

Triennial Cost Allocation Proceeding Workpapers

San Diego Gas And Electric Company

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Triennial Cost Allocation Proceeding

FORECAST OF REQUIREMENTS – DETAIL



Triennial Cost Allocation Proceeding

CUSTOMER FORECAST



San Diego Gas and Electric Customer Forecast Models

SDG&E uses econometric models to produce its customer/meter forecasts. The factor driving the residential market growth is residential new housing starts. On the other hand, the commercial and industrial (manufacturing and Mining) customer growth is explained by commercial and industrial employment growth in SDG&E' service area. The customer growth estimation was performed using the "Proc Autoreg" method from Statistical Analysis System (SAS). The historical quarterly data used in the forecast is from 1990Q1 to 2013Q4 period.

RESUnit	Total Residential Dwelling Units with Gas Service
RESHS	Residential New Housing Starts
CICUST	Commercial and Industrial Customer Counts
CIEMP	"Total Com/Ind Employment" in SDG&E service area, lagged 2 quarters
Dte	Date by quarter of the year
D034FIRE	Dummy variable, =1 when dte=200304, =0 otherwise
DUM0604	Dummy variable, =1 when dte=200604, =0 otherwise
DUM0702	Dummy variable, =1 when dte=200702, =0 otherwise
DUM0802	Dummy variable, =1 when dte=200802, =0 otherwise
SEA1	Seasonal Dummy - Spring
SEA2	Seasonal Dummy - Summer
SEA3	Seasonal Dummy - Fall
SEA4	Seasonal Dummy - Winter

1) Residential Meter: RESUnit (1990Q1 to 2013Q4)

$$\begin{aligned}
 \text{Diff (RESUnit)} = & \quad 611.8397 + 0.1008 * \text{RESHS (t)} \\
 & \quad (3.57) \quad (4.32) \\
 & + 0.0671 * \text{RESHS (t-1)} + 0.0279 * \text{RESHS (t -8)} \\
 & \quad (2.67) \quad (2.26) \\
 & - 650.9540 * \text{SEA2} \\
 & \quad (-3.81) \\
 & - 573.6928 * \text{SEA3} \\
 & \quad (-3.51) \\
 & + 3999 * \text{DUM0604} + 2594 * \text{DUM0702} \\
 & \quad (7.54) \quad (4.90) \\
 & -3387 * \text{DUM0802} \\
 & \quad (-6.20)
 \end{aligned}$$

* t-value is in the parenthesis.

SSE	22579132.5	DFE	77
MSE	293235	Root MSE	541.51222
Total Rsq	.8375	Durbin-Watson	1.8448

(2) Commercial & Industrial Meter: CICUST (1990Q1 to 2013Q4)

$$\begin{aligned} \ln(\text{CICUST}) = & 6.9977 + 0.2340 * \ln(\text{CIEMP}(t-1)) \\ & (17.83) \quad (8.31) \\ & +.002770 * \text{SEA1} + 0.005278 * \text{SEA2} \\ & (3.98) \quad (7.36) \end{aligned}$$

*t-value is in the parenthesis.

SSE	00046172	DFE	80
MSE	5.77145E-6	Root MSE	.00240
Rsq	.9968	Durbin-Watson	1.4831

FORECAST

	(Annual Averages)							
	2006	2007	2008	2009	2010	2011	2012	2013
Residential	798,253	805,013	808,545	812,174	817,006	821,874	826,197	831,403
Core C/I	29,588	29,860	30,158	30,123	30,150	30,114	30,096	30,026
NGV	114	28	29	26	27	29	24	25
Non-Core C/I	56	57	53	55	58	57	58	53
Electric Generation	77	71	68	64	65	61	64	66
TOTAL	828,088	835,029	838,853	842,442	847,305	852,135	856,440	861,573
Customer Growth	9,972	6,941	3,824	3,589	4,863	4,830	4,306	5,133
Customer Growth Rate	1.22%	0.84%	0.46%	0.43%	0.58%	0.57%	0.51%	0.60%

	2014	2015	2016	2017	2018	2019	2020
Residential	838,671	848,964	861,283	874,282	887,477	900,867	914,230
Core C/I	30,038	30,020	30,074	30,176	30,289	30,407	30,536
NGV	25	25	25	26	26	27	27
Non-Core C/I	47	47	47	47	47	48	48
Electric Generation	70	74	77	80	82	85	88
TOTAL	868,851	879,130	891,506	904,611	917,921	931,433	944,929
Customer Growth	7,278	10,279	12,376	13,105	13,310	13,512	13,495
Customer Growth Rate	0.84%	1.18%	1.41%	1.47%	1.47%	1.47%	1.45%

	2021	2022	2023	2024	2025	2026
Residential	927,287	940,019	952,570	965,113	977,708	990,875
Core C/I	30,645	30,732	30,811	30,897	30,983	31,076
NGV	28	28	29	29	30	30
Non-Core C/I	48	48	48	48	49	49
Electric Generation	91	94	97	100	103	106
TOTAL	958,099	970,921	983,554	996,187	1,008,873	1,022,136
Customer Growth	13,170	12,823	12,633	12,632	12,686	13,263
Customer Growth Rate	1.39%	1.34%	1.30%	1.28%	1.27%	1.31%

	2027	2028	2029	2030	2031	2032
Residential	1,004,253	1,017,646	1,031,132	1,044,797	1,058,668	1,072,591
Core C/I	31,174	31,268	31,361	31,456	31,539	31,617
NGV	36	37	38	38	39	39
Non-Core C/I	49	49	49	49	49	50
Electric Generation	109	112	115	118	121	124
TOTAL	1,035,621	1,049,112	1,062,695	1,076,458	1,090,416	1,104,420
Customer Growth	13,485	13,491	13,583	13,764	13,958	14,004
Customer Growth Rate	1.32%	1.30%	1.29%	1.30%	1.30%	1.28%

	2033	2034	2035	2036	2037	2038
Residential	1,086,661	1,100,949	1,115,496	1,130,215	1,145,048	1,160,015
Core C/I	31,692	31,764	31,837	31,909	31,984	32,060
NGV	40	40	41	41	42	42
Non-Core C/I	50	50	50	50	50	50

Electric Generation	127	130	133	136	139	142
TOTAL	1,118,570	1,132,932	1,147,557	1,162,351	1,177,263	1,192,308
Customer Growth	14,149	14,362	14,625	14,794	14,912	15,045
Customer Growth Rate	1.28%	1.28%	1.29%	1.29%	1.28%	1.28%

	2039	2040	2041
Residential	1,175,034	1,190,107	1,205,351
Core C/I	32,138	32,222	32,295
NGV	43	43	44
Non-Core C/I	50	50	51
Electric Generation	145	148	151
TOTAL	1,207,410	1,222,570	1,237,892
Customer Growth	15,101	15,160	15,322
Customer Growth Rate	1.27%	1.26%	1.25%

SOURCE DATA

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
1	198704	1987	4	788534			23580.64	
2	198801	1988	1	797671	9137	788534	20466.17	23580.64
3	198802	1988	2	804216	6545	797671	24022.11	20466.17
4	198803	1988	3	810671	6455	804216	27274.14	24022.11
5	198804	1988	4	818147	7476	810671	39050.86	27274.14
6	198901	1989	1	825969	7822	818147	21818.91	39050.86
7	198902	1989	2	831294	5325	825969	17585.85	21818.91
8	198903	1989	3	836520	5226	831294	16869.71	17585.85
9	198904	1989	4	841534	5014	836520	18167.44	16869.71
10	199001	1990	1	847260	5726	841534	27752.59	18167.44
11	199002	1990	2	851332	4072	847260	15542.76	27752.59
12	199003	1990	3	854482	3150	851332	11901.18	15542.76
13	199004	1990	4	858129	3647	854482	9905.55	11901.18
14	199101	1991	1	861720	3591	858129	12171.47	9905.55
15	199102	1991	2	864472	2752	861720	10179.76	12171.47
16	199103	1991	3	866136	1664	864472	6155.59	10179.76
17	199104	1991	4	868682	2546	866136	5666.41	6155.59
18	199201	1992	1	871097	2415	868682	9482.52	5666.41
19	199202	1992	2	872315	1218	871097	6838.96	9482.52
20	199203	1992	3	873523	1208	872315	6091.7	6838.96
21	199204	1992	4	874886	1363	873523	3709.51	6091.7
22	199301	1993	1	876997	2111	874886	4324.81	3709.51
23	199302	1993	2	878154	1157	876997	5847.89	4324.81
24	199303	1993	3	878475	321	878154	5469.62	5847.89
25	199304	1993	4	880449	1974	878475	7429.01	5469.62
26	199401	1994	1	882192	1743	880449	7618.1	7429.01
27	199402	1994	2	883297	1105	882192	7035.58	7618.1
28	199403	1994	3	884264	967	883297	6594.66	7035.58
29	199404	1994	4	885713	1449	884264	7055.08	6594.66
30	199501	1995	1	887934	2221	885713	6362.52	7055.08
31	199502	1995	2	889151	1217	887934	7649.49	6362.52
32	199503	1995	3	889959	808	889151	6579.53	7649.49
33	199504	1995	4	892258	2299	889959	6283.44	6579.53
34	199601	1996	1	894767	2509	892258	6895.39	6283.44
35	199602	1996	2	896892	2125	894767	7147.7	6895.39
36	199603	1996	3	898950	2058	896892	7019.27	7147.7

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
37	199604	1996	4	902164	3214	898950	7093.49	7019.27
38	199701	1997	1	903974	1810	902164	8864.77	7093.49
39	199702	1997	2	904911	937	903974	9738.32	8864.77
40	199703	1997	3	907198	2287	904911	10362.3	9738.32
41	199704	1997	4	910456	3258	907198	14851.14	10362.3
42	199801	1998	1	913807	3351	910456	11400.45	14851.14
43	199802	1998	2	916187	2380	913807	12278.94	11400.45
44	199803	1998	3	918532	2345	916187	13471.11	12278.94
45	199804	1998	4	921844	3312	918532	10586.2	13471.11
46	199901	1999	1	925659	3815	921844	15328.4	10586.2
47	199902	1999	2	928446	2787	925659	15826.24	15328.4
48	199903	1999	3	930414	1968	928446	15920.16	15826.24
49	199904	1999	4	933867	3453	930414	13922.31	15920.16
50	200001	2000	1	937026	3159	933867	13964.28	13922.31
51	200002	2000	2	939633	2607	937026	15624.62	13964.28
52	200003	2000	3	942201	2568	939633	13632.97	15624.62
53	200004	2000	4	946133	3932	942201	13154.02	13632.97
54	200101	2001	1	949299	3166	946133	15922.03	13154.02
55	200102	2001	2	951952	2653	949299	15338.07	15922.03
56	200103	2001	3	954665	2713	951952	13836.75	15338.07
57	200104	2001	4	958313	3648	954665	13198.11	13836.75
58	200201	2002	1	961875	3562	958313	15279.26	13198.11
59	200202	2002	2	965417	3542	961875	12979.17	15279.26
60	200203	2002	3	969333	3916	965417	11440.8	12979.17
61	200204	2002	4	972657	3324	969333	12876.66	11440.8
62	200301	2003	1	975867	3210	972657	17410.39	12876.66
63	200302	2003	2	978340	2473	975867	16593.78	17410.39
64	200303	2003	3	981434	3094	978340	14739.38	16593.78
65	200304	2003	4	984013	2579	981434	15747.2	14739.38
66	200401	2004	1	986498	2485	984013	15599.75	15747.2
67	200402	2004	2	988395	1897	986498	15260.73	15599.75
68	200403	2004	3	991199	2804	988395	14879.57	15260.73
69	200404	2004	4	994949	3750	991199	11680.69	14879.57
70	200501	2005	1	998429	3480	994949	16912.5	11680.69
71	200502	2005	2	1001222	2793	998429	14366.19	16912.5
72	200503	2005	3	1003616	2394	1001222	12492.38	14366.19

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
73	200504	2005	4	1006384	2768	1003616	7922.12	12492.38
74	200601	2006	1	1009232	2848	1006384	10111.97	7922.12
75	200602	2006	2	1011601	2369	1009232	9225.06	10111.97
76	200603	2006	3	1013991	2390	1011601	7315.48	9225.06
77	200604	2006	4	1020374	6383	1013991	7530.56	7315.48
78	200701	2007	1	1023075	2701	1020374	6999.5	7530.56
79	200702	2007	2	1027640	4565	1023075	7636.97	6999.5
80	200703	2007	3	1029929	2289	1027640	6018.91	7636.97
81	200704	2007	4	1031285	1356	1029929	4494.93	6018.91
82	200801	2008	1	1032214	929	1031285	5204.78	4494.93
83	200802	2008	2	1030129	-2085	1032214	7020.61	5204.78
84	200803	2008	3	1030631	502	1030129	4729.32	7020.61
85	200804	2008	4	1031393	762	1030631	3266.22	4729.32
86	200901	2009	1	1032464	1071	1031393	1860.31	3266.22
87	200902	2009	2	1032937	473	1032464	4582.95	1860.31
88	200903	2009	3	1033854	917	1032937	2027.56	4582.95
89	200904	2009	4	1033348	-506	1033854	2288.67	2027.56
90	201001	2010	1	1035250	1902	1033348	4156.88	2288.67
91	201002	2010	2	1036749	1499	1035250	3277.76	4156.88
92	201003	2010	3	1037818	1069	1036749	3341.8	3277.76
93	201004	2010	4	1038994	1176	1037818	2591.13	3341.8
94	201101	2011	1	1039993	999	1038994	4001.05	2591.13
95	201102	2011	2	1041735	1742	1039993	6465.1	4001.05
96	201103	2011	3	1043032	1297	1041735	5217.05	6465.1
97	201104	2011	4	1043739.3	707.33333	1043032	5452.87	5217.05
98	201201	2012	1	1044573.7	834.33333	1043739	3675.35	5452.87
99	201202	2012	2	1045422.3	848.66667	1044574	6247.54	3675.35
100	201203	2012	3	1047002.7	1580.3333	1045422	6528.29	6247.54
101	201204	2012	4	1048516.7	1514	1047003	4275.08	6528.29
102	201301	2013	1	1049988.7	1472	1048517	6208.31	4275.08
103	201302	2013	2	1051391.7	1403	1049989	8300.84	6208.31
104	201303	2013	3	1052529	1137.3333	1051392	6156.92	8300.84
105	201304	2013	4	1053757.3	1228.3333	1052529	10018.67	6156.92
106	201401	2014	1	.	.	1053757	9799.64	10018.67
107	201402	2014	2	.	.	.	10751.46	9799.64
108	201403	2014	3	.	.	.	11200.12	10751.46

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
109	201404	2014	4 .	.	.	.	12316.19	11200.12
110	201501	2015	1 .	.	.	.	13078.81	12316.19
111	201502	2015	2 .	.	.	.	13925.74	13078.81
112	201503	2015	3 .	.	.	.	14710.65	13925.74
113	201504	2015	4 .	.	.	.	15321.54	14710.65
114	201601	2016	1 .	.	.	.	15399.78	15321.54
115	201602	2016	2 .	.	.	.	15351.96	15399.78
116	201603	2016	3 .	.	.	.	15351.88	15351.96
117	201604	2016	4 .	.	.	.	15344.4	15351.88
118	201701	2017	1 .	.	.	.	15469.29	15344.4
119	201702	2017	2 .	.	.	.	15368.8	15469.29
120	201703	2017	3 .	.	.	.	15238.97	15368.8
121	201704	2017	4 .	.	.	.	15257.18	15238.97
122	201801	2018	1 .	.	.	.	15315.48	15257.18
123	201802	2018	2 .	.	.	.	15260.1	15315.48
124	201803	2018	3 .	.	.	.	15364.19	15260.1
125	201804	2018	4 .	.	.	.	15670.02	15364.19
126	201901	2019	1 .	.	.	.	15698.9	15670.02
127	201902	2019	2 .	.	.	.	15645.24	15698.9
128	201903	2019	3 .	.	.	.	15669.63	15645.24
129	201904	2019	4 .	.	.	.	15644.87	15669.63
130	202001	2020	1 .	.	.	.	15435.88	15644.87
131	202002	2020	2 .	.	.	.	15330.47	15435.88
132	202003	2020	3 .	.	.	.	15225.2	15330.47
133	202004	2020	4 .	.	.	.	15111.62	15225.2
134	202101	2021	1 .	.	.	.	14826.48	15111.62
135	202102	2021	2 .	.	.	.	14751.06	14826.48
136	202103	2021	3 .	.	.	.	14687.87	14751.06
137	202104	2021	4 .	.	.	.	14583.94	14687.87
138	202201	2022	1 .	.	.	.	14417.03	14583.94
139	202202	2022	2 .	.	.	.	14392.32	14417.03
140	202203	2022	3 .	.	.	.	14387.22	14392.32
141	202204	2022	4 .	.	.	.	14358.35	14387.22
142	202301	2023	1 .	.	.	.	14367.65	14358.35
143	202302	2023	2 .	.	.	.	14351.25	14367.65
144	202303	2023	3 .	.	.	.	14317.13	14351.25

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
145	202304	2023	4 .	.	.	.	14319.57	14317.13
146	202401	2024	1 .	.	.	.	14400.57	14319.57
147	202402	2024	2 .	.	.	.	14608.68	14400.57
148	202403	2024	3 .	.	.	.	14747.86	14608.68
149	202404	2024	4 .	.	.	.	14906.17	14747.86
150	202501	2025	1 .	.	.	.	15030.72	14906.17
151	202502	2025	2 .	.	.	.	15155.31	15030.72
152	202503	2025	3 .	.	.	.	15254.05	15155.31
153	202504	2025	4 .	.	.	.	15423.92	15254.05
154	202601	2026	1 .	.	.	.	15498.49	15423.92
155	202602	2026	2 .	.	.	.	15584	15498.49
156	202603	2026	3 .	.	.	.	15606.21	15584
157	202604	2026	4 .	.	.	.	15589.95	15606.21
158	202701	2027	1 .	.	.	.	15646.01	15589.95
159	202702	2027	2 .	.	.	.	15597.06	15646.01
160	202703	2027	3 .	.	.	.	15527.41	15597.06
161	202704	2027	4 .	.	.	.	15440.37	15527.41
162	202801	2028	1 .	.	.	.	15535.61	15440.37
163	202802	2028	2 .	.	.	.	15612.23	15535.61
164	202803	2028	3 .	.	.	.	15604.21	15612.23
165	202804	2028	4 .	.	.	.	15559.64	15604.21
166	202901	2029	1 .	.	.	.	15696.14	15559.64
167	202902	2029	2 .	.	.	.	15778.34	15696.14
168	202903	2029	3 .	.	.	.	15802.42	15778.34
169	202904	2029	4 .	.	.	.	15820.06	15802.42
170	203001	2030	1 .	.	.	.	16006.43	15820.06
171	203002	2030	2 .	.	.	.	16171.67	16006.43
172	203003	2030	3 .	.	.	.	16166.12	16171.67
173	203004	2030	4 .	.	.	.	16246.72	16166.12
174	203101	2031	1 .	.	.	.	16331.85	16246.72
175	203102	2031	2 .	.	.	.	16235.12	16331.85
176	203103	2031	3 .	.	.	.	16141.94	16235.12
177	203104	2031	4 .	.	.	.	16179.71	16141.94
178	203201	2032	1 .	.	.	.	16329	16179.71
179	203202	2032	2 .	.	.	.	16296.71	16329
180	203203	2032	3 .	.	.	.	16246.42	16296.71

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
181	203204	2032	4 .	.	.	.	16327.21	16246.42
182	203301	2033	1 .	.	.	.	16534.77	16327.21
183	203302	2033	2 .	.	.	.	16592.73	16534.77
184	203303	2033	3 .	.	.	.	16598.92	16592.73
185	203304	2033	4 .	.	.	.	16679.69	16598.92
186	203401	2034	1 .	.	.	.	16871.59	16679.69
187	203402	2034	2 .	.	.	.	16822.45	16871.59
188	203403	2034	3 .	.	.	.	16981.1	16822.45
189	203404	2034	4 .	.	.	.	17059.4	16981.1
190	203501	2035	1 .	.	.	.	17295.63	17059.4
191	203502	2035	2 .	.	.	.	17165.86	17295.63
192	203503	2035	3 .	.	.	.	17253.9	17165.86
193	203504	2035	4 .	.	.	.	17286.19	17253.9
194	203601	2036	1 .	.	.	.	17408.97	17286.19
195	203602	2036	2 .	.	.	.	17261.15	17408.97
196	203603	2036	3 .	.	.	.	17338.57	17261.15
197	203604	2036	4 .	.	.	.	17373.3	17338.57
198	203701	2037	1 .	.	.	.	17447.18	17373.3
199	203702	2037	2 .	.	.	.	17468.56	17447.18
200	203703	2037	3 .	.	.	.	17565.87	17468.56
201	203704	2037	4 .	.	.	.	17590.55	17565.87
202	203801	2038	1 .	.	.	.	17583.81	17590.55
203	203802	2038	2 .	.	.	.	17622.79	17583.81
204	203803	2038	3 .	.	.	.	17654.74	17622.79
205	203804	2038	4 .	.	.	.	17656.63	17654.74
206	203901	2039	1 .	.	.	.	17588.02	17656.63
207	203902	2039	2 .	.	.	.	17633.23	17588.02
208	203903	2039	3 .	.	.	.	17667.41	17633.23
209	203904	2039	4 .	.	.	.	17671.27	17667.41
210	204001	2040	1 .	.	.	.	17646.1	17671.27
211	204002	2040	2 .	.	.	.	17809.27	17646.1
212	204003	2040	3 .	.	.	.	17671.5	17809.27
213	204004	2040	4 .	.	.	.	18026.06	17671.5
214	204101	2041	1 .	.	.	.	17908.65	18026.06
215	204102	2041	2 .	.	.	.	18119.03	17908.65
216	204103	2041	3 .	.	.	.	18223.7	18119.03

