,881	2,476,947	6,543	37.9
2013	14,898	17,783	65,450	21,862	2,150,000	28,800	93,200	151,933	2,543,926	6,686	38.0
2014	12,637	17,783	65,450	21,862	2,150,000	47,200	99,100	161,505	2,575,537	6,782	38.0
2015	12,637	17,783	65,450	21,862	2,150,000	68,300	106,000	171,679	2,613,712	6,880	38.0
2016	12,637	17,783	120,980	21,862	2,150,000	104,000	114,600	187,665	2,729,527	6,979	39.1
2017	12,637	17,783	120,980	21,862	2,150,000	136,000	122,600	199,488	2,781,350	7,080	39.3
2018	12,637	17,783	152,359	21,862	2,150,000	185,300	136,300	214,976	2,891,218	7,182	40.3
2019	12,637	17,783	152,359	21,862	2,150,000	238,600	144,900	228,520	2,966,661	7,286	40.7
2020	12,637	17,783	152,359	21,862	2,150,000	340,500	154,900	242,917	3,092,958	7,390	41.9

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,447,372

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

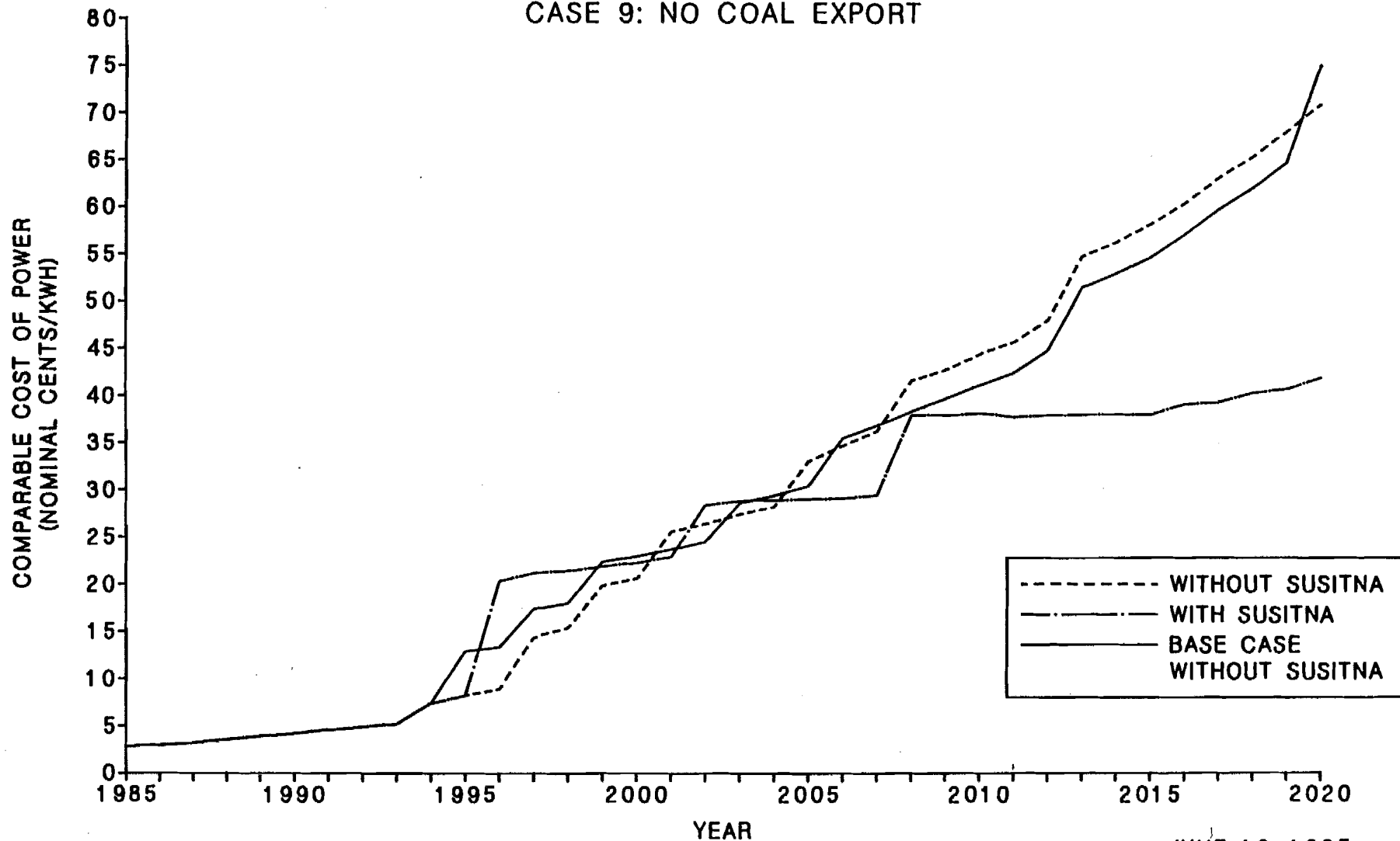
Annual 11.00
Semi-annual 5.36

CASE 9: NO COAL EXPORT

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	200.0	266.2		
1987	124	3,938	3.2	124	3,938	3.2	22	200.0	494.7		
1988	146	4,106	3.6	146	4,106	3.6	9	43.3	587.7		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	720.2		
1990	186	4,446	4.2	186	4,446	4.2		0.0	799.4		
1991	211	4,567	4.6	211	4,567	4.6		0.0	887.4		
1992	228	4,676	4.9	228	4,676	4.9		0.0	985.0		
1993	248	4,781	5.2	248	4,781	5.2		0.0	1093.3		
1994	359	4,880	7.4	360	4,880	7.4		0.0	1213.6		
1995	407	4,981	8.2	407	4,981	8.2		0.0	1347.1		
1996	1,035	5,090	20.3	451	5,090	8.9	584	0.0	880.0	584	0
1997	1,104	5,203	21.2	750	5,203	14.4	353		604.5	353	0
1998	1,140	5,317	21.4	818	5,317	15.4	322		331.9	322	0
1999	1,190	5,434	21.9	1,083	5,434	19.9	107		255.7	107	0
2000	1,239	5,552	22.3	1,146	5,552	20.6	92		186.7	92	0
2001	1,290	5,632	22.9	1,444	5,632	25.6	0		207.2	0	154
2002	1,620	5,713	28.4	1,511	5,713	26.4	109		115.0	109	0
2003	1,672	5,796	28.8	1,587	5,796	27.4	85		37.9	85	0
2004	1,699	5,879	28.9	1,660	5,879	28.2	40		.0	40	0
2005	1,728	5,964	29.0	1,967	5,964	33.0	0		.0	0	239
2006	1,762	6,050	29.1	2,098	6,050	34.7	0		.0	0	336
2007	1,802	6,136	29.4	2,223	6,136	36.2	0		.0	0	421
2008	2,356	6,225	37.9	2,590	6,225	41.6	0		.0	0	233
2009	2,394	6,315	37.9	2,697	6,315	42.7	0		.0	0	304
2010	2,439	6,406	38.1	2,844	6,406	44.4	0		.0	0	405
2011	2,453	6,498	37.7	2,969	6,498	45.7	0		.0	0	516
2012	2,477	6,543	37.9	3,141	6,543	48.0	0		.0	0	664
2013	2,544	6,686	38.0	3,666	6,686	54.8	0		.0	0	1,122
2014	2,576	6,782	38.0	3,821	6,782	56.3	0		.0	0	1,245
2015	2,614	6,880	38.0	4,004	6,880	58.2	0		.0	0	1,390