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResUnit</u>	<u>DResUnit</u>	<u>ResUnitL</u>	<u>RESHS</u>	<u>RESHSL1</u>
217	204104	2041	4				18310.73	18223.7

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
1	198704	1987	4					
2	198801	1988	1					
3	198802	1988	2	23580.64				
4	198803	1988	3	20466.17	23580.64			
5	198804	1988	4	24022.11	20466.17	23580.64		
6	198901	1989	1	27274.14	24022.11	20466.17	23580.64	
7	198902	1989	2	39050.86	27274.14	24022.11	20466.17	23580.64
8	198903	1989	3	21818.91	39050.86	27274.14	24022.11	20466.17
9	198904	1989	4	17585.85	21818.91	39050.86	27274.14	24022.11
10	199001	1990	1	16869.71	17585.85	21818.91	39050.86	27274.14
11	199002	1990	2	18167.44	16869.71	17585.85	21818.91	39050.86
12	199003	1990	3	27752.59	18167.44	16869.71	17585.85	21818.91
13	199004	1990	4	15542.76	27752.59	18167.44	16869.71	17585.85
14	199101	1991	1	11901.18	15542.76	27752.59	18167.44	16869.71
15	199102	1991	2	9905.55	11901.18	15542.76	27752.59	18167.44
16	199103	1991	3	12171.47	9905.55	11901.18	15542.76	27752.59
17	199104	1991	4	10179.76	12171.47	9905.55	11901.18	15542.76
18	199201	1992	1	6155.59	10179.76	12171.47	9905.55	11901.18
19	199202	1992	2	5666.41	6155.59	10179.76	12171.47	9905.55
20	199203	1992	3	9482.52	5666.41	6155.59	10179.76	12171.47
21	199204	1992	4	6838.96	9482.52	5666.41	6155.59	10179.76
22	199301	1993	1	6091.7	6838.96	9482.52	5666.41	6155.59
23	199302	1993	2	3709.51	6091.7	6838.96	9482.52	5666.41
24	199303	1993	3	4324.81	3709.51	6091.7	6838.96	9482.52
25	199304	1993	4	5847.89	4324.81	3709.51	6091.7	6838.96
26	199401	1994	1	5469.62	5847.89	4324.81	3709.51	6091.7
27	199402	1994	2	7429.01	5469.62	5847.89	4324.81	3709.51
28	199403	1994	3	7618.1	7429.01	5469.62	5847.89	4324.81
29	199404	1994	4	7035.58	7618.1	7429.01	5469.62	5847.89
30	199501	1995	1	6594.66	7035.58	7618.1	7429.01	5469.62
31	199502	1995	2	7055.08	6594.66	7035.58	7618.1	7429.01
32	199503	1995	3	6362.52	7055.08	6594.66	7035.58	7618.1

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
33	199504	1995	4	7649.49	6362.52	7055.08	6594.66	7035.58
34	199601	1996	1	6579.53	7649.49	6362.52	7055.08	6594.66
35	199602	1996	2	6283.44	6579.53	7649.49	6362.52	7055.08
36	199603	1996	3	6895.39	6283.44	6579.53	7649.49	6362.52
37	199604	1996	4	7147.7	6895.39	6283.44	6579.53	7649.49
38	199701	1997	1	7019.27	7147.7	6895.39	6283.44	6579.53
39	199702	1997	2	7093.49	7019.27	7147.7	6895.39	6283.44
40	199703	1997	3	8864.77	7093.49	7019.27	7147.7	6895.39
41	199704	1997	4	9738.32	8864.77	7093.49	7019.27	7147.7
42	199801	1998	1	10362.3	9738.32	8864.77	7093.49	7019.27
43	199802	1998	2	14851.14	10362.3	9738.32	8864.77	7093.49
44	199803	1998	3	11400.45	14851.14	10362.3	9738.32	8864.77
45	199804	1998	4	12278.94	11400.45	14851.14	10362.3	9738.32
46	199901	1999	1	13471.11	12278.94	11400.45	14851.14	10362.3
47	199902	1999	2	10586.2	13471.11	12278.94	11400.45	14851.14
48	199903	1999	3	15328.4	10586.2	13471.11	12278.94	11400.45
49	199904	1999	4	15826.24	15328.4	10586.2	13471.11	12278.94
50	200001	2000	1	15920.16	15826.24	15328.4	10586.2	13471.11
51	200002	2000	2	13922.31	15920.16	15826.24	15328.4	10586.2
52	200003	2000	3	13964.28	13922.31	15920.16	15826.24	15328.4
53	200004	2000	4	15624.62	13964.28	13922.31	15920.16	15826.24
54	200101	2001	1	13632.97	15624.62	13964.28	13922.31	15920.16
55	200102	2001	2	13154.02	13632.97	15624.62	13964.28	13922.31
56	200103	2001	3	15922.03	13154.02	13632.97	15624.62	13964.28
57	200104	2001	4	15338.07	15922.03	13154.02	13632.97	15624.62
58	200201	2002	1	13836.75	15338.07	15922.03	13154.02	13632.97
59	200202	2002	2	13198.11	13836.75	15338.07	15922.03	13154.02
60	200203	2002	3	15279.26	13198.11	13836.75	15338.07	15922.03
61	200204	2002	4	12979.17	15279.26	13198.11	13836.75	15338.07
62	200301	2003	1	11440.8	12979.17	15279.26	13198.11	13836.75
63	200302	2003	2	12876.66	11440.8	12979.17	15279.26	13198.11
64	200303	2003	3	17410.39	12876.66	11440.8	12979.17	15279.26
65	200304	2003	4	16593.78	17410.39	12876.66	11440.8	12979.17
66	200401	2004	1	14739.38	16593.78	17410.39	12876.66	11440.8
67	200402	2004	2	15747.2	14739.38	16593.78	17410.39	12876.66
68	200403	2004	3	15599.75	15747.2	14739.38	16593.78	17410.39

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
69	200404	2004	4	15260.73	15599.75	15747.2	14739.38	16593.78
70	200501	2005	1	14879.57	15260.73	15599.75	15747.2	14739.38
71	200502	2005	2	11680.69	14879.57	15260.73	15599.75	15747.2
72	200503	2005	3	16912.5	11680.69	14879.57	15260.73	15599.75
73	200504	2005	4	14366.19	16912.5	11680.69	14879.57	15260.73
74	200601	2006	1	12492.38	14366.19	16912.5	11680.69	14879.57
75	200602	2006	2	7922.12	12492.38	14366.19	16912.5	11680.69
76	200603	2006	3	10111.97	7922.12	12492.38	14366.19	16912.5
77	200604	2006	4	9225.06	10111.97	7922.12	12492.38	14366.19
78	200701	2007	1	7315.48	9225.06	10111.97	7922.12	12492.38
79	200702	2007	2	7530.56	7315.48	9225.06	10111.97	7922.12
80	200703	2007	3	6999.5	7530.56	7315.48	9225.06	10111.97
81	200704	2007	4	7636.97	6999.5	7530.56	7315.48	9225.06
82	200801	2008	1	6018.91	7636.97	6999.5	7530.56	7315.48
83	200802	2008	2	4494.93	6018.91	7636.97	6999.5	7530.56
84	200803	2008	3	5204.78	4494.93	6018.91	7636.97	6999.5
85	200804	2008	4	7020.61	5204.78	4494.93	6018.91	7636.97
86	200901	2009	1	4729.32	7020.61	5204.78	4494.93	6018.91
87	200902	2009	2	3266.22	4729.32	7020.61	5204.78	4494.93
88	200903	2009	3	1860.31	3266.22	4729.32	7020.61	5204.78
89	200904	2009	4	4582.95	1860.31	3266.22	4729.32	7020.61
90	201001	2010	1	2027.56	4582.95	1860.31	3266.22	4729.32
91	201002	2010	2	2288.67	2027.56	4582.95	1860.31	3266.22
92	201003	2010	3	4156.88	2288.67	2027.56	4582.95	1860.31
93	201004	2010	4	3277.76	4156.88	2288.67	2027.56	4582.95
94	201101	2011	1	3341.8	3277.76	4156.88	2288.67	2027.56
95	201102	2011	2	2591.13	3341.8	3277.76	4156.88	2288.67
96	201103	2011	3	4001.05	2591.13	3341.8	3277.76	4156.88
97	201104	2011	4	6465.1	4001.05	2591.13	3341.8	3277.76
98	201201	2012	1	5217.05	6465.1	4001.05	2591.13	3341.8
99	201202	2012	2	5452.87	5217.05	6465.1	4001.05	2591.13
100	201203	2012	3	3675.35	5452.87	5217.05	6465.1	4001.05
101	201204	2012	4	6247.54	3675.35	5452.87	5217.05	6465.1
102	201301	2013	1	6528.29	6247.54	3675.35	5452.87	5217.05
103	201302	2013	2	4275.08	6528.29	6247.54	3675.35	5452.87
104	201303	2013	3	6208.31	4275.08	6528.29	6247.54	3675.35

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
105	201304	2013	4	8300.84	6208.31	4275.08	6528.29	6247.54
106	201401	2014	1	6156.92	8300.84	6208.31	4275.08	6528.29
107	201402	2014	2	10018.67	6156.92	8300.84	6208.31	4275.08
108	201403	2014	3	9799.64	10018.67	6156.92	8300.84	6208.31
109	201404	2014	4	10751.46	9799.64	10018.67	6156.92	8300.84
110	201501	2015	1	11200.12	10751.46	9799.64	10018.67	6156.92
111	201502	2015	2	12316.19	11200.12	10751.46	9799.64	10018.67
112	201503	2015	3	13078.81	12316.19	11200.12	10751.46	9799.64
113	201504	2015	4	13925.74	13078.81	12316.19	11200.12	10751.46
114	201601	2016	1	14710.65	13925.74	13078.81	12316.19	11200.12
115	201602	2016	2	15321.54	14710.65	13925.74	13078.81	12316.19
116	201603	2016	3	15399.78	15321.54	14710.65	13925.74	13078.81
117	201604	2016	4	15351.96	15399.78	15321.54	14710.65	13925.74
118	201701	2017	1	15351.88	15351.96	15399.78	15321.54	14710.65
119	201702	2017	2	15344.4	15351.88	15351.96	15399.78	15321.54
120	201703	2017	3	15469.29	15344.4	15351.88	15351.96	15399.78
121	201704	2017	4	15368.8	15469.29	15344.4	15351.88	15351.96
122	201801	2018	1	15238.97	15368.8	15469.29	15344.4	15351.88
123	201802	2018	2	15257.18	15238.97	15368.8	15469.29	15344.4
124	201803	2018	3	15315.48	15257.18	15238.97	15368.8	15469.29
125	201804	2018	4	15260.1	15315.48	15257.18	15238.97	15368.8
126	201901	2019	1	15364.19	15260.1	15315.48	15257.18	15238.97
127	201902	2019	2	15670.02	15364.19	15260.1	15315.48	15257.18
128	201903	2019	3	15698.9	15670.02	15364.19	15260.1	15315.48
129	201904	2019	4	15645.24	15698.9	15670.02	15364.19	15260.1
130	202001	2020	1	15669.63	15645.24	15698.9	15670.02	15364.19
131	202002	2020	2	15644.87	15669.63	15645.24	15698.9	15670.02
132	202003	2020	3	15435.88	15644.87	15669.63	15645.24	15698.9
133	202004	2020	4	15330.47	15435.88	15644.87	15669.63	15645.24
134	202101	2021	1	15225.2	15330.47	15435.88	15644.87	15669.63
135	202102	2021	2	15111.62	15225.2	15330.47	15435.88	15644.87
136	202103	2021	3	14826.48	15111.62	15225.2	15330.47	15435.88
137	202104	2021	4	14751.06	14826.48	15111.62	15225.2	15330.47
138	202201	2022	1	14687.87	14751.06	14826.48	15111.62	15225.2
139	202202	2022	2	14583.94	14687.87	14751.06	14826.48	15111.62
140	202203	2022	3	14417.03	14583.94	14687.87	14751.06	14826.48

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
141	202204	2022	4	14392.32	14417.03	14583.94	14687.87	14751.06
142	202301	2023	1	14387.22	14392.32	14417.03	14583.94	14687.87
143	202302	2023	2	14358.35	14387.22	14392.32	14417.03	14583.94
144	202303	2023	3	14367.65	14358.35	14387.22	14392.32	14417.03
145	202304	2023	4	14351.25	14367.65	14358.35	14387.22	14392.32
146	202401	2024	1	14317.13	14351.25	14367.65	14358.35	14387.22
147	202402	2024	2	14319.57	14317.13	14351.25	14367.65	14358.35
148	202403	2024	3	14400.57	14319.57	14317.13	14351.25	14367.65
149	202404	2024	4	14608.68	14400.57	14319.57	14317.13	14351.25
150	202501	2025	1	14747.86	14608.68	14400.57	14319.57	14317.13
151	202502	2025	2	14906.17	14747.86	14608.68	14400.57	14319.57
152	202503	2025	3	15030.72	14906.17	14747.86	14608.68	14400.57
153	202504	2025	4	15155.31	15030.72	14906.17	14747.86	14608.68
154	202601	2026	1	15254.05	15155.31	15030.72	14906.17	14747.86
155	202602	2026	2	15423.92	15254.05	15155.31	15030.72	14906.17
156	202603	2026	3	15498.49	15423.92	15254.05	15155.31	15030.72
157	202604	2026	4	15584	15498.49	15423.92	15254.05	15155.31
158	202701	2027	1	15606.21	15584	15498.49	15423.92	15254.05
159	202702	2027	2	15589.95	15606.21	15584	15498.49	15423.92
160	202703	2027	3	15646.01	15589.95	15606.21	15584	15498.49
161	202704	2027	4	15597.06	15646.01	15589.95	15606.21	15584
162	202801	2028	1	15527.41	15597.06	15646.01	15589.95	15606.21
163	202802	2028	2	15440.37	15527.41	15597.06	15646.01	15589.95
164	202803	2028	3	15535.61	15440.37	15527.41	15597.06	15646.01
165	202804	2028	4	15612.23	15535.61	15440.37	15527.41	15597.06
166	202901	2029	1	15604.21	15612.23	15535.61	15440.37	15527.41
167	202902	2029	2	15559.64	15604.21	15612.23	15535.61	15440.37
168	202903	2029	3	15696.14	15559.64	15604.21	15612.23	15535.61
169	202904	2029	4	15778.34	15696.14	15559.64	15604.21	15612.23
170	203001	2030	1	15802.42	15778.34	15696.14	15559.64	15604.21
171	203002	2030	2	15820.06	15802.42	15778.34	15696.14	15559.64
172	203003	2030	3	16006.43	15820.06	15802.42	15778.34	15696.14
173	203004	2030	4	16171.67	16006.43	15820.06	15802.42	15778.34
174	203101	2031	1	16166.12	16171.67	16006.43	15820.06	15802.42
175	203102	2031	2	16246.72	16166.12	16171.67	16006.43	15820.06
176	203103	2031	3	16331.85	16246.72	16166.12	16171.67	16006.43

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
177	203104	2031	4	16235.12	16331.85	16246.72	16166.12	16171.67
178	203201	2032	1	16141.94	16235.12	16331.85	16246.72	16166.12
179	203202	2032	2	16179.71	16141.94	16235.12	16331.85	16246.72
180	203203	2032	3	16329	16179.71	16141.94	16235.12	16331.85
181	203204	2032	4	16296.71	16329	16179.71	16141.94	16235.12
182	203301	2033	1	16246.42	16296.71	16329	16179.71	16141.94
183	203302	2033	2	16327.21	16246.42	16296.71	16329	16179.71
184	203303	2033	3	16534.77	16327.21	16246.42	16296.71	16329
185	203304	2033	4	16592.73	16534.77	16327.21	16246.42	16296.71
186	203401	2034	1	16598.92	16592.73	16534.77	16327.21	16246.42
187	203402	2034	2	16679.69	16598.92	16592.73	16534.77	16327.21
188	203403	2034	3	16871.59	16679.69	16598.92	16592.73	16534.77
189	203404	2034	4	16822.45	16871.59	16679.69	16598.92	16592.73
190	203501	2035	1	16981.1	16822.45	16871.59	16679.69	16598.92
191	203502	2035	2	17059.4	16981.1	16822.45	16871.59	16679.69
192	203503	2035	3	17295.63	17059.4	16981.1	16822.45	16871.59
193	203504	2035	4	17165.86	17295.63	17059.4	16981.1	16822.45
194	203601	2036	1	17253.9	17165.86	17295.63	17059.4	16981.1
195	203602	2036	2	17286.19	17253.9	17165.86	17295.63	17059.4
196	203603	2036	3	17408.97	17286.19	17253.9	17165.86	17295.63
197	203604	2036	4	17261.15	17408.97	17286.19	17253.9	17165.86
198	203701	2037	1	17338.57	17261.15	17408.97	17286.19	17253.9
199	203702	2037	2	17373.3	17338.57	17261.15	17408.97	17286.19
200	203703	2037	3	17447.18	17373.3	17338.57	17261.15	17408.97
201	203704	2037	4	17468.56	17447.18	17373.3	17338.57	17261.15
202	203801	2038	1	17565.87	17468.56	17447.18	17373.3	17338.57
203	203802	2038	2	17590.55	17565.87	17468.56	17447.18	17373.3
204	203803	2038	3	17583.81	17590.55	17565.87	17468.56	17447.18
205	203804	2038	4	17622.79	17583.81	17590.55	17565.87	17468.56
206	203901	2039	1	17654.74	17622.79	17583.81	17590.55	17565.87
207	203902	2039	2	17656.63	17654.74	17622.79	17583.81	17590.55
208	203903	2039	3	17588.02	17656.63	17654.74	17622.79	17583.81
209	203904	2039	4	17633.23	17588.02	17656.63	17654.74	17622.79
210	204001	2040	1	17667.41	17633.23	17588.02	17656.63	17654.74
211	204002	2040	2	17671.27	17667.41	17633.23	17588.02	17656.63
212	204003	2040	3	17646.1	17671.27	17667.41	17633.23	17588.02

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL2</u>	<u>RESHSL3</u>	<u>RESHSL4</u>	<u>RESHSL5</u>	<u>RESHSL6</u>
213	204004	2040	4	17809.27	17646.1	17671.27	17667.41	17633.23
214	204101	2041	1	17671.5	17809.27	17646.1	17671.27	17667.41
215	204102	2041	2	18026.06	17671.5	17809.27	17646.1	17671.27
216	204103	2041	3	17908.65	18026.06	17671.5	17809.27	17646.1
217	204104	2041	4	18119.03	17908.65	18026.06	17671.5	17809.27

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
1	198704	1987	4				0	0
2	198801	1988	1				1	0
3	198802	1988	2				0	1
4	198803	1988	3				0	0
5	198804	1988	4				0	0
6	198901	1989	1				1	0
7	198902	1989	2				0	1
8	198903	1989	3	23580.64			0	0
9	198904	1989	4	20466.17	23580.64		0	0
10	199001	1990	1	24022.11	20466.17		1	0
11	199002	1990	2	27274.14	24022.11		0	1
12	199003	1990	3	39050.86	27274.14		0	0
13	199004	1990	4	21818.91	39050.86		0	0
14	199101	1991	1	17585.85	21818.91		1	0
15	199102	1991	2	16869.71	17585.85		0	1
16	199103	1991	3	18167.44	16869.71		0	0
17	199104	1991	4	27752.59	18167.44		0	0
18	199201	1992	1	15542.76	27752.59		1	0
19	199202	1992	2	11901.18	15542.76		0	1
20	199203	1992	3	9905.55	11901.18		0	0
21	199204	1992	4	12171.47	9905.55		0	0
22	199301	1993	1	10179.76	12171.47		1	0
23	199302	1993	2	6155.59	10179.76		0	1
24	199303	1993	3	5666.41	6155.59		0	0
25	199304	1993	4	9482.52	5666.41		0	0
26	199401	1994	1	6838.96	9482.52		1	0
27	199402	1994	2	6091.7	6838.96		0	1
28	199403	1994	3	3709.51	6091.7		0	0

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
29	199404	1994	4	4324.81	3709.51	0	0	0
30	199501	1995	1	5847.89	4324.81	1	0	0
31	199502	1995	2	5469.62	5847.89	0	1	0
32	199503	1995	3	7429.01	5469.62	0	0	1
33	199504	1995	4	7618.1	7429.01	0	0	0
34	199601	1996	1	7035.58	7618.1	1	0	0
35	199602	1996	2	6594.66	7035.58	0	1	0
36	199603	1996	3	7055.08	6594.66	0	0	1
37	199604	1996	4	6362.52	7055.08	0	0	0
38	199701	1997	1	7649.49	6362.52	1	0	0
39	199702	1997	2	6579.53	7649.49	0	1	0
40	199703	1997	3	6283.44	6579.53	0	0	1
41	199704	1997	4	6895.39	6283.44	0	0	0
42	199801	1998	1	7147.7	6895.39	1	0	0
43	199802	1998	2	7019.27	7147.7	0	1	0
44	199803	1998	3	7093.49	7019.27	0	0	1
45	199804	1998	4	8864.77	7093.49	0	0	0
46	199901	1999	1	9738.32	8864.77	1	0	0
47	199902	1999	2	10362.3	9738.32	0	1	0
48	199903	1999	3	14851.14	10362.3	0	0	1
49	199904	1999	4	11400.45	14851.14	0	0	0
50	200001	2000	1	12278.94	11400.45	1	0	0
51	200002	2000	2	13471.11	12278.94	0	1	0
52	200003	2000	3	10586.2	13471.11	0	0	1
53	200004	2000	4	15328.4	10586.2	0	0	0
54	200101	2001	1	15826.24	15328.4	1	0	0
55	200102	2001	2	15920.16	15826.24	0	1	0
56	200103	2001	3	13922.31	15920.16	0	0	1
57	200104	2001	4	13964.28	13922.31	0	0	0
58	200201	2002	1	15624.62	13964.28	1	0	0
59	200202	2002	2	13632.97	15624.62	0	1	0
60	200203	2002	3	13154.02	13632.97	0	0	1
61	200204	2002	4	15922.03	13154.02	0	0	0
62	200301	2003	1	15338.07	15922.03	1	0	0
63	200302	2003	2	13836.75	15338.07	0	1	0
64	200303	2003	3	13198.11	13836.75	0	0	1

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
65	200304	2003	4	15279.26	13198.11	0	0	0
66	200401	2004	1	12979.17	15279.26	1	0	0
67	200402	2004	2	11440.8	12979.17	0	1	0
68	200403	2004	3	12876.66	11440.8	0	0	1
69	200404	2004	4	17410.39	12876.66	0	0	0
70	200501	2005	1	16593.78	17410.39	1	0	0
71	200502	2005	2	14739.38	16593.78	0	1	0
72	200503	2005	3	15747.2	14739.38	0	0	1
73	200504	2005	4	15599.75	15747.2	0	0	0
74	200601	2006	1	15260.73	15599.75	1	0	0
75	200602	2006	2	14879.57	15260.73	0	1	0
76	200603	2006	3	11680.69	14879.57	0	0	1
77	200604	2006	4	16912.5	11680.69	0	0	0
78	200701	2007	1	14366.19	16912.5	1	0	0
79	200702	2007	2	12492.38	14366.19	0	1	0
80	200703	2007	3	7922.12	12492.38	0	0	1
81	200704	2007	4	10111.97	7922.12	0	0	0
82	200801	2008	1	9225.06	10111.97	1	0	0
83	200802	2008	2	7315.48	9225.06	0	1	0
84	200803	2008	3	7530.56	7315.48	0	0	1
85	200804	2008	4	6999.5	7530.56	0	0	0
86	200901	2009	1	7636.97	6999.5	1	0	0
87	200902	2009	2	6018.91	7636.97	0	1	0
88	200903	2009	3	4494.93	6018.91	0	0	1
89	200904	2009	4	5204.78	4494.93	0	0	0
90	201001	2010	1	7020.61	5204.78	1	0	0
91	201002	2010	2	4729.32	7020.61	0	1	0
92	201003	2010	3	3266.22	4729.32	0	0	1
93	201004	2010	4	1860.31	3266.22	0	0	0
94	201101	2011	1	4582.95	1860.31	1	0	0
95	201102	2011	2	2027.56	4582.95	0	1	0
96	201103	2011	3	2288.67	2027.56	0	0	1
97	201104	2011	4	4156.88	2288.67	0	0	0
98	201201	2012	1	3277.76	4156.88	1	0	0
99	201202	2012	2	3341.8	3277.76	0	1	0
100	201203	2012	3	2591.13	3341.8	0	0	1

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
101	201204	2012	4	4001.05	2591.13	0	0	0
102	201301	2013	1	6465.1	4001.05	1	0	0
103	201302	2013	2	5217.05	6465.1	0	1	0
104	201303	2013	3	5452.87	5217.05	0	0	1
105	201304	2013	4	3675.35	5452.87	0	0	0
106	201401	2014	1	6247.54	3675.35	1	0	0
107	201402	2014	2	6528.29	6247.54	0	1	0
108	201403	2014	3	4275.08	6528.29	0	0	1
109	201404	2014	4	6208.31	4275.08	0	0	0
110	201501	2015	1	8300.84	6208.31	1	0	0
111	201502	2015	2	6156.92	8300.84	0	1	0
112	201503	2015	3	10018.67	6156.92	0	0	1
113	201504	2015	4	9799.64	10018.67	0	0	0
114	201601	2016	1	10751.46	9799.64	1	0	0
115	201602	2016	2	11200.12	10751.46	0	1	0
116	201603	2016	3	12316.19	11200.12	0	0	1
117	201604	2016	4	13078.81	12316.19	0	0	0
118	201701	2017	1	13925.74	13078.81	1	0	0
119	201702	2017	2	14710.65	13925.74	0	1	0
120	201703	2017	3	15321.54	14710.65	0	0	1
121	201704	2017	4	15399.78	15321.54	0	0	0
122	201801	2018	1	15351.96	15399.78	1	0	0
123	201802	2018	2	15351.88	15351.96	0	1	0
124	201803	2018	3	15344.4	15351.88	0	0	1
125	201804	2018	4	15469.29	15344.4	0	0	0
126	201901	2019	1	15368.8	15469.29	1	0	0
127	201902	2019	2	15238.97	15368.8	0	1	0
128	201903	2019	3	15257.18	15238.97	0	0	1
129	201904	2019	4	15315.48	15257.18	0	0	0
130	202001	2020	1	15260.1	15315.48	1	0	0
131	202002	2020	2	15364.19	15260.1	0	1	0
132	202003	2020	3	15670.02	15364.19	0	0	1
133	202004	2020	4	15698.9	15670.02	0	0	0
134	202101	2021	1	15645.24	15698.9	1	0	0
135	202102	2021	2	15669.63	15645.24	0	1	0
136	202103	2021	3	15644.87	15669.63	0	0	1

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
137	202104	2021	4	15435.88	15644.87	0	0	0
138	202201	2022	1	15330.47	15435.88	1	0	0
139	202202	2022	2	15225.2	15330.47	0	1	0
140	202203	2022	3	15111.62	15225.2	0	0	1
141	202204	2022	4	14826.48	15111.62	0	0	0
142	202301	2023	1	14751.06	14826.48	1	0	0
143	202302	2023	2	14687.87	14751.06	0	1	0
144	202303	2023	3	14583.94	14687.87	0	0	1
145	202304	2023	4	14417.03	14583.94	0	0	0
146	202401	2024	1	14392.32	14417.03	1	0	0
147	202402	2024	2	14387.22	14392.32	0	1	0
148	202403	2024	3	14358.35	14387.22	0	0	1
149	202404	2024	4	14367.65	14358.35	0	0	0
150	202501	2025	1	14351.25	14367.65	1	0	0
151	202502	2025	2	14317.13	14351.25	0	1	0
152	202503	2025	3	14319.57	14317.13	0	0	1
153	202504	2025	4	14400.57	14319.57	0	0	0
154	202601	2026	1	14608.68	14400.57	1	0	0
155	202602	2026	2	14747.86	14608.68	0	1	0
156	202603	2026	3	14906.17	14747.86	0	0	1
157	202604	2026	4	15030.72	14906.17	0	0	0
158	202701	2027	1	15155.31	15030.72	1	0	0
159	202702	2027	2	15254.05	15155.31	0	1	0
160	202703	2027	3	15423.92	15254.05	0	0	1
161	202704	2027	4	15498.49	15423.92	0	0	0
162	202801	2028	1	15584	15498.49	1	0	0
163	202802	2028	2	15606.21	15584	0	1	0
164	202803	2028	3	15589.95	15606.21	0	0	1
165	202804	2028	4	15646.01	15589.95	0	0	0
166	202901	2029	1	15597.06	15646.01	1	0	0
167	202902	2029	2	15527.41	15597.06	0	1	0
168	202903	2029	3	15440.37	15527.41	0	0	1
169	202904	2029	4	15535.61	15440.37	0	0	0
170	203001	2030	1	15612.23	15535.61	1	0	0
171	203002	2030	2	15604.21	15612.23	0	1	0
172	203003	2030	3	15559.64	15604.21	0	0	1

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
173	203004	2030	4	15696.14	15559.64	0	0	0
174	203101	2031	1	15778.34	15696.14	1	0	0
175	203102	2031	2	15802.42	15778.34	0	1	0
176	203103	2031	3	15820.06	15802.42	0	0	1
177	203104	2031	4	16006.43	15820.06	0	0	0
178	203201	2032	1	16171.67	16006.43	1	0	0
179	203202	2032	2	16166.12	16171.67	0	1	0
180	203203	2032	3	16246.72	16166.12	0	0	1
181	203204	2032	4	16331.85	16246.72	0	0	0
182	203301	2033	1	16235.12	16331.85	1	0	0
183	203302	2033	2	16141.94	16235.12	0	1	0
184	203303	2033	3	16179.71	16141.94	0	0	1
185	203304	2033	4	16329	16179.71	0	0	0
186	203401	2034	1	16296.71	16329	1	0	0
187	203402	2034	2	16246.42	16296.71	0	1	0
188	203403	2034	3	16327.21	16246.42	0	0	1
189	203404	2034	4	16534.77	16327.21	0	0	0
190	203501	2035	1	16592.73	16534.77	1	0	0
191	203502	2035	2	16598.92	16592.73	0	1	0
192	203503	2035	3	16679.69	16598.92	0	0	1
193	203504	2035	4	16871.59	16679.69	0	0	0
194	203601	2036	1	16822.45	16871.59	1	0	0
195	203602	2036	2	16981.1	16822.45	0	1	0
196	203603	2036	3	17059.4	16981.1	0	0	1
197	203604	2036	4	17295.63	17059.4	0	0	0
198	203701	2037	1	17165.86	17295.63	1	0	0
199	203702	2037	2	17253.9	17165.86	0	1	0
200	203703	2037	3	17286.19	17253.9	0	0	1
201	203704	2037	4	17408.97	17286.19	0	0	0
202	203801	2038	1	17261.15	17408.97	1	0	0
203	203802	2038	2	17338.57	17261.15	0	1	0
204	203803	2038	3	17373.3	17338.57	0	0	1
205	203804	2038	4	17447.18	17373.3	0	0	0
206	203901	2039	1	17468.56	17447.18	1	0	0
207	203902	2039	2	17565.87	17468.56	0	1	0

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>RESHSL7</u>	<u>RESHSL8</u>	SEA1	SEA2	SEA3
208	203903	2039	3	17590.55	17565.87	0	0	1
209	203904	2039	4	17583.81	17590.55	0	0	0
210	204001	2040	1	17622.79	17583.81	1	0	0
211	204002	2040	2	17654.74	17622.79	0	1	0
212	204003	2040	3	17656.63	17654.74	0	0	1
213	204004	2040	4	17588.02	17656.63	0	0	0
214	204101	2041	1	17633.23	17588.02	1	0	0
215	204102	2041	2	17667.41	17633.23	0	1	0
216	204103	2041	3	17671.27	17667.41	0	0	1
217	204104	2041	4	17646.1	17671.27	0	0	0

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CIcust</u>	<u>CIcustL1</u>	<u>CIcustL2</u>	<u>CIcustL3</u>
1	198704	1987	4		26785			
2	198801	1988	1		27176	26785		
3	198802	1988	2		27140	27176	26785	
4	198803	1988	3		26939	27140	27176	26785
5	198804	1988	4		26923	26939	27140	27176
6	198901	1989	1	4908	27301	26923	26939	27140
7	198902	1989	2	7238	27269	27301	26923	26939
8	198903	1989	3	7708	27175	27269	27301	26923
9	198904	1989	4	8698	27203	27175	27269	27301
10	199001	1990	1	4617	27557	27203	27175	27269
11	199002	1990	2	4608	27570	27557	27203	27175
12	199003	1990	3	3962	27470	27570	27557	27203
13	199004	1990	4	5523	27518	27470	27570	27557
14	199101	1991	1	6373	27743	27518	27470	27570
15	199102	1991	2	3910	27694	27743	27518	27470
16	199103	1991	3	2957	27593	27694	27743	27518
17	199104	1991	4	2556	27557	27593	27694	27743
18	199201	1992	1	3857	27704	27557	27593	27694
19	199202	1992	2	1694	27618	27704	27557	27593
20	199203	1992	3	1315	27430	27618	27704	27557
21	199204	1992	4	1042	27403	27430	27618	27704
22	199301	1993	1	2330	27639	27403	27430	27618

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
23	199302	1993	2	1802	27519	27639	27403	27430
24	199303	1993	3	1218	27305	27519	27639	27403
25	199304	1993	4	709	27241	27305	27519	27639
26	199401	1994	1	1180	27457	27241	27305	27519
27	199402	1994	2	1556	27394	27457	27241	27305
28	199403	1994	3	1411	27196	27394	27457	27241
29	199404	1994	4	1455	27188	27196	27394	27457
30	199501	1995	1	1547	27313	27188	27196	27394
31	199502	1995	2	2169	27211	27313	27188	27196
32	199503	1995	3	1578	27087	27211	27313	27188
33	199504	1995	4	1641	26977	27087	27211	27313
34	199601	1996	1	1157	27189	26977	27087	27211
35	199602	1996	2	2321	27166	27189	26977	27087
36	199603	1996	3	1757	27061	27166	27189	26977
37	199604	1996	4	1373	27074	27061	27166	27189
38	199701	1997	1	1520	27315	27074	27061	27166
39	199702	1997	2	1795	27330	27315	27074	27061
40	199703	1997	3	1826	27271	27330	27315	27074
41	199704	1997	4	1727	27312	27271	27330	27315
42	199801	1998	1	1856	27549	27312	27271	27330
43	199802	1998	2	2814	27530	27549	27312	27271
44	199803	1998	3	3153	27470	27530	27549	27312
45	199804	1998	4	3579	27511	27470	27530	27549
46	199901	1999	1	2594	27762	27511	27470	27530
47	199902	1999	2	3463	27910	27762	27511	27470
48	199903	1999	3	3671	27943	27910	27762	27511
49	199904	1999	4	2445	28038	27943	27910	27762
50	200001	2000	1	4378	28312	28038	27943	27910
51	200002	2000	2	4951	28462	28312	28038	27943
52	200003	2000	3	4341	28452	28462	28312	28038
53	200004	2000	4	2757	28579	28452	28462	28312

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
54	200101	2001	1	4115	28777	28579	28452	28462
55	200102	2001	2	5124	28754	28777	28579	28452
56	200103	2001	3	3108	28765	28754	28777	28579
57	200104	2001	4	3580	28855	28765	28754	28777
58	200201	2002	1	4004	29006	28855	28765	28754
59	200202	2002	2	4675	29054	29006	28855	28765
60	200203	2002	3	3462	29090	29054	29006	28855
61	200204	2002	4	3497	29196	29090	29054	29006
62	200301	2003	1	4245	29319	29196	29090	29054
63	200302	2003	2	3961	29319	29319	29196	29090
64	200303	2003	3	3956	29309	29319	29319	29196
65	200304	2003	4	3576	29381	29309	29319	29319
66	200401	2004	1	5808	29523	29381	29309	29319
67	200402	2004	2	3903	29569	29523	29381	29309
68	200403	2004	3	4340	29477	29569	29523	29381
69	200404	2004	4	4263	29471	29477	29569	29523
70	200501	2005	1	4431	29583	29471	29477	29569
71	200502	2005	2	4867	29573	29583	29471	29477
72	200503	2005	3	4096	29558	29573	29583	29471
73	200504	2005	4	3912	29563	29558	29573	29583
74	200601	2006	1	4818	29639	29563	29558	29573
75	200602	2006	2	4290	29684	29639	29563	29558
76	200603	2006	3	4041	29620	29684	29639	29563
77	200604	2006	4	2109	29636	29620	29684	29639
78	200701	2007	1	2929	29812	29636	29620	29684
79	200702	2007	2	3623	29905	29812	29636	29620
80	200703	2007	3	2400	29926	29905	29812	29636
81	200704	2007	4	1825	30023	29926	29905	29812
82	200801	2008	1	2541	30150	30023	29926	29905
83	200802	2008	2	1783	30243	30150	30023	29926
84	200803	2008	3	1538	30227	30243	30150	30023
85	200804	2008	4	1583	30222	30227	30243	30150
86	200901	2009	1	925	30248	30222	30227	30243
87	200902	2009	2	2226	30178	30248	30222	30227
88	200903	2009	3	1394	30145	30178	30248	30222
89	200904	2009	4	609	30139	30145	30178	30248

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
90	201001	2010	1	694	30135	30139	30145	30178
91	201002	2010	2	984	30208	30135	30139	30145
92	201003	2010	3	693	30269	30208	30135	30139
93	201004	2010	4	619	30216	30269	30208	30135
94	201101	2011	1	831	30193	30216	30269	30208
95	201102	2011	2	1322	30189	30193	30216	30269
96	201103	2011	3	617	30170	30189	30193	30216
97	201104	2011	4	580	30133	30170	30189	30193
98	201201	2012	1	1427	30173	30133	30170	30189
99	201202	2012	2	1550	30192	30173	30133	30170
100	201203	2012	3	1094	30142	30192	30173	30133
101	201204	2012	4	1149	30086	30142	30192	30173
102	201301	2013	1	1830	30116	30086	30142	30192
103	201302	2013	2	2152	30095	30116	30086	30142
104	201303	2013	3	2532	30038	30095	30116	30086
105	201304	2013	4	2591	30058	30038	30095	30116
106	201401	2014	1	2670	.	30058	30038	30095
107	201402	2014	2	2798	.	.	30058	30038
108	201403	2014	3	3048	.	.	.	30058
109	201404	2014	4	3178	.	.	.	.
110	201501	2015	1	3366	.	.	.	.
111	201502	2015	2	3553	.	.	.	.
112	201503	2015	3	3774	.	.	.	.
113	201504	2015	4	3947	.	.	.	.
114	201601	2016	1	4068	.	.	.	.
115	201602	2016	2	4168	.	.	.	.
116	201603	2016	3	4263	.	.	.	.
117	201604	2016	4	4247	.	.	.	.
118	201701	2017	1	4182	.	.	.	.
119	201702	2017	2	4127	.	.	.	.
120	201703	2017	3	4095	.	.	.	.
121	201704	2017	4	4102	.	.	.	.
122	201801	2018	1	4076	.	.	.	.
123	201802	2018	2	4061	.	.	.	.
124	201803	2018	3	4060	.	.	.	.
125	201804	2018	4	4049	.	.	.	.

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
126	201901	2019	1	4030	.	.	.	.
127	201902	2019	2	4024	.	.	.	.
128	201903	2019	3	3985	.	.	.	.
129	201904	2019	4	3975	.	.	.	.
130	202001	2020	1	3952	.	.	.	.
131	202002	2020	2	3941	.	.	.	.
132	202003	2020	3	3920	.	.	.	.
133	202004	2020	4	3905	.	.	.	.
134	202101	2021	1	3882	.	.	.	.
135	202102	2021	2	3874	.	.	.	.
136	202103	2021	3	3869	.	.	.	.
137	202104	2021	4	3855	.	.	.	.
138	202201	2022	1	3810	.	.	.	.
139	202202	2022	2	3782	.	.	.	.
140	202203	2022	3	3740	.	.	.	.
141	202204	2022	4	3694	.	.	.	.
142	202301	2023	1	3633	.	.	.	.
143	202302	2023	2	3622	.	.	.	.
144	202303	2023	3	3628	.	.	.	.
145	202304	2023	4	3629	.	.	.	.
146	202401	2024	1	3626	.	.	.	.
147	202402	2024	2	3627	.	.	.	.
148	202403	2024	3	3626	.	.	.	.
149	202404	2024	4	3613	.	.	.	.
150	202501	2025	1	3635	.	.	.	.
151	202502	2025	2	3655	.	.	.	.
152	202503	2025	3	3667	.	.	.	.
153	202504	2025	4	3664	.	.	.	.
154	202601	2026	1	3693	.	.	.	.
155	202602	2026	2	3719	.	.	.	.
156	202603	2026	3	3739	.	.	.	.
157	202604	2026	4	3776	.	.	.	.
158	202701	2027	1	3789	.	.	.	.
159	202702	2027	2	3812	.	.	.	.
160	202703	2027	3	3822	.	.	.	.
161	202704	2027	4	3815	.	.	.	.