2016	2,730	6,979	39.1	4,214	6,979	60.4	0		.0	0	1,485
2017	2,781	7,080	39.3	4,473	7,080	63.2	0		.0	0	1,691
2018	2,891	7,182	40.3	4,697	7,182	65.4	0		.0	0	1,806
2019	2,967	7,286	40.7	4,959	7,286	68.1	0		.0	0	1,992
2020	3,093	7,390	41.9	5,251	7,390	71.1	0		.0	0	2,158
							1693	543.3		1,693	16,161

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 9: NO COAL EXPORT



JUNE 12, 1985

WITH SUSITNA
9. NO COAL EXPORT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1989	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
9. NO COAL EXPORT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,
GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,
JOB NUMBER 36638 06/01/85 10:09 AM
BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

YR	YEARLY	MW	ADDITIONS	TIES	TOTAL CAPAB.
**	*****	*****	*****	*****	*****

96

339*

1563

97

1560

98

1506

99

1349

0

1343

1

1325

2

478*

1737

3

1737

4

1735

5

1730

6

1438

7

1374

WITH SUSITNA
9. NO COAL EXPORT

8							753*	2127
9								2040
10		1X	87					2082
11								2082
12								2081
13		2X	87					2123
14								2118
15								2118
16		2X	87					2205
17								2205
18		1X	87					2292
19								2292
20								2292

MW ADD	0	0	522	0	0	0	1570	SUM= 2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM= -1225

2020	0	25	522	0	0	0	1745	SUM= 2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100 PCT

WITHOUT SUSITNA
9. NO COAL EXPORT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 23638

06/04/85

06:33 AM

BASED ON DATA PREP JOB

23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	+TIES
**	*****	*****	*****	*****

85

45*

5*

1177

86

1168

87

23*

1171

88

132*

1303

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1303

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90*

1357

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87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITHOUT SUSITNA
9. NO COAL EXPORT

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUT9, THERMAL W/ NO COAL EXPORT, TOTAL RAILBELT REGION

JOB NUMBER 29069 06/04/85 08:03 AM

BASED ON DATA PREP JOB 29054 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

YR	YEARLY	MW	ADDITIONS	TIES
**	*****	*****	*****	*****

96				1224
97	200*			1421
98		87*		1454
99	200*			1497
0				1491
1	1X 200			1673
2				1607
3				1607
4				1605
5	1X 200			1800
6		1X 87		1595
7		1X 87		

WITHOUT SUSITNA
9. NO COAL EXPORT

8	1X 200	1818
9		1731
10	1X 87	1773
11		1773
12		1772
13	1X 200	1840
14		1840
15		1840
16	1X 87	1840
17	1X 87	1927
18		1927
19		1927
20		1927