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
162	202801	2028	1	3834	.	.	.	.
163	202802	2028	2	3829	.	.	.	.
164	202803	2028	3	3830	.	.	.	.
165	202804	2028	4	3823	.	.	.	.
166	202901	2029	1	3827	.	.	.	.
167	202902	2029	2	3829	.	.	.	.
168	202903	2029	3	3823	.	.	.	.
169	202904	2029	4	3807	.	.	.	.
170	203001	2030	1	3826	.	.	.	.
171	203002	2030	2	3837	.	.	.	.
172	203003	2030	3	3834	.	.	.	.
173	203004	2030	4	3842	.	.	.	.
174	203101	2031	1	3875	.	.	.	.
175	203102	2031	2	3914	.	.	.	.
176	203103	2031	3	3903	.	.	.	.
177	203104	2031	4	3918	.	.	.	.
178	203201	2032	1	3949	.	.	.	.
179	203202	2032	2	3930	.	.	.	.
180	203203	2032	3	3929	.	.	.	.
181	203204	2032	4	3945	.	.	.	.
182	203301	2033	1	3984	.	.	.	.
183	203302	2033	2	3992	.	.	.	.
184	203303	2033	3	4001	.	.	.	.
185	203304	2033	4	4029	.	.	.	.
186	203401	2034	1	4080	.	.	.	.
187	203402	2034	2	4093	.	.	.	.
188	203403	2034	3	4096	.	.	.	.
189	203404	2034	4	4115	.	.	.	.
190	203501	2035	1	4155	.	.	.	.
191	203502	2035	2	4147	.	.	.	.
192	203503	2035	3	4197	.	.	.	.
193	203504	2035	4	4219	.	.	.	.
194	203601	2036	1	4271	.	.	.	.
195	203602	2036	2	4232	.	.	.	.
196	203603	2036	3	4258	.	.	.	.
197	203604	2036	4	4263	.	.	.	.

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>ResHPL4</u>	<u>CICust</u>	<u>CICustL1</u>	<u>CICustL2</u>	<u>CICustL3</u>
198	203701	2037	1	4288 .	.	.	.	.
199	203702	2037	2	4250 .	.	.	.	.
200	203703	2037	3	4278 .	.	.	.	.
201	203704	2037	4	4287 .	.	.	.	.
202	203801	2038	1	4294 .	.	.	.	.
203	203802	2038	2	4295 .	.	.	.	.
204	203803	2038	3	4308 .	.	.	.	.
205	203804	2038	4	4301 .	.	.	.	.
206	203901	2039	1	4282 .	.	.	.	.
207	203902	2039	2	4286 .	.	.	.	.
208	203903	2039	3	4293 .	.	.	.	.
209	203904	2039	4	4289 .	.	.	.	.
210	204001	2040	1	4257 .	.	.	.	.
211	204002	2040	2	4268 .	.	.	.	.
212	204003	2040	3	4278 .	.	.	.	.
213	204004	2040	4	4281 .	.	.	.	.
214	204101	2041	1	4242 .	.	.	.	.
215	204102	2041	2	4269 .	.	.	.	.
216	204103	2041	3	4215 .	.	.	.	.
217	204104	2041	4	4293 .	.	.	.	.

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
1	198704	1987	4					
2	198801	1988	1					
3	198802	1988	2					
4	198803	1988	3					
5	198804	1988	4	26785				
6	198901	1989	1	27176	26785			
7	198902	1989	2	27140	27176	26785		
8	198903	1989	3	26939	27140	27176	26785	
9	198904	1989	4	26923	26939	27140	27176	26785
10	199001	1990	1	27301	26923	26939	27140	27176
11	199002	1990	2	27269	27301	26923	26939	27140
12	199003	1990	3	27175	27269	27301	26923	26939

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
13	199004	1990	4	27203	27175	27269	27301	26923
14	199101	1991	1	27557	27203	27175	27269	27301
15	199102	1991	2	27570	27557	27203	27175	27269
16	199103	1991	3	27470	27570	27557	27203	27175
17	199104	1991	4	27518	27470	27570	27557	27203
18	199201	1992	1	27743	27518	27470	27570	27557
19	199202	1992	2	27694	27743	27518	27470	27570
20	199203	1992	3	27593	27694	27743	27518	27470
21	199204	1992	4	27557	27593	27694	27743	27518
22	199301	1993	1	27704	27557	27593	27694	27743
23	199302	1993	2	27618	27704	27557	27593	27694
24	199303	1993	3	27430	27618	27704	27557	27593
25	199304	1993	4	27403	27430	27618	27704	27557
26	199401	1994	1	27639	27403	27430	27618	27704
27	199402	1994	2	27519	27639	27403	27430	27618
28	199403	1994	3	27305	27519	27639	27403	27430
29	199404	1994	4	27241	27305	27519	27639	27403
30	199501	1995	1	27457	27241	27305	27519	27639
31	199502	1995	2	27394	27457	27241	27305	27519
32	199503	1995	3	27196	27394	27457	27241	27305
33	199504	1995	4	27188	27196	27394	27457	27241
34	199601	1996	1	27313	27188	27196	27394	27457
35	199602	1996	2	27211	27313	27188	27196	27394
36	199603	1996	3	27087	27211	27313	27188	27196
37	199604	1996	4	26977	27087	27211	27313	27188
38	199701	1997	1	27189	26977	27087	27211	27313
39	199702	1997	2	27166	27189	26977	27087	27211
40	199703	1997	3	27061	27166	27189	26977	27087
41	199704	1997	4	27074	27061	27166	27189	26977
42	199801	1998	1	27315	27074	27061	27166	27189
43	199802	1998	2	27330	27315	27074	27061	27166
44	199803	1998	3	27271	27330	27315	27074	27061
45	199804	1998	4	27312	27271	27330	27315	27074
46	199901	1999	1	27549	27312	27271	27330	27315
47	199902	1999	2	27530	27549	27312	27271	27330
48	199903	1999	3	27470	27530	27549	27312	27271

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
49	199904	1999	4	27511	27470	27530	27549	27312
50	200001	2000	1	27762	27511	27470	27530	27549
51	200002	2000	2	27910	27762	27511	27470	27530
52	200003	2000	3	27943	27910	27762	27511	27470
53	200004	2000	4	28038	27943	27910	27762	27511
54	200101	2001	1	28312	28038	27943	27910	27762
55	200102	2001	2	28462	28312	28038	27943	27910
56	200103	2001	3	28452	28462	28312	28038	27943
57	200104	2001	4	28579	28452	28462	28312	28038
58	200201	2002	1	28777	28579	28452	28462	28312
59	200202	2002	2	28754	28777	28579	28452	28462
60	200203	2002	3	28765	28754	28777	28579	28452
61	200204	2002	4	28855	28765	28754	28777	28579
62	200301	2003	1	29006	28855	28765	28754	28777
63	200302	2003	2	29054	29006	28855	28765	28754
64	200303	2003	3	29090	29054	29006	28855	28765
65	200304	2003	4	29196	29090	29054	29006	28855
66	200401	2004	1	29319	29196	29090	29054	29006
67	200402	2004	2	29319	29319	29196	29090	29054
68	200403	2004	3	29309	29319	29319	29196	29090
69	200404	2004	4	29381	29309	29319	29319	29196
70	200501	2005	1	29523	29381	29309	29319	29319
71	200502	2005	2	29569	29523	29381	29309	29319
72	200503	2005	3	29477	29569	29523	29381	29309
73	200504	2005	4	29471	29477	29569	29523	29381
74	200601	2006	1	29583	29471	29477	29569	29523
75	200602	2006	2	29573	29583	29471	29477	29569
76	200603	2006	3	29558	29573	29583	29471	29477
77	200604	2006	4	29563	29558	29573	29583	29471
78	200701	2007	1	29639	29563	29558	29573	29583
79	200702	2007	2	29684	29639	29563	29558	29573
80	200703	2007	3	29620	29684	29639	29563	29558
81	200704	2007	4	29636	29620	29684	29639	29563
82	200801	2008	1	29812	29636	29620	29684	29639
83	200802	2008	2	29905	29812	29636	29620	29684
84	200803	2008	3	29926	29905	29812	29636	29620

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
85	200804	2008	4	30023	29926	29905	29812	29636
86	200901	2009	1	30150	30023	29926	29905	29812
87	200902	2009	2	30243	30150	30023	29926	29905
88	200903	2009	3	30227	30243	30150	30023	29926
89	200904	2009	4	30222	30227	30243	30150	30023
90	201001	2010	1	30248	30222	30227	30243	30150
91	201002	2010	2	30178	30248	30222	30227	30243
92	201003	2010	3	30145	30178	30248	30222	30227
93	201004	2010	4	30139	30145	30178	30248	30222
94	201101	2011	1	30135	30139	30145	30178	30248
95	201102	2011	2	30208	30135	30139	30145	30178
96	201103	2011	3	30269	30208	30135	30139	30145
97	201104	2011	4	30216	30269	30208	30135	30139
98	201201	2012	1	30193	30216	30269	30208	30135
99	201202	2012	2	30189	30193	30216	30269	30208
100	201203	2012	3	30170	30189	30193	30216	30269
101	201204	2012	4	30133	30170	30189	30193	30216
102	201301	2013	1	30173	30133	30170	30189	30193
103	201302	2013	2	30192	30173	30133	30170	30189
104	201303	2013	3	30142	30192	30173	30133	30170
105	201304	2013	4	30086	30142	30192	30173	30133
106	201401	2014	1	30116	30086	30142	30192	30173
107	201402	2014	2	30095	30116	30086	30142	30192
108	201403	2014	3	30038	30095	30116	30086	30142
109	201404	2014	4	30058	30038	30095	30116	30086
110	201501	2015	1		30058	30038	30095	30116
111	201502	2015	2			30058	30038	30095
112	201503	2015	3				30058	30038
113	201504	2015	4					30058
114	201601	2016	1					
115	201602	2016	2					
116	201603	2016	3					
117	201604	2016	4					
118	201701	2017	1					
119	201702	2017	2					
120	201703	2017	3					

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
121	201704	2017	4					
122	201801	2018	1					
123	201802	2018	2					
124	201803	2018	3					
125	201804	2018	4					
126	201901	2019	1					
127	201902	2019	2					
128	201903	2019	3					
129	201904	2019	4					
130	202001	2020	1					
131	202002	2020	2					
132	202003	2020	3					
133	202004	2020	4					
134	202101	2021	1					
135	202102	2021	2					
136	202103	2021	3					
137	202104	2021	4					
138	202201	2022	1					
139	202202	2022	2					
140	202203	2022	3					
141	202204	2022	4					
142	202301	2023	1					
143	202302	2023	2					
144	202303	2023	3					
145	202304	2023	4					
146	202401	2024	1					
147	202402	2024	2					
148	202403	2024	3					
149	202404	2024	4					
150	202501	2025	1					
151	202502	2025	2					
152	202503	2025	3					
153	202504	2025	4					
154	202601	2026	1					
155	202602	2026	2					
156	202603	2026	3					

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL4</u>	<u>CICustL5</u>	<u>CICustL6</u>	<u>CICustL7</u>	<u>CICustL7</u>
157	202604	2026	4					
158	202701	2027	1					
159	202702	2027	2					
160	202703	2027	3					
161	202704	2027	4					
162	202801	2028	1					
163	202802	2028	2					
164	202803	2028	3					
165	202804	2028	4					
166	202901	2029	1					
167	202902	2029	2					
168	202903	2029	3					
169	202904	2029	4					
170	203001	2030	1					
171	203002	2030	2					
172	203003	2030	3					
173	203004	2030	4					
174	203101	2031	1					
175	203102	2031	2					
176	203103	2031	3					
177	203104	2031	4					
178	203201	2032	1					
179	203202	2032	2					
180	203203	2032	3					
181	203204	2032	4					
182	203301	2033	1					
183	203302	2033	2					
184	203303	2033	3					
185	203304	2033	4					
186	203401	2034	1					
187	203402	2034	2					
188	203403	2034	3					
189	203404	2034	4					
190	203501	2035	1					
191	203502	2035	2					
192	203503	2035	3					

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CI</u> CustL4	<u>CI</u> CustL5	<u>CI</u> CustL6	<u>CI</u> CustL7	<u>CI</u> CustL7
193	203504	2035	4					
194	203601	2036	1					
195	203602	2036	2					
196	203603	2036	3					
197	203604	2036	4					
198	203701	2037	1					
199	203702	2037	2					
200	203703	2037	3					
201	203704	2037	4					
202	203801	2038	1					
203	203802	2038	2					
204	203803	2038	3					
205	203804	2038	4					
206	203901	2039	1					
207	203902	2039	2					
208	203903	2039	3					
209	203904	2039	4					
210	204001	2040	1					
211	204002	2040	2					
212	204003	2040	3					
213	204004	2040	4					
214	204101	2041	1					
215	204102	2041	2					
216	204103	2041	3					
217	204104	2041	4					

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CI</u> CustL8	<u>Lg</u> CICust	<u>Lg</u> CICuL1	<u>CI</u> Emp	<u>Lg</u> CIEmp
1	198704	1987	4		10.1956	.	.	.
2	198801	1988	1		10.2101	10.1956	.	.
3	198802	1988	2		10.2088	10.2101	.	.
4	198803	1988	3		10.2013	10.2088	.	.
5	198804	1988	4		10.2007	10.2013	.	.
6	198901	1989	1		10.2147	10.2007	.	.

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL8</u>	<u>LgCICust</u>	<u>LgCICuL1</u>	<u>CIEmp</u>	<u>LgCIEmp</u>
7	198902	1989	2		10.2135	10.2147	.	.
8	198903	1989	3		10.2101	10.2135	.	.
9	198904	1989	4		10.2111	10.2101	.	.
10	199001	1990	1	26785	10.224	10.2111	956100	13.7706
11	199002	1990	2	27176	10.2245	10.224	967533	13.7825
12	199003	1990	3	27140	10.2208	10.2245	965600	13.7817
13	199004	1990	4	26939	10.2226	10.2208	979167	13.7913
14	199101	1991	1	26923	10.2307	10.2226	977833	13.7787
15	199102	1991	2	27301	10.229	10.2307	987033	13.7823
16	199103	1991	3	27269	10.2253	10.229	973500	13.7741
17	199104	1991	4	27175	10.224	10.2253	978400	13.7742
18	199201	1992	1	27203	10.2293	10.224	970100	13.758
19	199202	1992	2	27557	10.2262	10.2293	969933	13.7677
20	199203	1992	3	27570	10.2194	10.2262	954100	13.7572
21	199204	1992	4	27470	10.2184	10.2194	964467	13.7643
22	199301	1993	1	27518	10.227	10.2184	954100	13.7536
23	199302	1993	2	27743	10.2226	10.227	960567	13.7614
24	199303	1993	3	27694	10.2148	10.2226	950100	13.7593
25	199304	1993	4	27593	10.2125	10.2148	958700	13.7701
26	199401	1994	1	27557	10.2204	10.2125	956333	13.7582
27	199402	1994	2	27704	10.2181	10.2204	966000	13.7699
28	199403	1994	3	27618	10.2108	10.2181	953900	13.7696
29	199404	1994	4	27430	10.2105	10.2108	966500	13.7812
30	199501	1995	1	27403	10.2151	10.2105	966267	13.7724
31	199502	1995	2	27639	10.2114	10.2151	976633	13.7941
32	199503	1995	3	27519	10.2068	10.2114	967567	13.7976
33	199504	1995	4	27305	10.2027	10.2068	989900	13.8107
34	199601	1996	1	27241	10.2106	10.2027	993600	13.8028
35	199602	1996	2	27457	10.2097	10.2106	1006133	13.8218
36	199603	1996	3	27394	10.2058	10.2097	997533	13.8238
37	199604	1996	4	27196	10.2063	10.2058	1018300	13.8382
38	199701	1997	1	27188	10.2152	10.2063	1019433	13.8416
39	199702	1997	2	27313	10.2157	10.2152	1033733	13.8672
40	199703	1997	3	27211	10.2136	10.2157	1036433	13.8748
41	199704	1997	4	27087	10.2151	10.2136	1064333	13.8893
42	199801	1998	1	26977	10.2237	10.2151	1072100	13.8883

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL8</u>	<u>LgCICust</u>	<u>LgCICuL1</u>	<u>CIEmp</u>	<u>LgCIEmp</u>
43	199802	1998	2	27189	10.223	10.2237	1087233	13.9137
44	199803	1998	3	27166	10.2208	10.223	1085133	13.9201
45	199804	1998	4	27061	10.2223	10.2208	1114000	13.9403
46	199901	1999	1	27074	10.2314	10.2223	1121467	13.935
47	199902	1999	2	27315	10.2367	10.2314	1143600	13.9578
48	199903	1999	3	27330	10.2379	10.2367	1136900	13.9587
49	199904	1999	4	27271	10.2413	10.2379	1164367	13.979
50	200001	2000	1	27312	10.251	10.2413	1165700	13.9763
51	200002	2000	2	27549	10.2563	10.251	1189167	13.994
52	200003	2000	3	27530	10.256	10.2563	1184300	13.9907
53	200004	2000	4	27470	10.2604	10.256	1207167	14.011
54	200101	2001	1	27511	10.2673	10.2604	1202800	14.0026
55	200102	2001	2	27762	10.2665	10.2673	1226700	14.018
56	200103	2001	3	27910	10.2669	10.2665	1216467	14.0093
57	200104	2001	4	27943	10.27	10.2669	1236067	14.0229
58	200201	2002	1	28038	10.2753	10.27	1225600	14.0115
59	200202	2002	2	28312	10.2769	10.2753	1241033	14.0287
60	200203	2002	3	28462	10.2781	10.2769	1226233	14.0176
61	200204	2002	4	28452	10.2818	10.2781	1248800	14.0346
62	200301	2003	1	28579	10.286	10.2818	1235500	14.0198
63	200302	2003	2	28777	10.286	10.286	1256167	14.0317
64	200303	2003	3	28754	10.2856	10.286	1237067	14.0292
65	200304	2003	4	28765	10.2881	10.2856	1253000	14.0421
66	200401	2004	1	28855	10.2929	10.2881	1249733	14.0316
67	200402	2004	2	29006	10.2945	10.2929	1265367	14.0477
68	200403	2004	3	29054	10.2914	10.2945	1252133	14.0474
69	200404	2004	4	29090	10.2912	10.2914	1272967	14.0606
70	200501	2005	1	29196	10.295	10.2912	1272267	14.0497
71	200502	2005	2	29319	10.2946	10.295	1288433	14.0668
72	200503	2005	3	29319	10.2941	10.2946	1274033	14.0647
73	200504	2005	4	29309	10.2943	10.2941	1297033	14.0746
74	200601	2006	1	29381	10.2968	10.2943	1293867	14.0673
75	200602	2006	2	29523	10.2984	10.2968	1306333	14.0806
76	200603	2006	3	29569	10.2962	10.2984	1296633	14.0793
77	200604	2006	4	29477	10.2967	10.2962	1314967	14.0889
78	200701	2007	1	29471	10.3027	10.2967	1313233	14.0756

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CI</u> <u>CustL8</u>	<u>Lg</u> <u>CI</u> <u>Cust</u>	<u>Lg</u> <u>CI</u> <u>CuL1</u>	<u>CI</u> <u>Emp</u>	<u>Lg</u> <u>CI</u> <u>Emp</u>
79	200702	2007	2	29583	10.3058	10.3027	1325067	14.0867
80	200703	2007	3	29573	10.3065	10.3058	1307200	14.0862
81	200704	2007	4	29558	10.3097	10.3065	1322667	14.0901
82	200801	2008	1	29563	10.3139	10.3097	1322033	14.0766
83	200802	2008	2	29639	10.317	10.3139	1326900	14.0835
84	200803	2008	3	29684	10.3165	10.317	1308633	14.076
85	200804	2008	4	29620	10.3163	10.3165	1318867	14.0715
86	200901	2009	1	29636	10.3172	10.3163	1308733	14.0373
87	200902	2009	2	29812	10.3149	10.3172	1302100	14.029
88	200903	2009	3	29905	10.3138	10.3149	1257867	14.009
89	200904	2009	4	29926	10.3136	10.3138	1249633	14.0192
90	201001	2010	1	30023	10.3134	10.3136	1223733	14.0074
91	201002	2010	2	30150	10.3159	10.3134	1235500	14.0241
92	201003	2010	3	30243	10.3179	10.3159	1213667	14.0162
93	201004	2010	4	30227	10.3161	10.3179	1240267	14.0266
94	201101	2011	1	30222	10.3154	10.3161	1234000	14.0235
95	201102	2011	2	30248	10.3152	10.3154	1243967	14.0371
96	201103	2011	3	30178	10.3146	10.3152	1232700	14.0336
97	201104	2011	4	30145	10.3133	10.3146	1244233	14.0494
98	201201	2012	1	30139	.	10.3133	1239933	14.0449
99	201202	2012	2	30135	.	.	1255867	14.0587
100	201203	2012	3	30208	.	.	1244600	14.0545
101	201204	2012	4	30269	.	.	1272000	14.0672
102	201301	2013	1	30216	.	.	1270800	14.0629
103	201302	2013	2	30193	.	.	1287100	14.0765
104	201303	2013	3	30189	.	.	1275733	14.0735
105	201304	2013	4	30170	.	.	1292200	14.0868
106	201401	2014	1	30133	.	.	1289000	14.0835
107	201402	2014	2	30173	.	.	1309700	14.0984
108	201403	2014	3	30192	.	.	1301545	14.0965
109	201404	2014	4	30142	.	.	1321050	14.1104
110	201501	2015	1	30086	.	.	1319544	14.1069
111	201502	2015	2	30116	.	.	1337940	14.1213
112	201503	2015	3	30095	.	.	1332165	14.1188
113	201504	2015	4	30038	.	.	1354025	14.1317

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CI</u> <u>CustL8</u>	<u>Lg</u> <u>CI</u> <u>Cust</u>	<u>Lg</u> <u>CI</u> <u>CuL1</u>	<u>CI</u> <u>Emp</u>	<u>Lg</u> <u>CI</u> <u>Emp</u>
114	201601	2016	1	30058	.	.	1353717	14.1278
115	201602	2016	2	.	.	.	1372548	14.1419
116	201603	2016	3	.	.	.	1365761	14.139
117	201604	2016	4	.	.	.	1387827	14.151
118	201701	2017	1	.	.	.	1387305	14.146
119	201702	2017	2	.	.	.	1405981	14.1589
120	201703	2017	3	.	.	.	1398118	14.1544
121	201704	2017	4	.	.	.	1419531	14.1655
122	201801	2018	1	.	.	.	1416906	14.1596
123	201802	2018	2	.	.	.	1433979	14.1715
124	201803	2018	3	.	.	.	1423717	14.1664
125	201804	2018	4	.	.	.	1443243	14.1769
126	201901	2019	1	.	.	.	1438705	14.1712
127	201902	2019	2	.	.	.	1453932	14.183
128	201903	2019	3	.	.	.	1442312	14.1778
129	201904	2019	4	.	.	.	1460802	14.1886
130	202001	2020	1	.	.	.	1454640	14.1834
131	202002	2020	2	.	.	.	1469075	14.1977
132	202003	2020	3	.	.	.	1456815	14.1913
133	202004	2020	4	.	.	.	1478133	14.2011
134	202101	2021	1	.	.	.	1468883	14.1956
135	202102	2021	2	.	.	.	1481424	14.2071
136	202103	2021	3	.	.	.	1468306	14.2015
137	202104	2021	4	.	.	.	1485434	14.2115
138	202201	2022	1	.	.	.	1477628	14.2056
139	202202	2022	2	.	.	.	1491239	14.2166
140	202203	2022	3	.	.	.	1478338	14.2109
141	202204	2022	4	.	.	.	1495588	14.221
142	202301	2023	1	.	.	.	1487895	14.2156
143	202302	2023	2	.	.	.	1501734	14.2271
144	202303	2023	3	.	.	.	1488979	14.2221
145	202304	2023	4	.	.	.	1506252	14.2329
146	202401	2024	1	.	.	.	1498852	14.2278
147	202402	2024	2	.	.	.	1512832	14.2394
148	202403	2024	3	.	.	.	1500123	14.2344
149	202404	2024	4	.	.	.	1517764	14.2452

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CI</u> <u>CustL8</u>	<u>Lg</u> <u>CI</u> <u>Cust</u>	<u>Lg</u> <u>CI</u> <u>CuL1</u>	<u>CI</u> <u>Emp</u>	<u>Lg</u> <u>CI</u> <u>Emp</u>
150	202501	2025	1	.	.	.	1510267	14.2405
151	202502	2025	2	.	.	.	1524599	14.2523
152	202503	2025	3	.	.	.	1512411	14.2475
153	202504	2025	4	.	.	.	1530760	14.2587
154	202601	2026	1	.	.	.	1523792	14.2541
155	202602	2026	2	.	.	.	1538695	14.2661
156	202603	2026	3	.	.	.	1526529	14.2614
157	202604	2026	4	.	.	.	1545218	14.2729
158	202701	2027	1	.	.	.	1538295	14.2683
159	202702	2027	2	.	.	.	1553853	14.2802
160	202703	2027	3	.	.	.	1541775	14.2753
161	202704	2027	4	.	.	.	1560784	14.2865
162	202801	2028	1	.	.	.	1553655	14.2817
163	202802	2028	2	.	.	.	1569233	14.2935
164	202803	2028	3	.	.	.	1557034	14.2883
165	202804	2028	4	.	.	.	1576517	14.2995
166	202901	2029	1	.	.	.	1569274	14.2947
167	202902	2029	2	.	.	.	1585278	14.3064
168	202903	2029	3	.	.	.	1572918	14.3012
169	202904	2029	4	.	.	.	1592264	14.3122
170	203001	2030	1	.	.	.	1584432	14.3074
171	203002	2030	2	.	.	.	1600497	14.3207
172	203003	2030	3	.	.	.	1588190	14.314
173	203004	2030	4	.	.	.	1610942	14.3241
174	203101	2031	1	.	.	.	1601273	14.3191
175	203102	2031	2	.	.	.	1615877	14.3305
176	203103	2031	3	.	.	.	1602948	14.3247
177	203104	2031	4	.	.	.	1622228	14.3352
178	203201	2032	1	.	.	.	1614249	14.3298
179	203202	2032	2	.	.	.	1629883	14.3408
180	203203	2032	3	.	.	.	1616695	14.335
181	203204	2032	4	.	.	.	1636347	14.3454
182	203301	2033	1	.	.	.	1628343	14.34
183	203302	2033	2	.	.	.	1644441	14.3509
184	203303	2033	3	.	.	.	1631431	14.3449
185	203304	2033	4	.	.	.	1651276	14.3551

<u>Obs</u>	<u>DTE</u>	<u>YEAR</u>	<u>QUARTER</u>	<u>CICustL8</u>	<u>LgCICust</u>	<u>LgCICuL1</u>	<u>CIEmp</u>	<u>LgCIEmp</u>
186	203401	2034	1	.	.	.	1643175	14.3496
187	203402	2034	2	.	.	.	1659470	14.3604
188	203403	2034	3	.	.	.	1646312	14.3546
189	203404	2034	4	.	.	.	1666228	14.365
190	203501	2035	1	.	.	.	1657919	14.3596
191	203502	2035	2	.	.	.	1674299	14.3704
192	203503	2035	3	.	.	.	1661051	14.3645
193	203504	2035	4	.	.	.	1681109	14.3746
194	203601	2036	1	.	.	.	1672709	14.3692
195	203602	2036	2	.	.	.	1689424	14.3801
196	203603	2036	3	.	.	.	1676337	14.3744
197	203604	2036	4	.	.	.	1697096	14.3847
198	203701	2037	1	.	.	.	1689162	14.3794
199	203702	2037	2	.	.	.	1706534	14.3902
200	203703	2037	3	.	.	.	1693202	14.3846
201	203704	2037	4	.	.	.	1714147	14.3947
202	203801	2038	1	.	.	.	1706052	14.3894
203	203802	2038	2	.	.	.	1723558	14.4005
204	203803	2038	3	.	.	.	1709741	14.395
205	203804	2038	4	.	.	.	1730669	14.4051
206	203901	2039	1	.	.	.	1722374	14.3999
207	203902	2039	2	.	.	.	1739761	14.411
208	203903	2039	3	.	.	.	1725810	14.4058
209	203904	2039	4	.	.	.	1746842	14.4159
210	204001	2040	1	.	.	.	1737820	14.4108
211	204002	2040	2	.	.	.	1755674	14.4234
212	204003	2040	3	.	.	.	1741638	14.4169
213	204004	2040	4	.	.	.	1765990	14.4259
214	204101	2041	1	.	.	.	1755451	14.4207
215	204102	2041	2	.	.	.	1772099	14.4319
216	204103	2041	3	.	.	.	1757891	14.427
217	204104	2041	4	.	.	.	1779156	14.4368

Triennial Cost Allocation Proceeding

EUFORCASTER



Refer to the TCAP Workpapers of Southern California Gas Company for documentation of the EUForecaster model. This model is used to forecast gas demands for the residential, core commercial and core industrial markets.

Triennial Cost Allocation Proceeding

CORE COMMERCIAL AND INDUSTRIAL DEMAND FORECAST



Introduction

The core commercial and Industrial GN-3 gas demand forecast used the EUForecaster model to generate annual gas demand forecasts for the TCAP Period.

The model segments the core commercial and industrial GN-3 markets into 14 sectors and 11 sectors by type of business activity, respectively. Business activity is determined by the NAICS code assigned to the customer and carried on the customer's billing record. A second segmentation within each specific business type involved further disaggregation into end-uses.

The gas demand forecast that results from the EUForecaster model is at the annual design HDD total of 1,303 for an Average Year. The gas demand forecasts under Cold, Hot and Base temperature were then constructed based on Cold Year (Hdd = 1,615), Hot Year (Hdd=991) and Base Year (Hdd=0) annual assumptions.

This *end use* forecasts under the above four temperature scenarios are then reduced for the EE/DSM savings provided by the EE/DSM group. The post-model adjustments are summarized in tables that follow.

Data Sources

The key set of information used to perform the modeling and to generate the forecast includes historical year 2014 consumption and customer counts, employment forecasts, gas and electric energy use intensity (EUI) values, end-use saturations, fuel and efficiency shares, gas and electric price forecasts, equipment age, use per meter for existing and new customers, and equipment cost. A description of each component follows:

A. Historical Year 2014 Sales:

The historical data are extracted from the billing tables in the Customer Information System (CIS). The gas consumption by business type was adjusted to 1,303 Average Year Hdd.

B. Employment Data:

The level of employment in each business type is used as a measure of economic activity in the core commercial and industrial GN-3 demand forecast models. The employment data series matches the NAICS categories used to develop the historical consumption data. The employment data was compiled and totaled for the SDG&E' service territory. The forecast data comes from Global Insight.

C. Gas Price Data:

— — Average and marginal gas prices (\$/therm) were calculated from forecasts of the GN-3 rate components. We used underlying detailed consumption data to separate monthly consumption for customers by each business type into the respective GN-3 consumption tiers.

For a given business type, the average gas commodity rate for the 12-month period was calculated for each year. The average commodity rate in each forecast year was developed using the same monthly consumption pattern, but with the forecasts of rates for each GN-3 rate tier. The average gas price each year was then calculated by including the non-volumetric customer charges with the year's average gas commodity rate.

Each respective business type's marginal gas commodity rate (for each month) was calculated by "pricing" the entire month's consumption at the GN-3 rate's tier that was the last tier with non-zero consumption, the marginal consumption tier, for the customers of the given business type. The marginal gas price was then calculated as the simple average of the 12 monthly marginal commodity rates. The forecasts for each year used the same monthly consumption pattern, but used the projected GN-3 price of the marginal consumption tier.

D. Electric Price Data:

Both average prices (cents/kWh) and marginal prices (cents/kWh) were developed as electricity price inputs. Forecasts for the SDG&E retail electricity rates by customer class were developed from the CEC's July report CEC-200-2007-013-SD, Appendix B: Utility-Specific Retail Price Forecast Tables at page 4 for SDG&E. Forecasts for the SDG&E small/medium commercial and industrial customer classes were developed by SDG&E's electricity rate analysis group. These were the average electricity prices for the GN-3 core commercial and industrial markets.

The marginal prices were calculated by multiplying each year's respective average price by a ratio. These ratios, 1.000 for commercial and 0.789 for industrial, are the same as ratio used for the SoCalGas core commercial and industrial G-10 end-use models.

To impute the average and marginal electricity prices for each year, in each core commercial business type, we simply calculated the ratio of the average (or marginal) gas price to the overall core commercial gas price for each business type and then multiplied by the overall average (or marginal) electricity price.

E.. Building and Equipment Decay Rates:

Building decay rates are based on the building lifetimes, where the lifetime is defined as the length of time it takes for either a demolition or a major renovation where are major systems are replaced. For existing core buildings and facilities, an exponential rate of decay of 1% per year was assumed, consistent with an average remaining life for existing buildings of 100 years. A building decay rate concept is not relevant to large gas transport (non-core) customers. In both the commercial and industrial non-core models the existing building decay rate was set equal to zero.

Similarly, all new construction decay rates were assumed to be zero over the forecast horizon. This assumption was required because the growth of new buildings and facilities was tied directly to the econometric models.

End-Use lifetimes were derived from a variety of sources.

Commercial:

- Space heat – 25 years
- Water heat – 15 years
- AC/compressor – 20 years
- All other commercial end-uses – 15 years

Industrial:

Fire-tube boiler – 25 years
Water-tube boiler – 25 years
Engine (motors) – 25 years
All other industrial end-uses – 20 years

F. Equipment Saturations, Fuel Shares, and Efficiency Shares:

EUForecaster defines saturation as the percentage of customers in any segment that has a particular end use, independent of fuel shares. The commercial models developed saturation and fuel share estimates from our others end-use models. EUForecaster adjusted core commercial fuel shares according to a set of fuel-choice equations over the forecast horizon.

End-use saturations in the industrial model were initially set equal to 100%. Industrial end-use gas fuel shares were initially approximated. We then used an iterative procedure to further adjust industrial saturation and fuel shares such that the EUForecaster sales totals matched SDG&E industrial sales figures, and our estimates of electric usage by SDG&E customers. Finally, all commercial and industrial fuel shares were held constant over the forecast horizon.

Energy efficiency varied within the major gas end-uses/processes, including all boilers, space heat, and water heat. Four levels of efficiency were assigned to gas equipment: low, medium (standard) high, and premium for core commercial and three levels of efficiency were assigned to gas equipment: low, medium (standard), and high for core industrial market. California and federal standards have effectively eliminated the lowest efficiency alternatives for several gas end-uses from being purchased as new or replacement equipment. The lowest efficiency alternative for these end uses is, therefore, allowed to exist in the base year stock, but the customer must then purchase either medium (e.g., equipment that just meets Government standards), high or premium efficiency equipment as these units decay. The low efficiency share in the existing equipment stock was set equal to 50%. Medium ranged from 40% to 45%, and high from 5% to 10%.

EUForecaster's choice module prorates the low share proportionately to the medium, high and premium alternatives proportionate to their shares noted above. Therefore, replacement and new construction efficiency shares for medium range from 80% to 90%, and high ranges from 10% to 20%.

G. DSM Forecast:

The end-use gas demand forecast developed with EUForecaster does not capture the effects of SDG&E's EE/DSM programs. Energy savings goals from the CPUC's mandated energy efficiency/energy conservation programs for the core commercial and industrial were provided by SDG&E's DSM department. These savings are subtracted from the forecast generated by the core commercial and industrial forecasts generated by EUForecaster.

G10 COMMERCIAL DATA TABLES

TCAP PHASE II CORE COMMERCIAL MODEL SOURCE INPUTS

Segment	2014 Therm Sales	2014 Meter Count	2014 Meter Count, Existing/Old customers	2014 Meter Count New Customers	Avg Use Per Meter Existing Customers	Avg Use Per Meter New Customers	Price Elasticity
Office	32441572	6508	6461	47	4427	8564	-0.135376
Restaurant	40375040	5534	5473	61	6510	7778	-0.091877
Retail	12391902	2999	2972	27	3680	5361	-0.265060
Laundry	7673912	458	453	5	14466	61774	-0.122795
Warehouse	2883646	571	567	4	4503	6328	-0.043035
School	2576418	795	791	4	2898	2934	-0.000001
College	5825507	378	373	5	13928	2761	-0.037179
Health	12494258	714	709	5	15700	8161	-0.096826
Lodging	19728786	815	815	0	21645	0	-0.105697
Misc	13579518	4709	4671	38	2590	1177	-0.000001
Government	12383494	700	695	5	15664	37227	-0.095709
TCU	5440304	1407	1404	3	3464	223	-0.129301
Construction	1192066	682	659	23	1615	61	-0.161076
Agriculture	1940641	109	109	0	15920	0	-0.315282

**San Diego Gas and Electric Company
 Triennial Cost Allocation Proceeding
 The Year the Equipment Was Installed by Business Types**

<u>Sector</u>	<u>Space Heater</u>	<u>Water Heater</u>	<u>Cooktop</u>	<u>Griddle</u>	<u>Fryer</u>	<u>Other Cooking Equipment</u>	<u>Kitchen Equipment</u>	<u>AC</u>	<u>Dryer</u>	<u>Engine</u>	<u>Other</u>
Office	1977	1978	1974	1978	1979	1976	1980	1975	1978	1975	1973
Restaurant	1980	1983	1980	1980	1982	1981	1983	1977	1983	1978	1980
Retail	1976	1979	1977	1977	1984	1981	1977	1976	1978	1984	1977
Laundry	1979	1975	1981	1986	1986	1986	1986	1975	1976		1975
Warehouse	1977	1977	1975	1981	1979	1979	1939	1975	1983	1981	1978
School	1975	1977	1971	1972	1975	1972	1972	1973	1975	1974	1972
College	1974	1976	1973	1974	1975	1975	1973	1979	1974	1973	1970
Health	1976	1979	1974	1975	1977	1975	1973	1975	1977	1974	1975
Lodging	1974	1981	1975	1979	1983	1979	1984	1975	1980	1975	1981
Misc	1974	1977	1972	1972	1976	1973	1979	1974	1978	1974	1978
Government	1975	1977	1973	1979	1975	1976	1978	1975	1980	1978	1972
TIU	1975	1979	1975	1978	1982	1979	1990	1975	1983	1978	1981
Construction	1977	1977	1972	1974	1975	1974	1953	1973	1980	1975	1976
Agriculture	1982	1980	1973	1979	1980	1979	1970	1976	1971	1987	1985

TCAP Phase II
EMPLOYMENT - CORE COMMERCIAL MODEL

YEAR	Office	Restaurant	Retail	Laundry	Warehouse	School	College
2014	0.3017833	0.11769167	0.14278333	0.0172	0.04799167	0.0942583	0.0423083
2015	0.3145111	0.1214428	0.14580882	0.0174868	0.04970633	0.0973863	0.0437115
2016	0.3263613	0.12328922	0.14735071	0.0175773	0.05085228	0.1001838	0.0449675
2017	0.3337229	0.12557749	0.14756828	0.017558	0.05181715	0.1023463	0.0459374
2018	0.3371361	0.127788	0.14743127	0.0175508	0.05260682	0.104046	0.0467001
2019	0.3428615	0.12924051	0.14738133	0.0175968	0.05339397	0.1055875	0.0473918
2020	0.3517156	0.13029562	0.14740618	0.0176652	0.05405976	0.1067715	0.0479231

TCAP Phase II
EMPLOYMENT - CORE COMMERCIAL MODEL

YEAR	Health	Lodging	Misc	Government	TCU	Construction	Agriculture
2014	0.15383333	0.0282583	0.060433333	0.125716667	0.05025	0.0664	0.00985
2015	0.15891414	0.0291599	0.061447976	0.126134707	0.05175989	0.070276192	0.0098993
2016	0.16348119	0.029603	0.061765901	0.12602198	0.0530846	0.074973569	0.0099487
2017	0.16699843	0.0301527	0.061699511	0.12741487	0.05383809	0.08067061	0.0099985
2018	0.16977149	0.0306834	0.061673137	0.12891457	0.05466853	0.085894516	0.0100485
2019	0.1722818	0.0310321	0.06183481	0.130641025	0.05538506	0.089765549	0.0100987
2020	0.17421278	0.0312855	0.062074898	0.133938786	0.05624732	0.093612041	0.0101492

TCAP PHASE II: CORE COMMERCIAL MODEL
 USE PER METER (AVERAGE)

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other	Total Building	
Office	552	229	28	9	7	29		6	9	27	8	550	1455
Restaurant	460	890	1485	611	1173	1298		316	18	8	0	292	6551
Retail	485	295	107	18	119	206		127	28	54	4	672	2116
Laundry	42	666	5	1	1	8		0	1	6694	0	6233	13652
Warehouse	425	123	18	5	42	49		62	48	141	42	1366	2321
School	2450	826	140	10	31	257		26	31	5	33	717	4526
College	3469	1714	167	49	86	206		48	217	53	74	2359	8441
Health	2467	1546	248	48	67	191		108	45	339	25	2608	7692
Lodging	1680	3432	474	116	148	577		284	28	894	1	3879	11512
Misc	706	431	87	17	29	72		23	73	28	5	476	1947
Government	2573	1496	131	65	38	108		59	69	35	380	1008	5961
TCU	780	280	25	6	12	22		15	38	2	1224	1294	3697
Construction	531	166	13	0	2	7		5	16	99	0	783	1623
Agriculture	3433	832	141	24	294	653		594	8	866	5677	11463	23985

TCAP PHASE II: GAS PRICE FORECAST
 CORE COMMERCIAL MODEL \$/THERM

Year	Com Price Deflator	C Agriculture Average Price	C Agriculture Marginal Price	C College Average Price	C College Marginal Price	C Construction Average Price	C Construction Marginal Price	C Government Average Price	C Government Marginal Price	C Health Average Price	C Health Marginal Price	C Laundry Average Price	C Laundry Marginal Price	C Lodging Average Price	C Lodging Marginal Price
2014	100.00	0.8131	0.7588	0.8897	0.8344	0.8467	0.7782	0.8263	0.7758	0.8125	0.7573	0.8908	0.8234	0.7784	0.7409
2015	99.45	0.7253	0.6691	0.8064	0.7489	0.7606	0.6896	0.7400	0.6870	0.7248	0.6675	0.8064	0.7374	0.6894	0.6502
2016	101.77	0.6589	0.6053	0.7340	0.6794	0.6920	0.6243	0.6717	0.6220	0.6584	0.6038	0.7354	0.6687	0.6247	0.5878
2017	104.48	0.6842	0.6332	0.7534	0.7016	0.7150	0.6507	0.6950	0.6485	0.6837	0.6318	0.7562	0.6917	0.6516	0.6170
2018	107.21	0.7039	0.6528	0.7731	0.7212	0.7347	0.6704	0.7147	0.6682	0.7033	0.6514	0.7759	0.7113	0.6712	0.6366
2019	109.85	0.7468	0.6958	0.8160	0.7642	0.7777	0.7133	0.7577	0.7112	0.7463	0.6944	0.8188	0.7543	0.7142	0.6796
2020	112.55	0.8485	0.7975	0.9177	0.8658	0.8793	0.8150	0.8593	0.8128	0.8479	0.7961	0.9205	0.8559	0.8159	0.7813