MW ADD	0	1200	522	0	0	0	0 SUM= 1722
MW RET	0	-48	-603	-191	-20	-358	0 SUM= -1220

2020	0	1225	522	0	0	0	180 SUM= 1927
PCT TOT	0.0	63.6	27.1	0.0	0.0	0.0	9.3 SUM=100 PCT

FUEL PRICE 9. NO COAL EXPORT

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
Coal	APA Beluga No Export	APA Beluga Export

APA BELUGA NO EXPORT
COAL PRICE
(\$/MMBTU)

YEAR *****	REAL PRICE ***** (\$1985)	NOMINAL PRICE (INF-6.31%) ***** (\$)
1985	1.840	1.840
1986	1.861	1.979
1987	1.883	2.128
1988	1.905	2.289
1989	1.927	2.462
1990	1.950	2.648
1991	1.972	2.846
1992	1.993	3.059
1993	2.015	3.286
1994	2.038	3.534
1995	2.060	3.796
1996	2.083	4.084
1997	2.107	4.391
1998	2.131	4.722
1999	2.156	5.077
2000	2.180	5.459
2005	2.300	7.820
2010	2.440	11.266
2015	2.581	16.181
2020	2.730	23.242

Sensitivity
Analysis
Parameters

	NO.	DESCRIPTION
Sensitivity Analysis Run	1	1999 Gas Peak
	2	1996 Gas Peak
	3	Ramped Gas Price
	4	CEA-Enstar Gas Price
	5	APA Coal Price
	6	Nenana 0%
	7	Beluga Low Coal Price
	8	Matanuska
	9	No Coal Export
	10	11.2% Financing (Thermal only)
	11	10% Financing (Both)
	12	5% Inflation
	13	Keetna
	14	Bradley Lake 3rd Unit
	15	Phase I Only
	16	Diamond Coal
Base Analysis (5 TCF Gas)	0	X
2 TCF Gas	1	X
Low Gas Price	2	X
Low Gas & Coal Price	3	X
Low Coal Price with Diamond Plant	4	X
Low Finance	5	X
Low Inflation	6	X
Matanuska	7	X
Phase I	8	X
No Coal Export	9	X
Keetna	10	X

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

12-Jun-85

CASE 10: KEETNA
WITHOUT SUSITNA

PAGE 1 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)					RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH)(11)	COMPARABLE COST OF POWER (C/KWH)(12)	
	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	KEETNA (6)	FUEL (7)						
1985	24,638	1,974	0	0	0	47,700	23,100	0	97,412	3,502	2.8
1986	24,632	2,289	0	0	0	61,500	24,800	0	113,281	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,600	0	124,110	3,938	3.2
1988	24,910	9,946	0	0	0	81,900	29,500	0	146,256	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,500	0	166,821	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,300	34,200	484	185,716	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,500	37,400	514	210,761	4,567	4.6
1992	25,214	14,567	0	17,562	0	131,000	39,200	547	228,090	4,676	4.9
1993	25,196	14,567	0	17,562	0	148,000	41,800	581	247,706	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,400	48,000	618	359,543	4,880	7.4
1995	25,179	17,783	210,429	21,862	0	268,000	82,400	15,134	640,787	4,981	12.9
1996	25,113	17,783	210,429	21,862	0	304,500	82,300	16,087	678,075	5,090	13.3
1997	24,874	17,783	210,429	21,862	280,957	311,900	91,700	25,352	984,857	5,203	18.9
1998	24,715	17,783	210,429	21,862	280,957	357,000	97,100	26,949	1,036,795	5,317	19.5
1999	24,658	17,783	401,391	21,862	280,957	361,500	137,200	46,976	1,292,327	5,434	23.8
2000	24,425	17,783	401,391	21,862	280,957	415,600	146,200	49,935	1,358,153	5,552	24.5
2001	22,014	17,783	648,984	21,862	280,957	374,000	196,300	72,440	1,634,340	5,632	29.0
2002	22,009	17,783	648,984	21,862	280,957	433,400	198,300	77,004	1,700,299	5,713	29.8
2003	20,983	17,783	648,984	21,862	280,957	483,500	212,100	81,855	1,768,024	5,750	30.5
2004	20,970	17,783	648,984	21,862	280,957	531,100	226,800	87,012	1,835,468	5,879	31.2
2005	20,910	17,783	901,290	21,862	280,957	485,000	290,600	116,711	2,135,113	5,964	35.8
2006	20,683	17,783	1,169,516	21,862	280,957	475,700	349,400	149,809	2,485,710	6,050	41.1
2007	20,666	17,783	1,185,524	21,862	280,957	534,800	371,900	160,737	2,594,229	6,136	42.3
2008	20,651	17,783	1,185,524	21,862	280,957	579,400	398,500	170,863	2,675,540	6,225	43.0
2009	20,635	17,783	1,203,615	21,862	280,957	644,600	421,300	183,312	2,794,064	6,315	44.2
2010	20,619	17,783	1,203,615	21,862	280,957	719,600	448,200	194,860	2,907,497	6,406	45.4
2011	20,597	17,783	1,224,062	21,862	280,957	802,300	483,300	209,040	3,059,901	6,498	47.1
2012	20,588	17,783	1,224,062	21,862	280,957	889,900	514,100	222,210	3,191,462	6,543	48.8
2013	14,898	17,783	1,630,011	21,862	280,957	864,200	615,600	275,173	3,720,484	6,686	55.6
2014	12,637	17,783	1,630,011	21,862	280,957	956,600	655,600	292,509	3,867,959	6,782	57.0
2015	12,637	17,783	1,630,011	21,862	280,957	1,062,800	702,600	310,937	4,039,587	6,880	58.7
2016	12,637	17,783	1,657,776	21,862	280,957	1,184,500	743,300	333,110	4,251,925	6,979	60.9
2017	12,637	17,783	1,687,292	21,862	280,957	1,308,400	801,600	356,844	4,487,376	7,080	63.4
2018	12,637	17,783	1,687,292	21,862	280,957	1,450,100	853,300	379,325	4,703,257	7,182	65.5
2019	12,637	17,783	1,687,292	21,862	280,957	1,606,000	908,200	403,223	4,937,954	7,286	67.8
2020	12,637	17,783	1,687,292	21,862	280,957	1,783,700	972,900	428,626	5,205,757	7,390	70.4