TCAP PHASE II: GAS PRICE FORECAST
 CORE COMMERCIAL MODEL \$/THERM

Year	C Misc		C Office		C Restaurant		C Retail		C School		C TCU		C Warehouse	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	0.7792	0.7366	0.7889	0.7463	0.8657	0.7887	0.7645	0.7303	0.7789	0.7327	0.8699	0.7836	0.7752	0.7396
2015	0.6903	0.6457	0.7006	0.6559	0.7798	0.7007	0.6747	0.6390	0.6892	0.6416	0.7837	0.6953	0.6861	0.6488
2016	0.6255	0.5836	0.6349	0.5931	0.7109	0.6347	0.6110	0.5773	0.6255	0.5797	0.7152	0.6296	0.6215	0.5865
2017	0.6523	0.6131	0.6609	0.6218	0.7337	0.6603	0.6389	0.6073	0.6534	0.6095	0.7384	0.6556	0.6486	0.6158
2018	0.6720	0.6327	0.6806	0.6415	0.7534	0.6799	0.6586	0.6270	0.6730	0.6292	0.7581	0.6753	0.6683	0.6354
2019	0.7149	0.6757	0.7236	0.6845	0.7963	0.7229	0.7016	0.6700	0.7160	0.6722	0.8011	0.7182	0.7113	0.6784
2020	0.8166	0.7774	0.8252	0.7861	0.8980	0.8246	0.8032	0.7716	0.8177	0.7738	0.9027	0.8199	0.8129	0.7801

**TCAP PHASE II: ELECTRIC PRICE FORECAST
 CORE COMMERCIAL MODEL (CENTS/KWH)**

Year	C Agriculture		C College		C Construction		C Government		C Health		C Laundry		C Lodging	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	17.54	17.52	19.20	19.27	18.27	17.97	17.83	17.91	17.53	17.49	19.22	19.01	16.80	17.11
2015	17.57	17.54	19.53	19.63	18.42	18.08	17.92	18.01	17.56	17.50	19.53	19.33	16.70	17.05
2016	18.31	18.28	20.40	20.52	19.23	18.85	18.66	18.78	18.29	18.23	20.44	20.19	17.36	17.75
2017	18.88	18.85	20.79	20.89	19.73	19.38	19.18	19.31	18.87	18.81	20.87	20.59	17.98	18.37
2018	19.61	19.58	21.54	21.63	20.47	20.11	19.91	20.04	19.59	19.54	21.62	21.34	18.70	19.10
2019	20.29	20.26	22.17	22.26	21.13	20.77	20.58	20.71	20.28	20.22	22.25	21.97	19.40	19.79
2020	21.01	20.98	22.72	22.78	21.77	21.45	21.28	21.39	20.99	20.95	22.79	22.52	20.20	20.56

**TCAP PHASE II: GAS PRICE FORECAST
 CORE COMMERCIAL MODEL (CENTS/KWH)**

Year	C Misc		C Office		C Restaurant		C Retail		C School		C TCU		C Warehouse	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	16.81	17.01	17.02	17.23	18.68	18.21	16.50	16.86	16.81	16.92	18.77	18.09	16.73	17.08
2015	16.72	16.93	16.97	17.20	18.89	18.37	16.34	16.75	16.69	16.82	18.98	18.23	16.62	17.01
2016	17.38	17.62	17.64	17.91	19.75	19.17	16.98	17.43	17.38	17.51	19.87	19.01	17.27	17.71
2017	18.00	18.25	18.24	18.52	20.25	19.66	17.63	18.08	18.03	18.15	20.38	19.52	17.90	18.33
2018	18.72	18.98	18.96	19.24	20.99	20.40	18.35	18.81	18.75	18.87	21.12	20.26	18.62	19.06
2019	19.42	19.68	19.66	19.93	21.64	21.05	19.06	19.51	19.45	19.58	21.76	20.92	19.32	19.76
2020	20.22	20.46	20.43	20.69	22.23	21.70	19.89	20.31	20.24	20.36	22.35	21.57	20.13	20.53

San Diego Gas and Electric Company
Triennial Cost Allocation Proceeding
UEC, Equipment Cost and Efficiency Shares

Where Fuel = 1 (gas) and = 2 (electric), and
 Efficiency =1 (stock), =2 (standard), =3 (high) and =4 (premium)

<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
Office	Space_Heat	1	1	0.3046	4.3149	0.65
Office	Space_Heat	1	2	0.2742	4.7464	0.3
Office	Space_Heat	1	3	0.2495	5.1779	0.04
Office	Space_Heat	1	4	0.2248	5.6094	0.01
Office	Space_Heat	2	1	6.2481	3.4519	1
Office	Space_Heat	2	2	5.6233	3.7971	0
Office	Space_Heat	2	3	5.1172	4.1423	0
Office	Space_Heat	2	4	4.6111	4.4875	0
Office	Water_Heat	1	1	0.0474	0.6712	0.4
Office	Water_Heat	1	2	0.0427	0.7384	0.5
Office	Water_Heat	1	3	0.0373	0.8055	0.08
Office	Water_Heat	1	4	0.032	0.8726	0.02
Office	Water_Heat	2	1	0.972	0.537	0.4
Office	Water_Heat	2	2	0.8748	0.5907	0.5
Office	Water_Heat	2	3	0.7654	0.6444	0.08
Office	Water_Heat	2	4	0.6561	0.6981	0.02
Office	Cooking	1	1	0.0346	0.4899	0.65
Office	Cooking	1	2	0.0311	0.5389	0.35
Office	Cooking	2	1	0.7094	0.3919	0.65
Office	Cooking	2	2	0.6385	0.4311	0.35
Office	AC_Compressor	1	1	0.1043	1.4773	0.65
Office	AC_Compressor	1	2	0.0939	1.6251	0.35
Office	AC_Compressor	2	1	2.1392	1.1819	0.65
Office	AC_Compressor	2	2	1.9253	1.3	0.35
Office	Other	1	1	0	0	1
Office	Other	2	1	0	0	0
Restaurant	Space_Heat	1	1	0.1177	1.5841	0.65
Restaurant	Space_Heat	1	2	0.1059	1.7425	0.3
Restaurant	Space_Heat	1	3	0.0964	1.9009	0.04
Restaurant	Space_Heat	1	4	0.0868	2.0593	0.01
Restaurant	Space_Heat	2	1	2.4134	1.2673	1
Restaurant	Space_Heat	2	2	2.1721	1.394	0
Restaurant	Space_Heat	2	3	1.9766	1.5207	0
Restaurant	Space_Heat	2	4	1.7811	1.6474	0
Restaurant	Water_Heat	1	1	0.8666	11.666	0.4
Restaurant	Water_Heat	1	2	0.7799	12.8326	0.5
Restaurant	Water_Heat	1	3	0.6824	13.9992	0.08
Restaurant	Water_Heat	1	4	0.5849	15.1658	0.02
Restaurant	Water_Heat	2	1	17.7736	9.3328	0.4
Restaurant	Water_Heat	2	2	15.9962	10.2661	0.5
Restaurant	Water_Heat	2	3	13.9967	11.1994	0.08
Restaurant	Water_Heat	2	4	11.9972	12.1327	0.02
Restaurant	Cook_top	1	1	1.1985	16.1343	0.65
Restaurant	Cook_top	1	2	1.0787	17.7477	0.35
Restaurant	Cook_top	2	1	24.5811	12.9074	0.65
Restaurant	Cook_top	2	2	22.123	14.1981	0.35
Restaurant	Fryer	1	1	1.0791	14.5274	0.65
Restaurant	Fryer	1	2	0.9712	15.9802	0.35
Restaurant	Fryer	2	1	22.133	11.622	0.65
Restaurant	Fryer	2	2	19.9197	12.7841	0.35
Restaurant	Griddle	1	1	0.9107	12.2603	0.65
Restaurant	Griddle	1	2	0.8197	13.4863	0.35
Restaurant	Griddle	2	1	18.6789	9.8082	0.65
Restaurant	Griddle	2	2	16.8111	10.789	0.35
Restaurant	Other_Cooking	1	1	0.9712	13.0747	0.65
Restaurant	Other_Cooking	1	2	0.8741	14.3822	0.35
Restaurant	Other_Cooking	2	1	19.9197	10.4598	0.65
Restaurant	Other_Cooking	2	2	17.9278	11.5057	0.35
Restaurant	AC_Compressor	1	1	0.2028	2.7306	0.65
Restaurant	AC_Compressor	1	2	0.1826	3.0036	0.35
Restaurant	AC_Compressor	2	1	4.1601	2.1844	0.65

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<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
Restaurant	AC_Compressor	2	2	3.7441	2.4029	0.35
Restaurant	Other	1	1	0	0	1
Restaurant	Other	2	1	0	0	0
Retail	Space_Heat	1	1	0.2455	3.5122	0.65
Retail	Space_Heat	1	2	0.221	3.8634	0.3
Retail	Space_Heat	1	3	0.2011	4.2146	0.04
Retail	Space_Heat	1	4	0.1812	4.5658	0.01
Retail	Space_Heat	2	1	5.0356	2.8097	1
Retail	Space_Heat	2	2	4.532	3.0907	0
Retail	Space_Heat	2	3	4.1241	3.3717	0
Retail	Space_Heat	2	4	3.7163	3.6527	0
Retail	Water_Heat	1	1	0.1093	1.563	0.4
Retail	Water_Heat	1	2	0.0983	1.7193	0.5
Retail	Water_Heat	1	3	0.086	1.8756	0.08
Retail	Water_Heat	1	4	0.0738	2.0319	0.02
Retail	Water_Heat	2	1	2.2409	1.2504	0.4
Retail	Water_Heat	2	2	2.0168	1.3754	0.5
Retail	Water_Heat	2	3	1.7647	1.5004	0.08
Retail	Water_Heat	2	4	1.5126	1.6255	0.02
Retail	Cooking	1	1	0.3079	4.4039	0.65
Retail	Cooking	1	2	0.2771	4.8443	0.35
Retail	Cooking	2	1	6.3142	3.5231	0.65
Retail	Cooking	2	2	5.683	3.875	0.35
Retail	Other	1	1	0	0	1
Retail	Other	2	1	0	0	0
Laundry	Space_Heat	1	1	0.147	1.836	0.65
Laundry	Space_Heat	1	2	0.132	2.02	0.3
Laundry	Space_Heat	1	3	0.12	2.203	0.04
Laundry	Space_Heat	1	4	0.108	2.387	0.01
Laundry	Space_Heat	2	1	3.012	1.469	1
Laundry	Space_Heat	2	2	2.711	1.616	0
Laundry	Space_Heat	2	3	2.467	1.763	0
Laundry	Space_Heat	2	4	2.223	1.909	0
Laundry	Water_Heat	1	1	2.76	34.512	0.4
Laundry	Water_Heat	1	2	2.484	37.963	0.5
Laundry	Water_Heat	1	3	2.174	41.414	0.08
Laundry	Water_Heat	1	4	1.863	44.865	0.02
Laundry	Water_Heat	2	1	56.617	27.609	0.4
Laundry	Water_Heat	2	2	50.955	30.37	0.5
Laundry	Water_Heat	2	3	44.586	33.131	0.08
Laundry	Water_Heat	2	4	38.216	35.892	0.02
Laundry	Drying	1	1	14.937	186.738	0.65
Laundry	Drying	1	2	13.443	205.412	0.35
Laundry	Drying	2	1	306.348	149.39	0.65
Laundry	Drying	2	2	275.713	164.329	0.35
Laundry	Other	1	1	0	0	1
Laundry	Other	2	1	0	0	0
Warehouse	Space_Heat	1	1	0.621	7.909	0.65
Warehouse	Space_Heat	1	2	0.559	8.7	0.3
Warehouse	Space_Heat	1	3	0.509	9.491	0.04
Warehouse	Space_Heat	1	4	0.458	10.282	0.01
Warehouse	Space_Heat	2	1	12.739	6.327	1
Warehouse	Space_Heat	2	2	11.465	6.96	0
Warehouse	Space_Heat	2	3	10.433	7.593	0
Warehouse	Space_Heat	2	4	9.401	8.225	0
Warehouse	Water_Heat	1	1	0.205	2.608	0.4
Warehouse	Water_Heat	1	2	0.184	2.869	0.5
Warehouse	Water_Heat	1	3	0.161	3.13	0.08
Warehouse	Water_Heat	1	4	0.138	3.39	0.02
Warehouse	Water_Heat	2	1	4.2	2.086	0.4
Warehouse	Water_Heat	2	2	3.78	2.295	0.5
Warehouse	Water_Heat	2	3	3.308	2.504	0.08
Warehouse	Water_Heat	2	4	2.835	2.712	0.02
Warehouse	Engine	1	1	8.884	113.127	0.65
Warehouse	Engine	1	2	7.995	124.44	0.35
Warehouse	Engine	2	1	182.207	90.502	0.65
Warehouse	Engine	2	2	163.986	99.552	0.35
Warehouse	Other	1	1	0	0	1
Warehouse	Other	2	1	0	0	0
School	Space_Heat	1	1	0.092	1.225	0.65
School	Space_Heat	1	2	0.083	1.348	0.3

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<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
School	Space_Heat	1	3	0.076	1.471	0.04
School	Space_Heat	1	4	0.068	1.593	0.01
School	Space_Heat	2	1	1.895	0.98	1
School	Space_Heat	2	2	1.705	1.078	0
School	Space_Heat	2	3	1.552	1.176	0
School	Space_Heat	2	4	1.398	1.274	0
School	Water_Heat	1	1	0.123	1.635	0.4
School	Water_Heat	1	2	0.111	1.799	0.5
School	Water_Heat	1	3	0.097	1.962	0.08
School	Water_Heat	1	4	0.083	2.126	0.02
School	Water_Heat	2	1	2.528	1.308	0.4
School	Water_Heat	2	2	2.276	1.439	0.5
School	Water_Heat	2	3	1.991	1.57	0.08
School	Water_Heat	2	4	1.707	1.701	0.02
School	Cook_top	1	1	0.046	0.61	0.65
School	Cook_top	1	2	0.041	0.671	0.35
School	Cook_top	2	1	0.943	0.488	0.65
School	Cook_top	2	2	0.849	0.537	0.35
School	Fryer	1	1	0.046	0.612	0.65
School	Fryer	1	2	0.041	0.673	0.35
School	Fryer	2	1	0.946	0.489	0.65
School	Fryer	2	2	0.851	0.538	0.35
School	Griddle	1	1	0.046	0.612	0.65
School	Griddle	1	2	0.041	0.673	0.35
School	Griddle	2	1	0.946	0.489	0.65
School	Griddle	2	2	0.851	0.538	0.35
School	Other_Cooking	1	1	0.046	0.61	0.65
School	Other_Cooking	1	2	0.041	0.671	0.35
School	Other_Cooking	2	1	0.943	0.488	0.65
School	Other_Cooking	2	2	0.849	0.537	0.35
School	AC_Compressor	1	1	0.065	0.866	0.65
School	AC_Compressor	1	2	0.059	0.953	0.35
School	AC_Compressor	2	1	1.339	0.693	0.65
School	AC_Compressor	2	2	1.205	0.762	0.35
School	Other	1	1	0	0	1
School	Other	2	1	0	0	0
College	Space_Heat	1	1	0.26643	3.14441	0.65
College	Space_Heat	1	2	0.23979	3.45885	0.3
College	Space_Heat	1	3	0.21821	3.77329	0.04
College	Space_Heat	1	4	0.19663	4.08773	0.01
College	Space_Heat	2	1	5.46443	2.51553	1
College	Space_Heat	2	2	4.91799	2.76708	0
College	Space_Heat	2	3	4.47537	3.01863	0
College	Space_Heat	2	4	4.03275	3.27018	0
College	Water_Heat	1	1	0.28715	3.38894	0.4
College	Water_Heat	1	2	0.25844	3.72784	0.5
College	Water_Heat	1	3	0.22613	4.06673	0.08
College	Water_Heat	1	4	0.19383	4.40563	0.02
College	Water_Heat	2	1	5.88939	2.71116	0.4
College	Water_Heat	2	2	5.30045	2.98227	0.5
College	Water_Heat	2	3	4.6379	3.25339	0.08
College	Water_Heat	2	4	3.97534	3.5245	0.02
College	Cook_top	1	1	0.0486	0.57358	0.65
College	Cook_top	1	2	0.04374	0.63093	0.35
College	Cook_top	2	1	0.99678	0.45886	0.65
College	Cook_top	2	2	0.8971	0.50475	0.35
College	Fryer	1	1	0.04857	0.57322	0.65
College	Fryer	1	2	0.04371	0.63055	0.35
College	Fryer	2	1	0.99616	0.45858	0.65
College	Fryer	2	2	0.89655	0.50444	0.35
College	Griddle	1	1	0.04857	0.57322	0.65
College	Griddle	1	2	0.04371	0.63055	0.35
College	Griddle	2	1	0.99616	0.45858	0.65
College	Griddle	2	2	0.89655	0.50444	0.35
College	Other_Cooking	1	1	0.0486	0.57358	0.65
College	Other_Cooking	1	2	0.04374	0.63093	0.35
College	Other_Cooking	2	1	0.99678	0.45886	0.65
College	Other_Cooking	2	2	0.8971	0.50475	0.35
College	AC_Compressor	1	1	0.11819	1.3949	0.65
College	AC_Compressor	1	2	0.10637	1.53439	0.35
College	AC_Compressor	2	1	2.4241	1.11592	0.65

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<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
College	AC_Compressor	2	2	2.18169	1.22752	0.35
College	Other	1	1	0	0	1
College	Other	2	1	0	0	0
Health	Space_Heat	1	1	0.06894	0.8825	0.65
Health	Space_Heat	1	2	0.06205	0.97075	0.3
Health	Space_Heat	1	3	0.05646	1.059	0.04
Health	Space_Heat	1	4	0.05088	1.14725	0.01
Health	Space_Heat	2	1	1.41395	0.706	1
Health	Space_Heat	2	2	1.27255	0.7766	0
Health	Space_Heat	2	3	1.15802	0.8472	0
Health	Space_Heat	2	4	1.04349	0.9178	0
Health	Water_Heat	1	1	0.41709	5.33917	0.4
Health	Water_Heat	1	2	0.37538	5.87309	0.5
Health	Water_Heat	1	3	0.32846	6.407	0.08
Health	Water_Heat	1	4	0.28154	6.94092	0.02
Health	Water_Heat	2	1	8.55444	4.27134	0.4
Health	Water_Heat	2	2	7.699	4.69847	0.5
Health	Water_Heat	2	3	6.73662	5.1256	0.08
Health	Water_Heat	2	4	5.77425	5.55274	0.02
Health	Cook_top	1	1	0.26358	3.37409	0.65
Health	Cook_top	1	2	0.23722	3.7115	0.35
Health	Cook_top	2	1	5.40598	2.69927	0.65
Health	Cook_top	2	2	4.86538	2.9692	0.35
Health	Fryer	1	1	0.26358	3.37409	0.65
Health	Fryer	1	2	0.23722	3.7115	0.35
Health	Fryer	2	1	5.40598	2.69927	0.65
Health	Fryer	2	2	4.86538	2.9692	0.35
Health	Griddle	1	1	0.26358	3.37409	0.65
Health	Griddle	1	2	0.23722	3.7115	0.35
Health	Griddle	2	1	5.40598	2.69927	0.65
Health	Griddle	2	2	4.86538	2.9692	0.35
Health	Other_Cooking	1	1	0.02636	0.33743	0.65
Health	Other_Cooking	1	2	0.02372	0.37118	0.35
Health	Other_Cooking	2	1	0.54064	0.26995	0.65
Health	Other_Cooking	2	2	0.48657	0.29694	0.35
Health	Drying	1	1	0.14598	1.86871	0.65
Health	Drying	1	2	0.13138	2.05558	0.35
Health	Drying	2	1	2.99405	1.49497	0.65
Health	Drying	2	2	2.69465	1.64446	0.35
Health	AC_Compressor	1	1	0.11386	1.45749	0.65
Health	AC_Compressor	1	2	0.10247	1.60324	0.35
Health	AC_Compressor	2	1	2.3352	1.16599	0.65
Health	AC_Compressor	2	2	2.10168	1.28259	0.35
Health	Other	1	1	0	0	1
Health	Other	2	1	0	0	0
Lodging	Space_Heat	1	1	0.38698	4.85892	0.65
Lodging	Space_Heat	1	2	0.3483	5.3448	0.3
Lodging	Space_Heat	1	3	0.3169	5.8307	0.04
Lodging	Space_Heat	1	4	0.2856	6.3166	0.01
Lodging	Space_Heat	2	1	7.9369	3.8871	1
Lodging	Space_Heat	2	2	7.1432	4.2759	
Lodging	Space_Heat	2	3	6.5003	4.6646	
Lodging	Space_Heat	2	4	5.8574	5.0533	
Lodging	Water_Heat	1	1	0.6901	8.6651	0.4
Lodging	Water_Heat	1	2	0.6211	9.5317	0.5
Lodging	Water_Heat	1	3	0.5435	10.3982	0.08
Lodging	Water_Heat	1	4	0.4658	11.2647	0.02
Lodging	Water_Heat	2	1	14.1542	6.9321	0.4
Lodging	Water_Heat	2	2	12.7388	7.6253	0.5
Lodging	Water_Heat	2	3	11.1465	8.3185	0.08
Lodging	Water_Heat	2	4	9.5541	9.0118	0.02
Lodging	Cook_top	1	1	0.321	4.0305	0.65
Lodging	Cook_top	1	2	0.2889	4.4335	0.35
Lodging	Cook_top	2	1	6.5837	3.2244	0.65
Lodging	Cook_top	2	2	5.9253	3.5468	0.35
Lodging	Fryer	1	1	0.4183	5.2524	0.65
Lodging	Fryer	1	2	0.3765	5.7777	0.35
Lodging	Fryer	2	1	8.5797	4.2019	0.65
Lodging	Fryer	2	2	7.7217	4.6221	0.35
Lodging	Griddle	1	1	0.4183	5.2524	0.65
Lodging	Griddle	1	2	0.3765	5.7777	0.35