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

7,538,176

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF POWER
(\$000)

CASE 10: KEETNA
WITH SUSITNA

12-Jun-85

PAGE 2 OF 2

YEAR	EXISTING UTILITY DEBT SERVICE (2)	ANNUAL CAPITAL COSTS OF NEW PLANT (1)				FUEL (7)	O&M (8)	RENEWALS AND REPLACEMENTS (9)	TOTAL (10)	ENERGY REQUIREMENTS (GWH) (11)	COMPARABLE COST OF POWER (C/KWH) (12)
	UTILITY THERMAL (3)	LARGE THERMAL (4)	BRADLEY LAKE (5)	SUSITNA (6)							
1985	24,638	1,974	0	0	0	47,500	23,000	0	97,112	3,502	2.8
1986	24,692	2,289	0	0	0	61,300	24,800	0	113,081	3,767	3.0
1987	24,821	2,989	0	0	0	69,700	26,700	0	124,210	3,938	3.2
1988	24,910	9,946	0	0	0	81,800	29,200	0	145,856	4,106	3.6
1989	25,275	9,946	0	0	0	100,100	31,400	0	166,721	4,269	3.9
1990	25,224	9,946	0	17,562	0	98,400	33,900	484	185,516	4,446	4.2
1991	25,218	14,567	0	17,562	0	115,800	37,400	514	211,061	4,567	4.6
1992	25,214	14,567	0	17,562	0	130,800	39,300	547	227,990	4,676	4.9
1993	25,196	14,567	0	17,562	0	147,800	42,100	581	247,806	4,781	5.2
1994	25,180	17,783	0	17,562	0	250,100	47,700	618	358,943	4,880	7.4
1995	25,179	17,783	0	21,862	0	291,000	50,700	657	407,181	4,981	8.2
1996	25,113	17,783	0	21,862	728,000	155,600	61,200	25,598	1,035,156	5,090	20.3
1997	24,874	17,783	0	21,862	766,000	180,700	65,400	27,211	1,103,830	5,203	21.2
1998	24,715	17,783	0	21,862	766,000	212,200	68,500	28,925	1,139,985	5,317	21.4
1999	24,658	17,783	0	21,862	766,000	259,800	69,000	30,748	1,189,851	5,434	21.9
2000	24,425	17,783	0	21,862	766,000	305,200	70,600	32,685	1,238,555	5,552	22.3
2001	22,014	17,783	0	21,862	766,000	353,200	74,500	34,744	1,290,109	5,632	22.9
2002	22,009	17,783	0	21,862	1,351,000	82,100	68,200	57,033	1,619,987	5,713	28.4
2003	20,983	17,783	0	21,862	1,384,000	94,200	72,500	60,626	1,671,954	5,796	28.8
2004	20,970	17,783	0	21,862	1,384,000	112,900	77,400	64,445	1,699,360	5,879	28.9
2005	20,910	17,783	0	21,862	1,384,000	132,600	82,300	68,505	1,727,960	5,964	29.0
2006	20,683	17,783	0	21,862	1,384,000	177,800	67,200	72,821	1,762,149	6,050	29.1
2007	20,666	17,783	0	21,862	1,384,000	210,200	69,900	77,409	1,801,820	6,136	29.4
2008	20,651	17,783	0	21,862	2,119,000	0	69,900	107,186	2,356,382	6,225	37.9
2009	20,635	17,783	0	21,862	2,150,000	0	69,500	113,938	2,393,718	6,315	37.9
2010	20,619	17,783	19,233	21,862	2,150,000	11,100	75,700	122,907	2,439,204	6,406	38.1
2011	20,597	17,783	19,233	21,862	2,150,000	12,300	80,500	130,650	2,452,925	6,498	37.7
2012	20,588	17,783	19,233	21,862	2,150,000	23,000	85,600	138,881	2,476,947	6,543	37.9
2013	14,898	17,783	65,450	21,862	2,150,000	28,800	93,200	151,933	2,543,926	6,686	38.0
2014	12,637	17,783	65,450	21,862	2,150,000	47,200	99,100	161,505	2,575,537	6,782	38.0
2015	12,637	17,783	65,450	21,862	2,150,000	68,300	106,000	171,679	2,613,712	6,880	38.0
2016	12,637	17,783	120,980	21,862	2,150,000	104,000	114,600	187,665	2,729,527	6,979	39.1
2017	12,637	17,783	120,980	21,862	2,150,000	136,000	122,600	199,488	2,781,350	7,080	39.3
2018	12,637	17,783	152,359	21,862	2,150,000	185,300	136,300	214,976	2,891,218	7,182	40.3
2019	12,637	17,783	152,359	21,862	2,150,000	238,600	144,900	228,520	2,966,661	7,286	40.7
2020	12,637	17,783	152,359	21,862	2,150,000	340,500	154,900	242,917	3,092,958	7,390	41.9

CUMULATIVE PRESENT WORTH OF TOTAL COSTS (1985-2020)

6,447,372

12-Jun

SUSITNA HYDROELECTRIC PROJECT
RATE STABILIZATION ANALYSIS
UTILITY LOAD FORECASTS

Interest Earnings

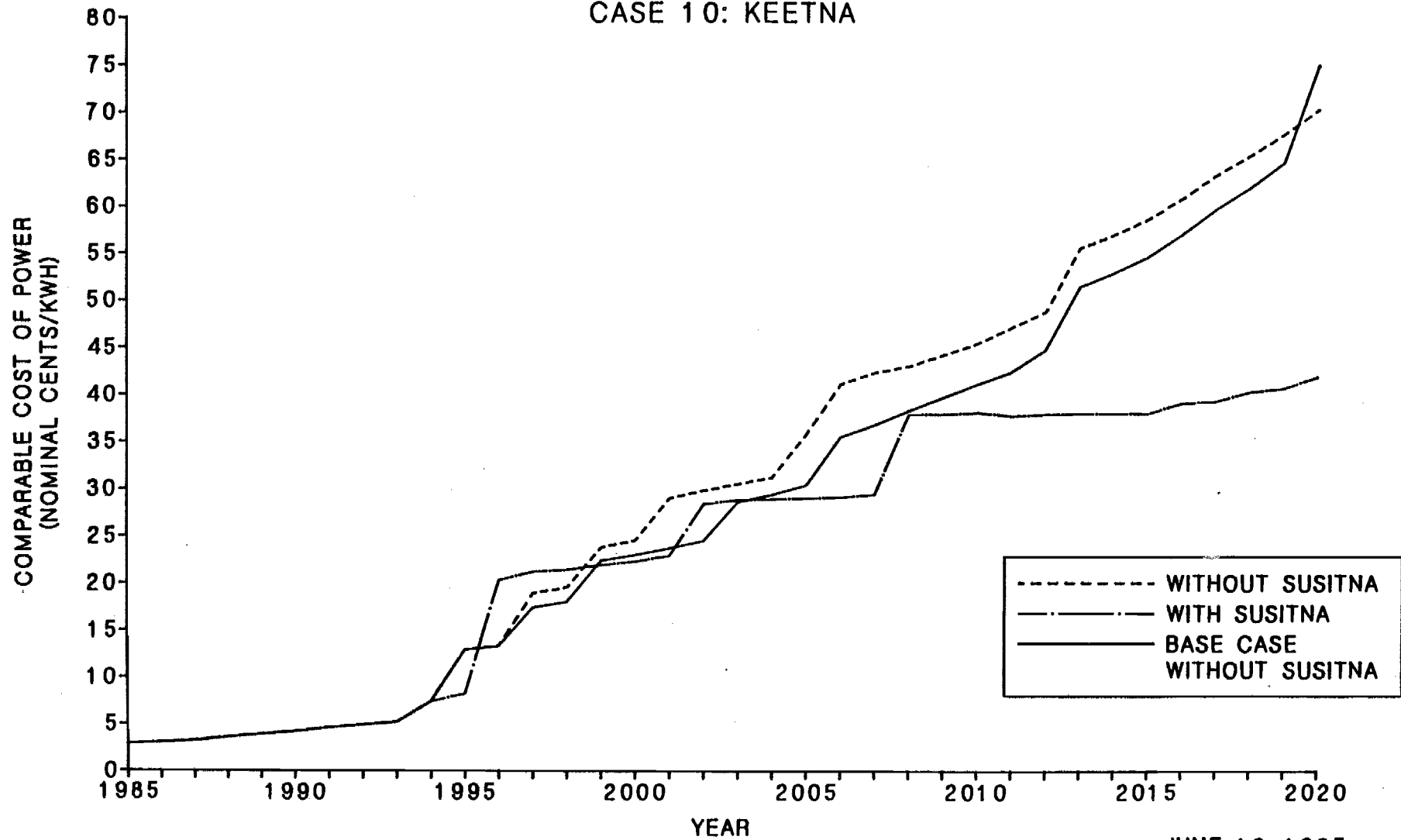
Annual 11.00
Semi-annual 5.36

CASE 10: KEETNA

CY	WITH SUSITNA			THERMAL ALTERNATIVE			RATE STABILIZATION			REQ. SUBSIDY (\$ MIL)	SAVINGS (\$ MIL)
	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	TOTAL SYSTEM COSTS (\$ MIL)	SYSTEM ENERGY SALES (GWh)	TOTAL SYSTEM COSTS (c/kWh)	REQ. SUBSIDY (\$ MIL)	STATE CONTRIB. (\$ MIL)	ACCRUED STATE CONTRIB. (\$ MIL)		
1985	97	3,502	2.8	97	3,502	2.8		100.0	100.0		
1986	113	3,767	3.0	113	3,767	3.0	34	115.7	181.9		
1987	124	3,938	3.2	124	3,938	3.2	22	0.0	179.2		
1988	146	4,106	3.6	146	4,106	3.6	9	0.0	189.4		
1989	167	4,269	3.9	167	4,269	3.9	-64	0.0	278.1		
1990	186	4,446	4.2	186	4,446	4.2		0.0	308.7		
1991	211	4,567	4.6	211	4,567	4.6		0.0	342.6		
1992	228	4,676	4.9	228	4,676	4.9		0.0	380.3		
1993	248	4,781	5.2	248	4,781	5.2		0.0	422.1		
1994	359	4,880	7.4	360	4,880	7.4		0.0	468.6		
1995	407	4,981	8.2	641	4,981	12.9		0.0	520.1		
1996	1,035	5,090	20.3	678	5,090	13.3	357	0.0	201.1	357	0
1997	1,104	5,203	21.2	985	5,203	18.9	119		98.0	119	0
1998	1,140	5,317	21.4	1,037	5,317	19.5	103		.0	103	0
1999	1,190	5,434	21.9	1,292	5,434	23.8	0		.0	0	102
2000	1,239	5,552	22.3	1,358	5,552	24.5	0		.0	0	120
2001	1,290	5,632	22.9	1,634	5,632	29.0	0		.0	0	344
2002	1,620	5,713	28.4	1,700	5,713	29.8	0		.0	0	80
2003	1,672	5,796	28.8	1,768	5,796	30.5	0		.0	0	96
2004	1,699	5,879	28.9	1,836	5,879	31.2	0		.0	0	136
2005	1,728	5,964	29.0	2,135	5,964	35.8	0		.0	0	407
2006	1,762	6,050	29.1	2,486	6,050	41.1	0		.0	0	724
2007	1,802	6,136	29.4	2,594	6,136	42.3	0		.0	0	792
2008	2,356	6,225	37.9	2,676	6,225	43.0	0		.0	0	319
2009	2,394	6,315	37.9	2,794	6,315	44.2	0		.0	0	400
2010	2,439	6,406	38.1	2,908	6,406	45.4	0		.0	0	468
2011	2,453	6,498	37.7	3,060	6,498	47.1	0		.0	0	607