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<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
Lodging	Griddle	2	1	8.5797	4.2019	0.65
Lodging	Griddle	2	2	7.7217	4.6221	0.35
Lodging	Other_Cooking	1	1	0.041	0.5148	0.65
Lodging	Other_Cooking	1	2	0.0369	0.5663	0.35
Lodging	Other_Cooking	2	1	0.8409	0.4118	0.65
Lodging	Other_Cooking	2	2	0.7568	0.453	0.35
Lodging	Drying	1	1	0.1725	2.1663	0.65
Lodging	Drying	1	2	0.1553	2.3829	0.35
Lodging	Drying	2	1	3.5386	1.733	0.65
Lodging	Drying	2	2	3.1847	1.9063	0.35
Lodging	AC_Compressor	1	1	0.057	0.7157	0.65
Lodging	AC_Compressor	1	2	0.0513	0.7872	0.35
Lodging	AC_Compressor	2	1	1.169	0.5725	0.65
Lodging	AC_Compressor	2	2	1.0521	0.6298	0.35
Lodging	Other	1	1	0	0	1
Lodging	Other	2	1	0	0	0
Misc	Space_Heat	1	1	0.1469	2.1455	0.65
Misc	Space_Heat	1	2	0.1322	2.36	0.3
Misc	Space_Heat	1	3	0.1203	2.5746	0.04
Misc	Space_Heat	1	4	0.1084	2.7891	0.01
Misc	Space_Heat	2	1	3.0121	1.7164	1
Misc	Space_Heat	2	2	2.7109	1.888	0
Misc	Space_Heat	2	3	2.4669	2.0597	0
Misc	Space_Heat	2	4	2.2229	2.2313	0
Misc	Water_Heat	1	1	0.2013	2.9412	0.4
Misc	Water_Heat	1	2	0.1812	3.2354	0.5
Misc	Water_Heat	1	3	0.1585	3.5295	0.08
Misc	Water_Heat	1	4	0.1359	3.8236	0.02
Misc	Water_Heat	2	1	4.1292	2.353	0.4
Misc	Water_Heat	2	2	3.7163	2.5883	0.5
Misc	Water_Heat	2	3	3.2518	2.8236	0.08
Misc	Water_Heat	2	4	2.7872	3.0589	0.02
Misc	Cook_top	1	1	0.043	0.6282	0.65
Misc	Cook_top	1	2	0.0387	0.691	0.35
Misc	Cook_top	2	1	0.8819	0.5025	0.65
Misc	Cook_top	2	2	0.7937	0.5528	0.35
Misc	Fryer	1	1	0.043	0.6285	0.65
Misc	Fryer	1	2	0.0387	0.6913	0.35
Misc	Fryer	2	1	0.8823	0.5028	0.65
Misc	Fryer	2	2	0.7941	0.5531	0.35
Misc	Griddle	1	1	0.043	0.6285	0.65
Misc	Griddle	1	2	0.0387	0.6913	0.35
Misc	Griddle	2	1	0.8823	0.5028	0.65
Misc	Griddle	2	2	0.7941	0.5531	0.35
Misc	Other_Cooking	1	1	0.043	0.6282	0.65
Misc	Other_Cooking	1	2	0.0387	0.691	0.35
Misc	Other_Cooking	2	1	0.8819	0.5025	0.65
Misc	Other_Cooking	2	2	0.7937	0.5528	0.35
Misc	AC_Compressor	1	1	0.1322	1.9306	0.65
Misc	AC_Compressor	1	2	0.1189	2.1237	0.35
Misc	AC_Compressor	2	1	2.7104	1.5445	0.65
Misc	AC_Compressor	2	2	2.4394	1.6989	0.35
Misc	Other	1	1	0	0	1
Misc	Other	2	1	0	0	0
Government	Space_Heat	1	1	0.3046	3.815	0.65
Government	Space_Heat	1	2	0.2742	4.1965	0.3
Government	Space_Heat	1	3	0.2495	4.578	0.04
Government	Space_Heat	1	4	0.2248	4.9595	0.01
Government	Space_Heat	2	1	6.2481	3.052	1
Government	Space_Heat	2	2	5.6233	3.3572	0
Government	Space_Heat	2	3	5.1172	3.6624	0
Government	Space_Heat	2	4	4.6111	3.9676	0
Government	Water_Heat	1	1	0.0474	0.5935	0.4
Government	Water_Heat	1	2	0.0427	0.6528	0.5
Government	Water_Heat	1	3	0.0373	0.7122	0.08
Government	Water_Heat	1	4	0.032	0.7715	0.02
Government	Water_Heat	2	1	0.972	0.4748	0.4
Government	Water_Heat	2	2	0.8748	0.5222	0.5
Government	Water_Heat	2	3	0.7654	0.5697	0.08
Government	Water_Heat	2	4	0.6561	0.6172	0.02
Government	Cook_top	1	1	0.0346	0.4333	0.65

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<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
Government	Cook_top	1	2	0.0311	0.4766	0.35
Government	Cook_top	2	1	0.7096	0.3466	0.65
Government	Cook_top	2	2	0.6387	0.3813	0.35
Government	Fryer	1	1	0.0346	0.4332	0.65
Government	Fryer	1	2	0.0311	0.4765	0.35
Government	Fryer	2	1	0.7094	0.3465	0.65
Government	Fryer	2	2	0.6385	0.3812	0.35
Government	Griddle	1	1	0.0346	0.4332	0.65
Government	Griddle	1	2	0.0311	0.4765	0.35
Government	Griddle	2	1	0.7094	0.3465	0.65
Government	Griddle	2	2	0.6385	0.3812	0.35
Government	Other_Cooking	1	1	0.0346	0.4333	0.65
Government	Other_Cooking	1	2	0.0311	0.4766	0.35
Government	Other_Cooking	2	1	0.7096	0.3466	0.65
Government	Other_Cooking	2	2	0.6387	0.3813	0.35
Government	AC_Compressor	1	1	0.1043	1.3062	0.65
Government	AC_Compressor	1	2	0.0939	1.4368	0.35
Government	AC_Compressor	2	1	2.1392	1.0449	0.65
Government	AC_Compressor	2	2	1.9253	1.1494	0.35
Government	Other	1	1	0	0	1
Government	Other	2	1	0	0	0
TCU	Space_Heat	1	1	0.1469	1.8457	0.65
TCU	Space_Heat	1	2	0.1322	2.0303	0.3
TCU	Space_Heat	1	3	0.1203	2.2149	0.04
TCU	Space_Heat	1	4	0.1084	2.3995	0.01
TCU	Space_Heat	2	1	3.0121	1.4766	1
TCU	Space_Heat	2	2	2.7109	1.6242	0
TCU	Space_Heat	2	3	2.4669	1.7719	0
TCU	Space_Heat	2	4	2.2229	1.9196	0
TCU	Water_Heat	1	1	0.2013	2.5303	0.4
TCU	Water_Heat	1	2	0.1812	2.7833	0.5
TCU	Water_Heat	1	3	0.1585	3.0364	0.08
TCU	Water_Heat	1	4	0.1359	3.2894	0.02
TCU	Water_Heat	2	1	4.1292	2.0243	0.4
TCU	Water_Heat	2	2	3.7163	2.2267	0.5
TCU	Water_Heat	2	3	3.2518	2.4291	0.08
TCU	Water_Heat	2	4	2.7872	2.6315	0.02
TCU	Engine	1	1	2.4409	30.6768	0.65
TCU	Engine	1	2	2.1968	33.7445	0.35
TCU	Engine	2	1	50.0617	24.5415	0.65
TCU	Engine	2	2	45.0556	26.9956	0.35
TCU	Other	1	1	0	0	1
TCU	Other	2	1	0	0	0
Construction	Space_Heat	1	1	0.1469	2.2951	0.65
Construction	Space_Heat	1	2	0.1322	2.5246	0.3
Construction	Space_Heat	1	3	0.1203	2.7542	0.04
Construction	Space_Heat	1	4	0.1084	2.9837	0.01
Construction	Space_Heat	2	1	3.0121	1.8361	1
Construction	Space_Heat	2	2	2.7109	2.0197	0
Construction	Space_Heat	2	3	2.4669	2.2033	0
Construction	Space_Heat	2	4	2.2229	2.3869	0
Construction	Water_Heat	1	1	0.2013	3.1464	0.4
Construction	Water_Heat	1	2	0.1812	3.461	0.5
Construction	Water_Heat	1	3	0.1585	3.7757	0.08
Construction	Water_Heat	1	4	0.1359	4.0903	0.02
Construction	Water_Heat	2	1	4.1292	2.5171	0.4
Construction	Water_Heat	2	2	3.7163	2.7688	0.5
Construction	Water_Heat	2	3	3.2518	3.0205	0.08
Construction	Water_Heat	2	4	2.7872	3.2722	0.02
Construction	Other	1	1	0	0	1
Construction	Other	2	1	0	0	0
Agriculture	Space_Heat	1	1	0.1469	1.6583	0.65
Agriculture	Space_Heat	1	2	0.1322	1.8242	0.3
Agriculture	Space_Heat	1	3	0.1203	1.99	0.04
Agriculture	Space_Heat	1	4	0.1084	2.1558	0.01
Agriculture	Space_Heat	2	1	3.0121	1.3267	1
Agriculture	Space_Heat	2	2	2.7109	1.4593	0
Agriculture	Space_Heat	2	3	2.4669	1.592	0
Agriculture	Space_Heat	2	4	2.2229	1.7247	0
Agriculture	Water_Heat	1	1	0.2013	2.2734	0.4
Agriculture	Water_Heat	1	2	0.1812	2.5008	0.5

<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>uec</u> (therm/SqFt)	<u>Equipment Cost</u>	<u>efficiency shares</u>
Agriculture	Water_Heat	1	3	0.1585	2.7281	0.08
Agriculture	Water_Heat	1	4	0.1359	2.9554	0.02
Agriculture	Water_Heat	2	1	4.1292	1.8187	0.4
Agriculture	Water_Heat	2	2	3.7163	2.0006	0.5
Agriculture	Water_Heat	2	3	3.2518	2.1825	0.08
Agriculture	Water_Heat	2	4	2.7872	2.3644	0.02
Agriculture	Drying	1	1	0.2013	2.2734	0.65
Agriculture	Drying	1	2	0.1812	2.5008	0.35
Agriculture	Drying	2	1	4.1292	1.8187	0.65
Agriculture	Drying	2	2	3.7163	2.0006	0.35
Agriculture	Engine	1	1	0.8657	9.7757	0.65
Agriculture	Engine	1	2	0.7791	10.7533	0.35
Agriculture	Engine	2	1	17.7557	7.8206	0.65
Agriculture	Engine	2	2	15.9802	8.6026	0.35
Agriculture	Other	1	1	0	0	1
Agriculture	Other	2	1	0	0	0

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Fuel Market Share

<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Share</u>
Office	Space_Heat	1	0.8555
Office	Space_Heat	2	0.1445
Office	Water_Heat	1	0.16581
Office	Water_Heat	2	0.83419
Office	Cooking	1	0.02069
Office	Cooking	2	0.97931
Office	AC_Compressor	1	0.06
Office	AC_Compressor	2	0.94
Office	Other	1	1
Restaurant	Space_Heat	1	0.59046
Restaurant	Space_Heat	2	0.40954
Restaurant	Water_Heat	1	0.90204
Restaurant	Water_Heat	2	0.09796
Restaurant	Cook_top	1	0.97733
Restaurant	Cook_top	2	0.02267
Restaurant	Fryer	1	0.90535
Restaurant	Fryer	2	0.09465
Restaurant	Griddle	1	0.97038
Restaurant	Griddle	2	0.02962
Restaurant	Other_Cooking	1	0.66
Restaurant	Other_Cooking	2	0.34
Restaurant	AC_Compressor	1	0.06
Restaurant	AC_Compressor	2	0.94
Restaurant	Other	1	1
Retail	Space_Heat	1	0.51751
Retail	Space_Heat	2	0.48249
Retail	Water_Heat	1	0.31008
Retail	Water_Heat	2	0.68992
Retail	Cooking	1	0.09367
Retail	Cooking	2	0.90633
Retail	Other	1	1
Laundry	Space_Heat	1	0.57692
Laundry	Space_Heat	2	0.42308
Laundry	Water_Heat	1	0.67647
Laundry	Water_Heat	2	0.32353
Laundry	Drying	1	0.6
Laundry	Drying	2	0.4
Laundry	Other	1	1
Warehouse	Space_Heat	1	0.43723
Warehouse	Space_Heat	2	0.56277
Warehouse	Water_Heat	1	0.07159
Warehouse	Water_Heat	2	0.92841
Warehouse	Engine	1	0.06
Warehouse	Engine	2	0.94
Warehouse	Other	1	1
School	Space_Heat	1	0.75284
School	Space_Heat	2	0.24716
School	Water_Heat	1	0.75843
School	Water_Heat	2	0.24157
School	Cook_top	1	0.42857
School	Cook_top	2	0.57143
School	Fryer	1	0.42857
School	Fryer	2	0.57143
School	Griddle	1	0.42857
School	Griddle	2	0.57143
School	Other_Cooking	1	0.42857
School	Other_Cooking	2	0.57143
School	AC_Compressor	1	0.06
School	AC_Compressor	2	0.94
School	Other	1	1
College	Space_Heat	1	0.33028
College	Space_Heat	2	0.66972
College	Water_Heat	1	0.81675

<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Share</u>
College	Water_Heat	2	0.18325
College	Cook_top	1	0.04801
College	Cook_top	2	0.95199
College	Fryer	1	0.04801
College	Fryer	2	0.95199
College	Griddle	1	0.04801
College	Griddle	2	0.95199
College	Other_Cooking	1	0.04801
College	Other_Cooking	2	0.95199
College	AC_Compressor	1	0.06
College	AC_Compressor	2	0.94
College	Other	1	1
Health	Space_Heat	1	0.66026
Health	Space_Heat	2	0.33974
Health	Water_Heat	1	0.8242
Health	Water_Heat	2	0.1758
Health	Cook_top	1	0.09487
Health	Cook_top	2	0.90513
Health	Fryer	1	0.09487
Health	Fryer	2	0.90513
Health	Griddle	1	0.09487
Health	Griddle	2	0.90513
Health	Other_Cooking	1	0.66
Health	Other_Cooking	2	0.34
Health	Drying	1	0.6
Health	Drying	2	0.4
Health	AC_Compressor	1	0.06
Health	AC_Compressor	2	0.94
Health	Other	1	1
Lodging	Space_Heat	1	0.27151
Lodging	Space_Heat	2	0.72849
Lodging	Water_Heat	1	0.98948
Lodging	Water_Heat	2	0.01052
Lodging	Cook_top	1	0.44958
Lodging	Cook_top	2	0.55042
Lodging	Fryer	1	0.44958
Lodging	Fryer	2	0.55042
Lodging	Griddle	1	0.44958
Lodging	Griddle	2	0.55042
Lodging	Other_Cooking	1	0.44958
Lodging	Other_Cooking	2	0.55042
Lodging	Drying	1	0.6
Lodging	Drying	2	0.4
Lodging	AC_Compressor	1	0.06
Lodging	AC_Compressor	2	0.94
Lodging	Other	1	1
Misc	Space_Heat	1	0.54964
Misc	Space_Heat	2	0.45036
Misc	Water_Heat	1	0.55691
Misc	Water_Heat	2	0.44309
Misc	Cook_top	1	0.97733
Misc	Cook_top	2	0.02267
Misc	Fryer	1	0.90535
Misc	Fryer	2	0.09465
Misc	Griddle	1	0.97038
Misc	Griddle	2	0.02962
Misc	Other_Cooking	1	0.66
Misc	Other_Cooking	2	0.34
Misc	AC_Compressor	1	0.06
Misc	AC_Compressor	2	0.94
Misc	Other	1	1
Government	Space_Heat	1	0.8555
Government	Space_Heat	2	0.1445
Government	Water_Heat	1	0.16581
Government	Water_Heat	2	0.83419
Government	Cook_top	1	0.97733
Government	Cook_top	2	0.02267
Government	Fryer	1	0.90535
Government	Fryer	2	0.09465
Government	Griddle	1	0.97038

<u>Business Types</u>	<u>End Use</u>	<u>Fuel</u>	<u>Share</u>
Government	Griddle	2	0.02962
Government	Other_Cooking	1	0.66
Government	Other_Cooking	2	0.34
Government	AC_Compressor	1	0.06
Government	AC_Compressor	2	0.94
Government	Other	1	1
TCU	Space_Heat	1	0.57692
TCU	Space_Heat	2	0.42308
TCU	Water_Heat	1	0.67647
TCU	Water_Heat	2	0.32353
TCU	Engine	1	0.06
TCU	Engine	2	0.94
TCU	Other	1	1
Construction	Space_Heat	1	0.57692
Construction	Space_Heat	2	0.42308
Construction	Water_Heat	1	0.67647
Construction	Water_Heat	2	0.32353
Construction	Other	1	1
Agriculture	Space_Heat	1	0.57692
Agriculture	Space_Heat	2	0.42308
Agriculture	Water_Heat	1	0.67647
Agriculture	Water_Heat	2	0.32353
Agriculture	Drying	1	1
Agriculture	Drying	2	0
Agriculture	Engine	1	0.06
Agriculture	Engine	2	0.94
Agriculture	Other	1	1
Grocery	Space_Heat	1	0.74652
Grocery	Space_Heat	2	0.25348
Grocery	Water_Heat	1	0.70846
Grocery	Water_Heat	2	0.29154
Grocery	Cook_top	1	0.35627
Grocery	Cook_top	2	0.64373
Grocery	Fryer	1	0.35627
Grocery	Fryer	2	0.64373
Grocery	Griddle	1	0.35627
Grocery	Griddle	2	0.64373
Grocery	Other_Cooking	1	0.35627
Grocery	Other_Cooking	2	0.64373
Grocery	AC_Compressor	1	0.06
Grocery	AC_Compressor	2	0.94
Grocery	Other	1	1