2012	2,477	6,543	37.9	3,192	6,543	48.8	0		.0	0	715
2013	2,544	6,686	38.0	3,721	6,686	55.6	0		.0	0	1,177
2014	2,576	6,782	38.0	3,868	6,782	57.0	0		.0	0	1,293
2015	2,614	6,880	38.0	4,040	6,880	58.7	0		.0	0	1,426
2016	2,730	6,979	39.1	4,252	6,979	60.9	0		.0	0	1,522
2017	2,781	7,080	39.3	4,487	7,080	63.4	0		.0	0	1,706
2018	2,891	7,182	40.3	4,703	7,182	65.5	0		.0	0	1,812
2019	2,967	7,286	40.7	4,938	7,286	67.8	0		.0	0	1,971
2020	3,093	7,390	41.9	5,206	7,390	70.4	0		.0	0	2,113
							579	215.7		579	18,331

ALASKA POWER AUTHORITY
SUSITNA FINANCIAL ANALYSIS
COMPARISON OF RAILBELT COST OF ENERGY

CASE 10: KEETNA



JUNE 12, 1985

WITH SUSITNA
10. KEETNA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION

JOB NUMRER 23638 06/04/85 06:33 AM

BASED ON DATA PREP JOB 23598 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1915	0	0	1989	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S	+ T I E S
**	*****	*****	*****	*****

85

45*

5*

1177

86

1160

87

23*

1171

88

132*

1303

89

1303

90

90*

1357

91

87*

1400

92

1358

93

1358

94

25*

1383

95

45*

1425

WITH SUSITNA
10. KEETNA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020,

GUSB, SUSITNA BASE FOR THE TOTAL RAILBELT REGION,

JOB NUMBER 36638 06/01/85 10:09 AM

BASED ON DATA PREP JOB 36611 DATED 06/01/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMZING	0	1996	1996	0	0	1996	***
PCT TRIM	0	0	0	0	0	0	
1995 MW	0	73	603	191	20	358	180 SUM= 1425

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	+ TIES
**	*****	*****	*****	*****

96

339*

1563

97

1560

98

1506

99

1349

0

1343

1

1325

2

478*

1737

3

1737

4

1735

5

1730

6

1438

7

1374

WITH SUSITNA
10. KEETNA

8							753*	2127
9								2040
10		1X	87					2082
11								2082
12								2081
13								
		2X	87					2123
14								2118
15								2118
16								
		2X	87					2205
17								2205
18								
		1X	87					2292
19								2292
20								2292

MW ADD	0	0	522	0	0	0	1570	SUM= 2092
MW RET	0	-48	-603	-191	-20	-358	-5	SUM= -1225

2020	0	25	522	0	0	0	1745	SUM= 2292
PCT TOT	0.0	1.1	22.8	0.0	0.0	0.0	76.1	SUM=100 PCT

WITHOUT SUSITNA
10. KEETNA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1985-2000

GUTTB, THERMAL BASE FOR THE TOTAL RAILBELT REGION

JOB NUMBER 32486 06/04/85 08:59 AM

BASED ON DATA PREP JOB 32450 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
OPTMIZING	0	1992	1985	0	0	1988	***
PCT TRIM	0	0	0	0	0	0	
1984 MW	0	54	443	197	36	358	45 SUM= 1133

TOTAL
CAPAB.

YR	Y E A R L Y	M W	A D D I T I O N S + T I E S
**	*****	*****	*****
85		45*	
			5*
			1177
86			1168
87		23*	
			1171
88		132*	
			1303
89			1303
90			90*
			1357
91		87*	
			1400
92			1358
93			1358
94		25*	
			1383
95		200*	
			45*

1625

WITHOUT SUSITNA

10. KEETNA

SUSITNA POWER SALES NEGOTIATIONS, YEARS 1996-2020

GUTIO, THERMAL W/KEETNA, FOR THE TOTAL RAILBELT REGION

JOB NUMBER 27430 06/04/85 07:35 AM

BASED ON DATA PREP JOB 27340 DATED 06/04/85

GENERATION SYSTEM

	NUKE	COAL	NGASCT	OIL CT	DIESEL	COMCYC	TYPES
TYPE	1	2	3	4	5	6	7-10
CPTMZYNG	0	1996	1996	0	0	1996	***
FCT TRIM	0	0	0	0	0	0	
1995 MW	0	273	603	191	20	358	180 SUM= 1625

TOTAL
CAPAB.

YR	YEARLY	MW	ADDITIONS	TIES
**	*****	*****	*****	*****
96				1424
97			100*	1521
98				1467
99		200*		1510
0				1504
1	1X 200			1686
2				1620
3				1620
4				1618
5	1X 200			1813
6	1X 200			1721
7		1X 87		1744

WITHOUT SUSITNA
10. KEETNA

8										1744
9			1X 87							1744
10										1699
11			1X 87							1786
12										1785
13		1X 200								1853
14										1853
15										1853
16			1X 87							1853
17			1X 87							1940
18										1940
19										1940
20										1940

MW ADD	0	1000	435	0	0	0	100	SUM=	1535	
MW RET	0	-48	-603	-191	-20	-358	0	SUM=	-1220	

2020	0	1225	435	0	0	0	280	SUM=	1940	
PCT TOT	0.0	63.1	22.4	0.0	0.0	0.0	14.4	SUM=100	PCT	

FUEL PRICE 10. KEETNA

<u>Type</u>	<u>Fuel Price Analyzed</u>	<u>Replaces Basic Analysis Fuel</u>
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For Keetna Analysis fuel prices are the same as the Base Analysis.

June 12, 1985

TABLE 1

ALASKA POWER AUTHORITY

SUMMARY COMPARISON OF RAILBELT COST OF ENERGY
WITHOUT SUSITNA ALTERNATIVES
(Nominal cents/kWh)

Case:	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Base Analysis	2 TCF Gas	Low Gas Price	Low Gas & Coal Price	Low Coal Price With Diamond Plant	Low Finance	Low Inflation	Matanuska	Phase I	No Coal Export	Keetna
1985	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1995	12.9	13.0	8.9	11.9	10.7	12.2	11.0	11.2	12.9	8.2	12.9
1996	13.3	13.5	9.0	12.0	14.5	12.7	13.3	11.7	13.3	8.9	13.3
1997	17.4	17.5	9.5	16.0	15.0	16.3	14.5	12.4	17.4	14.4	18.9
1998	18.0	18.0	10.4	16.4	19.0	16.9	14.8	16.7	18.0	15.4	19.5
1999	22.4	22.5	15.3	20.7	19.5	20.7	18.1	17.1	22.4	19.9	23.8
2000	23.0	23.0	16.2	21.1	23.9	21.3	18.5	22.1	23.0	20.6	24.5
2001	23.7	23.7	21.1	21.6	24.3	22.0	18.9	22.7	23.7	25.6	29.0
2002	24.5	24.5	22.0	25.5	25.0	22.9	19.5	27.7	24.5	26.4	29.8
2003	28.6	28.7	27.4	26.0	25.7	26.5	22.4	28.5	28.6	27.4	30.5
2004	29.4	29.4	28.1	26.7	26.4	27.3	22.9	29.2	29.4	28.2	31.2
2005	30.4	30.3	29.0	27.3	27.2	28.2	23.4	30.1	30.4	33.0	35.8
2006	35.5	35.5	34.3	32.3	32.0	32.8	26.9	35.5	35.5	34.7	41.1
2007	36.8	36.8	35.6	33.3	33.2	34.1	27.7	36.8	36.8	36.2	42.3
2008	38.3	38.3	36.8	34.4	38.6	35.5	28.6	38.0	38.3	41.6	43.0
2009	39.7	39.7	37.9	35.4	39.5	36.9	29.5	39.4	39.7	42.7	44.2
2010	41.1	41.1	39.6	36.4	40.3	38.4	30.3	41.1	41.1	44.4	45.4
2015	54.7	54.8	52.7	48.1	46.4	51.2	38.3	53.5	54.7	58.2	58.7
2020	75.1	75.2	70.5	57.5	62.5	70.4	49.4	73.0	75.1	71.0	70.4

June 12, 1985

TABLE 1

ALASKA POWER AUTHORITY

SUMMARY COMPARISON OF RAILBELT COST OF ENERGY
WITH SUSITNA ALTERNATIVES
(Nominal cents/kWh)

Case:	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Base Analysis	2 TCF Gas	Low Gas Price	Low Gas & Coal Price	Low Coal Price With Diamond Plant	Low Finance	Low Inflation	Matanuska	Phase I	No Coal Export	Keetna
1985	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1995	8.2	6.7	8.2	8.2	9.7	8.2	7.3	10.2	8.2	8.2	8.2
1996	20.3	20.5	20.1	20.1	22.0	20.3	15.8	10.8	20.3	20.3	20.3
1997	21.2	21.3	20.8	20.8	22.8	21.2	16.5	11.4	21.2	21.2	21.2
1998	21.4	21.5	21.0	21.0	22.9	21.4	16.7	24.1	21.4	21.4	21.4
1999	21.9	21.9	21.3	21.3	23.1	21.9	17.0	25.2	21.9	21.9	21.9
2000	22.3	22.3	21.6	21.6	23.4	22.3	17.3	25.5	22.3	22.3	22.3
2001	22.9	22.9	22.1	22.1	23.8	22.9	17.8	25.9	22.9	22.9	22.9
2002	28.4	28.3	28.1	28.1	30.2	28.3	20.8	26.5	27.8	28.4	28.4
2003	28.8	28.8	28.6	28.6	30.6	28.8	21.1	27.1	28.5	28.8	28.8
2004	28.9	28.9	28.6	28.6	30.6	28.9	21.2	33.3	33.3	28.9	28.9
2005	29.0	28.9	28.6	28.6	30.6	28.9	21.2	33.6	33.8	29.0	29.0
2006	29.1	29.1	28.7	28.7	30.6	29.1	21.3	33.8	39.9	29.1	29.1
2007	29.4	29.4	28.8	28.8	30.6	29.4	21.4	33.8	40.8	29.4	29.4
2008	37.9	37.9	37.9	37.9	40.3	37.9	26.3	34.0	41.5	37.9	37.9
2009	37.9	37.9	37.9	37.9	40.4	37.9	26.4	34.0	42.5	37.9	37.9
2010	38.1	38.1	38.1	38.1	40.2	38.1	26.5	43.7	43.9	38.1	38.1
2015	38.0	38.0	37.8	37.8	40.0	37.9	26.0	43.8	55.2	38.0	38.0
2020	41.9	41.8	40.6	40.6	42.3	41.6	28.1	46.0	72.0	41.9	41.9

June 12, 1985

TABLE 2
ALASKA POWER AUTHORITY
CUMULATIVE PRESENT WORTH
OF RAILBELT ANNUAL POWER COSTS
(1985-2020)
(million 1985\$)

No.	Case	Without Susitna	With Susitna	Net Difference
0	Base Analysis	6,990	6,447	543
1	2 TCF Gas	7,006	6,447	559
2	Low Gas Price	6,335	6,376	(41)
3	Low Gas & Coal Price	6,647	6,376	271
4	Low Coal Price With Diamond Plant	6,782	6,880	(98)
5	Low Finance	6,596	6,443	153
6	Low Inflation	7,223	6,394	829
7	Matanuska	7,044	6,756	288
8	Phase I	6,990	7,321	(331)
9	No Coal Export	6,881	6,447	434
10	Keetna	7,538	6,447	1,091

Note: Cumulative present worth calculated only through 2020 and does not take into account the disparities in remaining plant life at that time. Based on 10% discount rate except for Case 6, Low Inflation, which uses an 8.5% discount rate.

June 12, 1985

TABLE 3

ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

ESTIMATED RATE STABILIZATION CONTRIBUTION
(million \$)

<u>No.</u>	<u>Case</u>	<u>W/O Interest Earnings (1)</u>	<u>W/Interest Earnings (2)</u>
0	Base Analysis	972	312
1	2 TCF Gas	967	311
2	Low Gas Price	2,908	915
3	Low Gas & Coal Price	1,984	479
4	Low Coal Price With Diamond Plant	2,383	611
5	Low Finance	1,847	486
6	Low Inflation	515	204
7	Matanuska	1,775	409
8	Phase I	2,841	516
9	No Coal Export	1,693	543
10	Keetna	579	216

(1) Amount required if interest earned on State contributions are not retained for rate stabilization.

(2) Amount required if interest earned on State contributions are retained for rate stabilization. Based on a reinvestment rate of one percent greater than the assumed long-term rate for tax-exempt bonds.