**San Diego Gas and Electric Company
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 Efficiency Shares**

bname	nname	fname	Stock	Standard	High	Premium
Agriculture	Drying	Electric	0.65	0.35	N/A	N/A
Agriculture	Drying	Natural_Gas	0.65	0.35	N/A	N/A
Agriculture	Engine	Electric	0.65	0.35	N/A	N/A
Agriculture	Engine	Natural_Gas	0.65	0.35	N/A	N/A
Agriculture	Other	Natural_Gas	1	N/A	N/A	N/A
Agriculture	Space_Heat	Electric	1	N/A	N/A	N/A
Agriculture	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Agriculture	Water_Heat	Electric	0.4	0.5	0.08	0.02
Agriculture	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
College	AC_Compressor	Electric	0.65	0.35	N/A	N/A
College	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
College	Cook_top	Electric	0.65	0.35	N/A	N/A
College	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
College	Fryer	Electric	0.65	0.35	N/A	N/A
College	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
College	Griddle	Electric	0.65	0.35	N/A	N/A
College	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
College	Other	Natural_Gas	1	N/A	N/A	N/A
College	Other_Cooking	Electric	0.65	0.35	N/A	N/A
College	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
College	Space_Heat	Electric	1	N/A	N/A	N/A
College	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
College	Water_Heat	Electric	0.4	0.5	0.08	0.02
College	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Construction	Other	Natural_Gas	1	N/A	N/A	N/A
Construction	Space_Heat	Electric	1	N/A	N/A	N/A
Construction	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Construction	Water_Heat	Electric	0.4	0.5	0.08	0.02
Construction	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Government	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Government	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Government	Cook_top	Electric	0.65	0.35	N/A	N/A

bname	nname	fname	Stock	Standard	High	Premium
Government	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
Government	Fryer	Electric	0.65	0.35	N/A	N/A
Government	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Government	Griddle	Electric	0.65	0.35	N/A	N/A
Government	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Government	Other	Natural_Gas	1	N/A	N/A	N/A
Government	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Government	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Government	Space_Heat	Electric	1	N/A	N/A	N/A
Government	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Government	Water_Heat	Electric	0.4	0.5	0.08	0.02
Government	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Grocery	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Grocery	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Grocery	Cook_top	Electric	0.65	0.35	N/A	N/A
Grocery	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
Grocery	Fryer	Electric	0.65	0.35	N/A	N/A
Grocery	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Grocery	Griddle	Electric	0.65	0.35	N/A	N/A
Grocery	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Grocery	Other	Natural_Gas	1	N/A	N/A	N/A
Grocery	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Grocery	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Grocery	Space_Heat	Electric	1	N/A	N/A	N/A
Grocery	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Grocery	Water_Heat	Electric	0.4	0.5	0.08	0.02
Grocery	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Health	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Health	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Health	Cook_top	Electric	0.65	0.35	N/A	N/A
Health	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
Health	Drying	Electric	0.65	0.35	N/A	N/A
Health	Drying	Natural_Gas	0.65	0.35	N/A	N/A
Health	Fryer	Electric	0.65	0.35	N/A	N/A
Health	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Health	Griddle	Electric	0.65	0.35	N/A	N/A

bname	nname	fname	Stock	Standard	High	Premium
Health	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Health	Other	Natural_Gas	1	N/A	N/A	N/A
Health	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Health	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Health	Space_Heat	Electric	1	N/A	N/A	N/A
Health	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Health	Water_Heat	Electric	0.4	0.5	0.08	0.02
Health	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Laundry	Drying	Electric	0.65	0.35	N/A	N/A
Laundry	Drying	Natural_Gas	0.65	0.35	N/A	N/A
Laundry	Other	Natural_Gas	1	N/A	N/A	N/A
Laundry	Space_Heat	Electric	1	N/A	N/A	N/A
Laundry	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Laundry	Water_Heat	Electric	0.4	0.5	0.08	0.02
Laundry	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Lodging	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Lodging	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Cook_top	Electric	0.65	0.35	N/A	N/A
Lodging	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Drying	Electric	0.65	0.35	N/A	N/A
Lodging	Drying	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Fryer	Electric	0.65	0.35	N/A	N/A
Lodging	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Griddle	Electric	0.65	0.35	N/A	N/A
Lodging	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Other	Natural_Gas	1	N/A	N/A	N/A
Lodging	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Lodging	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Lodging	Space_Heat	Electric	1	N/A	N/A	N/A
Lodging	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Lodging	Water_Heat	Electric	0.4	0.5	0.08	0.02
Lodging	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Misc	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Misc	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Misc	Cook_top	Electric	0.65	0.35	N/A	N/A
Misc	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A

bname	nname	fname	Stock	Standard	High	Premium
Misc	Fryer	Electric	0.65	0.35	N/A	N/A
Misc	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Misc	Griddle	Electric	0.65	0.35	N/A	N/A
Misc	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Misc	Other	Natural_Gas	1	N/A	N/A	N/A
Misc	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Misc	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Misc	Space_Heat	Electric	1	N/A	N/A	N/A
Misc	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Misc	Water_Heat	Electric	0.4	0.5	0.08	0.02
Misc	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Office	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Office	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Office	Cooking	Electric	0.65	0.35	N/A	N/A
Office	Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Office	Other	Natural_Gas	1	N/A	N/A	N/A
Office	Space_Heat	Electric	1	N/A	N/A	N/A
Office	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Office	Water_Heat	Electric	0.4	0.5	0.08	0.02
Office	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Restaurant	AC_Compressor	Electric	0.65	0.35	N/A	N/A
Restaurant	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
Restaurant	Cook_top	Electric	0.65	0.35	N/A	N/A
Restaurant	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
Restaurant	Fryer	Electric	0.65	0.35	N/A	N/A
Restaurant	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
Restaurant	Griddle	Electric	0.65	0.35	N/A	N/A
Restaurant	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
Restaurant	Other	Natural_Gas	1	N/A	N/A	N/A
Restaurant	Other_Cooking	Electric	0.65	0.35	N/A	N/A
Restaurant	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Restaurant	Space_Heat	Electric	1	N/A	N/A	N/A
Restaurant	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Restaurant	Water_Heat	Electric	0.4	0.5	0.08	0.02
Restaurant	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Retail	Cooking	Electric	0.65	0.35	N/A	N/A

bname	nname	fname	Stock	Standard	High	Premium
Retail	Cooking	Natural_Gas	0.65	0.35	N/A	N/A
Retail	Other	Natural_Gas	1	N/A	N/A	N/A
Retail	Space_Heat	Electric	1	N/A	N/A	N/A
Retail	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Retail	Water_Heat	Electric	0.4	0.5	0.08	0.02
Retail	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
School	AC_Compressor	Electric	0.65	0.35	N/A	N/A
School	AC_Compressor	Natural_Gas	0.65	0.35	N/A	N/A
School	Cook_top	Electric	0.65	0.35	N/A	N/A
School	Cook_top	Natural_Gas	0.65	0.35	N/A	N/A
School	Fryer	Electric	0.65	0.35	N/A	N/A
School	Fryer	Natural_Gas	0.65	0.35	N/A	N/A
School	Griddle	Electric	0.65	0.35	N/A	N/A
School	Griddle	Natural_Gas	0.65	0.35	N/A	N/A
School	Other	Natural_Gas	1	N/A	N/A	N/A
School	Other_Cooking	Electric	0.65	0.35	N/A	N/A
School	Other_Cooking	Natural_Gas	0.65	0.35	N/A	N/A
School	Space_Heat	Electric	1	N/A	N/A	N/A
School	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
School	Water_Heat	Electric	0.4	0.5	0.08	0.02
School	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
TCU	Engine	Electric	0.65	0.35	N/A	N/A
TCU	Engine	Natural_Gas	0.65	0.35	N/A	N/A
TCU	Other	Natural_Gas	1	N/A	N/A	N/A
TCU	Space_Heat	Electric	1	N/A	N/A	N/A
TCU	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
TCU	Water_Heat	Electric	0.4	0.5	0.08	0.02
TCU	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02
Warehouse	Engine	Electric	0.65	0.35	N/A	N/A
Warehouse	Engine	Natural_Gas	0.65	0.35	N/A	N/A
Warehouse	Other	Natural_Gas	1	N/A	N/A	N/A
Warehouse	Space_Heat	Electric	1	N/A	N/A	N/A
Warehouse	Space_Heat	Natural_Gas	0.65	0.3	0.04	0.01
Warehouse	Water_Heat	Electric	0.4	0.5	0.08	0.02
Warehouse	Water_Heat	Natural_Gas	0.4	0.5	0.08	0.02

**San Diego Gas and Electric Company
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Saturation Rate**

Business Type	End Use	saturation
Office	Space_Heat	0.872
Office	Water_Heat	0.7
Office	Cooking	0.082
Office	AC_Compressor	0.931
Office	Other	1
Restaurant	Space_Heat	0.818
Restaurant	Water_Heat	0.96
Restaurant	Cook_top	0.75
Restaurant	Fryer	0.729
Restaurant	Griddle	0.574
Restaurant	Other_Cooking	0.9
Restaurant	AC_Compressor	0.871
Restaurant	Other	1
Retail	Space_Heat	0.771
Retail	Water_Heat	0.62
Retail	Cooking	0.245
Retail	Other	1
Laundry	Space_Heat	0.72
Laundry	Water_Heat	1
Laundry	Drying	1
Laundry	Other	1
Warehouse	Space_Heat	0.231
Warehouse	Water_Heat	0.88
Warehouse	Engine	0.25
Warehouse	Other	1
School	Space_Heat	0.967
School	Water_Heat	0.9
School	Cook_top	0.147
School	Fryer	0.147
School	Griddle	0.147
School	Other_Cooking	0.147
School	AC_Compressor	0.885
School	Other	1
College	Space_Heat	0.763
College	Water_Heat	0.955
College	Cook_top	0.147
College	Fryer	0.147
College	Griddle	0.147
College	Other_Cooking	0.147
College	AC_Compressor	0.885
College	Other	1
Health	Space_Heat	0.936
Health	Water_Heat	1
Health	Cook_top	0.102
Health	Fryer	0.102
Health	Griddle	0.102
Health	Other_Cooking	0.102
Health	Drying	0.82
Health	AC_Compressor	0.792
Health	Other	1
Lodging	Space_Heat	0.895
Lodging	Water_Heat	1
Lodging	Cook_top	0.084
Lodging	Fryer	0.084
Lodging	Griddle	0.084
Lodging	Other_Cooking	0.084
Lodging	Drying	0.82
Lodging	AC_Compressor	0.795
Lodging	Other	1
Misc	Space_Heat	0.695
Misc	Water_Heat	0.69
Misc	Cook_top	0.021
Misc	Fryer	0.021
Misc	Griddle	0.021
Misc	Other_Cooking	0.021
Misc	AC_Compressor	0.731
Misc	Other	1
Government	Space_Heat	0.872

Government	Water_Heat	0.7
Government	Cook_top	0.196
Government	Fryer	0.196
Government	Griddle	0.196
Government	Other_Cooking	0.196
Government	AC_Compressor	0.888
Government	Other	1
TCU	Space_Heat	0.72
TCU	Water_Heat	0.69
TCU	Engine	0.5
TCU	Other	1
Construction	Space_Heat	0.72
Construction	Water_Heat	0.69
Construction	Other	1
Agriculture	Space_Heat	0.72
Agriculture	Water_Heat	0.69
Agriculture	Drying	1
Agriculture	Engine	0.5
Agriculture	Other	1
Grocery	Space_Heat	0.647
Grocery	Water_Heat	0.93
Grocery	Cook_top	0.245
Grocery	Fryer	0.245
Grocery	Griddle	0.245
Grocery	Other_Cooking	0.245
Grocery	AC_Compressor	0.856
Grocery	Other	1

**Triennial Cost Allocation Proceeding
 Equipment Cost Data**

b	n	f	e	bname	nname	EQcost
	1	1	1	1 Office	Space_Heat	4.3149
	1	1	1	2 Office	Space_Heat	4.7464
	1	1	1	3 Office	Space_Heat	5.1779
	1	1	1	4 Office	Space_Heat	5.6094
	1	1	2	1 Office	Space_Heat	3.4519
	1	1	2	2 Office	Space_Heat	3.7971
	1	1	2	3 Office	Space_Heat	4.1423
	1	1	2	4 Office	Space_Heat	4.4875
	1	2	1	1 Office	Water_Heat	0.6712
	1	2	1	2 Office	Water_Heat	0.7384
	1	2	1	3 Office	Water_Heat	0.8055
	1	2	1	4 Office	Water_Heat	0.8726
	1	2	2	1 Office	Water_Heat	0.537
	1	2	2	2 Office	Water_Heat	0.5907
	1	2	2	3 Office	Water_Heat	0.6444
	1	2	2	4 Office	Water_Heat	0.6981
	1	3	1	1 Office	Cooking	0.4899
	1	3	1	2 Office	Cooking	0.5389
	1	3	2	1 Office	Cooking	0.3919
	1	3	2	2 Office	Cooking	0.4311
	1	10	1	1 Office	AC_Compressor	1.4773
	1	10	1	2 Office	AC_Compressor	1.6251
	1	10	2	1 Office	AC_Compressor	1.1819
	1	10	2	2 Office	AC_Compressor	1.3
	1	11	1	1 Office	Other	0
	1	11	2	1 Office	Other	0
	2	1	1	1 Restaurant	Space_Heat	1.5841
	2	1	1	2 Restaurant	Space_Heat	1.7425
	2	1	1	3 Restaurant	Space_Heat	1.9009
	2	1	1	4 Restaurant	Space_Heat	2.0593
	2	1	2	1 Restaurant	Space_Heat	1.2673
	2	1	2	2 Restaurant	Space_Heat	1.394
	2	1	2	3 Restaurant	Space_Heat	1.5207
	2	1	2	4 Restaurant	Space_Heat	1.6474
	2	2	1	1 Restaurant	Water_Heat	11.666
	2	2	1	2 Restaurant	Water_Heat	12.8326
	2	2	1	3 Restaurant	Water_Heat	13.9992
	2	2	1	4 Restaurant	Water_Heat	15.1658
	2	2	2	1 Restaurant	Water_Heat	9.3328
	2	2	2	2 Restaurant	Water_Heat	10.2661
	2	2	2	3 Restaurant	Water_Heat	11.1994
	2	2	2	4 Restaurant	Water_Heat	12.1327
	2	4	1	1 Restaurant	Cook_top	16.1343
	2	4	1	2 Restaurant	Cook_top	17.7477
	2	4	2	1 Restaurant	Cook_top	12.9074
	2	4	2	2 Restaurant	Cook_top	14.1981
	2	5	1	1 Restaurant	Fryer	14.5274
	2	5	1	2 Restaurant	Fryer	15.9802
	2	5	2	1 Restaurant	Fryer	11.622
	2	5	2	2 Restaurant	Fryer	12.7841
	2	6	1	1 Restaurant	Griddle	12.2603
	2	6	1	2 Restaurant	Griddle	13.4863
	2	6	2	1 Restaurant	Griddle	9.8082
	2	6	2	2 Restaurant	Griddle	10.789
	2	7	1	1 Restaurant	Other_Cooking	13.0747
	2	7	1	2 Restaurant	Other_Cooking	14.3822
	2	7	2	1 Restaurant	Other_Cooking	10.4598
	2	7	2	2 Restaurant	Other_Cooking	11.5057
	2	10	1	1 Restaurant	AC_Compressor	2.7306
	2	10	1	2 Restaurant	AC_Compressor	3.0036
	2	10	2	1 Restaurant	AC_Compressor	2.1844
	2	10	2	2 Restaurant	AC_Compressor	2.4029
	2	11	1	1 Restaurant	Other	0
	2	11	2	1 Restaurant	Other	0
	3	1	1	1 Retail	Space_Heat	3.5122
	3	1	1	2 Retail	Space_Heat	3.8634
	3	1	1	3 Retail	Space_Heat	4.2146
	3	1	1	4 Retail	Space_Heat	4.5658
	3	1	2	1 Retail	Space_Heat	2.8097
	3	1	2	2 Retail	Space_Heat	3.0907

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b	f	e	name	name	Cost
3	1	2	3 Retail	Space_Heat	3.3717
3	1	2	4 Retail	Space_Heat	3.6527
3	2	1	1 Retail	Water_Heat	1.563
3	2	1	2 Retail	Water_Heat	1.7193
3	2	1	3 Retail	Water_Heat	1.8756
3	2	1	4 Retail	Water_Heat	2.0319
3	2	2	1 Retail	Water_Heat	1.2504
3	2	2	2 Retail	Water_Heat	1.3754
3	2	2	3 Retail	Water_Heat	1.5004
3	2	2	4 Retail	Water_Heat	1.6255
3	3	1	1 Retail	Cooking	4.4039
3	3	1	2 Retail	Cooking	4.8443
3	3	2	1 Retail	Cooking	3.5231
3	3	2	2 Retail	Cooking	3.875
3	11	1	1 Retail	Other	0
3	11	2	1 Retail	Other	0
4	1	1	1 Laundry	Space_Heat	1.836
4	1	1	2 Laundry	Space_Heat	2.02
4	1	1	3 Laundry	Space_Heat	2.203
4	1	1	4 Laundry	Space_Heat	2.387
4	1	2	1 Laundry	Space_Heat	1.469
4	1	2	2 Laundry	Space_Heat	1.616
4	1	2	3 Laundry	Space_Heat	1.763
4	1	2	4 Laundry	Space_Heat	1.909
4	2	1	1 Laundry	Water_Heat	34.512
4	2	1	2 Laundry	Water_Heat	37.963
4	2	1	3 Laundry	Water_Heat	41.414
4	2	1	4 Laundry	Water_Heat	44.865
4	2	2	1 Laundry	Water_Heat	27.609
4	2	2	2 Laundry	Water_Heat	30.37
4	2	2	3 Laundry	Water_Heat	33.131
4	2	2	4 Laundry	Water_Heat	35.892
4	8	1	1 Laundry	Drying	186.738
4	8	1	2 Laundry	Drying	205.412
4	8	2	1 Laundry	Drying	149.39
4	8	2	2 Laundry	Drying	164.329
4	11	1	1 Laundry	Other	0
4	11	2	1 Laundry	Other	0
5	1	1	1 Warehouse	Space_Heat	7.909
5	1	1	2 Warehouse	Space_Heat	8.7
5	1	1	3 Warehouse	Space_Heat	9.491
5	1	1	4 Warehouse	Space_Heat	10.282
5	1	2	1 Warehouse	Space_Heat	6.327
5	1	2	2 Warehouse	Space_Heat	6.96
5	1	2	3 Warehouse	Space_Heat	7.593
5	1	2	4 Warehouse	Space_Heat	8.225
5	2	1	1 Warehouse	Water_Heat	2.608
5	2	1	2 Warehouse	Water_Heat	2.869
5	2	1	3 Warehouse	Water_Heat	3.13
5	2	1	4 Warehouse	Water_Heat	3.39
5	2	2	1 Warehouse	Water_Heat	2.086
5	2	2	2 Warehouse	Water_Heat	2.295
5	2	2	3 Warehouse	Water_Heat	2.504
5	2	2	4 Warehouse	Water_Heat	2.712
5	9	1	1 Warehouse	Engine	113.127
5	9	1	2 Warehouse	Engine	124.44
5	9	2	1 Warehouse	Engine	90.502
5	9	2	2 Warehouse	Engine	99.552
5	11	1	1 Warehouse	Other	0
5	11	2	1 Warehouse	Other	0
6	1	1	1 School	Space_Heat	1.225
6	1	1	2 School	Space_Heat	1.348
6	1	1	3 School	Space_Heat	1.471
6	1	1	4 School	Space_Heat	1.593
6	1	2	1 School	Space_Heat	0.98
6	1	2	2 School	Space_Heat	1.078
6	1	2	3 School	Space_Heat	1.176
6	1	2	4 School	Space_Heat	1.274
6	2	1	1 School	Water_Heat	1.635
6	2	1	2 School	Water_Heat	1.799
6	2	1	3 School	Water_Heat	1.962
6	2	1	4 School	Water_Heat	2.126
6	2	2	1 School	Water_Heat	1.308
6	2	2	2 School	Water_Heat	1.439
6	2	2	3 School	Water_Heat	1.57
6	2	2	4 School	Water_Heat	1.701
6	4	1	1 School	Cook_top	0.61
6	4	1	2 School	Cook_top	0.671

Year	Month	Days	Location	Equipment	ECost
6	4	2	1 School	Cook_top	0.488
6	4	2	2 School	Cook_top	0.537
6	5	1	1 School	Fryer	0.612
6	5	1	2 School	Fryer	0.673
6	5	2	1 School	Fryer	0.489
6	5	2	2 School	Fryer	0.538
6	6	1	1 School	Griddle	0.612
6	6	1	2 School	Griddle	0.673
6	6	2	1 School	Griddle	0.489
6	6	2	2 School	Griddle	0.538
6	7	1	1 School	Other_Cooking	0.61
6	7	1	2 School	Other_Cooking	0.671
6	7	2	1 School	Other_Cooking	0.488
6	7	2	2 School	Other_Cooking	0.537
6	10	1	1 School	AC_Compressor	0.866
6	10	1	2 School	AC_Compressor	0.953
6	10	2	1 School	AC_Compressor	0.693
6	10	2	2 School	AC_Compressor	0.762
6	11	1	1 School	Other	0
6	11	2	1 School	Other	0
7	1	1	1 College	Space_Heat	3.14441
7	1	1	2 College	Space_Heat	3.45885
7	1	1	3 College	Space_Heat	3.77329
7	1	1	4 College	Space_Heat	4.08773
7	1	2	1 College	Space_Heat	2.51553
7	1	2	2 College	Space_Heat	2.76708
7	1	2	3 College	Space_Heat	3.01863
7	1	2	4 College	Space_Heat	3.27018
7	2	1	1 College	Water_Heat	3.38894
7	2	1	2 College	Water_Heat	3.72784
7	2	1	3 College	Water_Heat	4.06673
7	2	1	4 College	Water_Heat	4.40563
7	2	2	1 College	Water_Heat	2.71116
7	2	2	2 College	Water_Heat	2.98227
7	2	2	3 College	Water_Heat	3.25339
7	2	2	4 College	Water_Heat	3.5245
7	4	1	1 College	Cook_top	0.57358
7	4	1	2 College	Cook_top	0.63093
7	4	2	1 College	Cook_top	0.45886
7	4	2	2 College	Cook_top	0.50475
7	5	1	1 College	Fryer	0.57322
7	5	1	2 College	Fryer	0.63055
7	5	2	1 College	Fryer	0.45858
7	5	2	2 College	Fryer	0.50444
7	6	1	1 College	Griddle	0.57322
7	6	1	2 College	Griddle	0.63055
7	6	2	1 College	Griddle	0.45858
7	6	2	2 College	Griddle	0.50444
7	7	1	1 College	Other_Cooking	0.57358
7	7	1	2 College	Other_Cooking	0.63093
7	7	2	1 College	Other_Cooking	0.45886
7	7	2	2 College	Other_Cooking	0.50475
7	10	1	1 College	AC_Compressor	1.3949
7	10	1	2 College	AC_Compressor	1.53439
7	10	2	1 College	AC_Compressor	1.11592
7	10	2	2 College	AC_Compressor	1.22752
7	11	1	1 College	Other	0
7	11	2	1 College	Other	0
8	1	1	1 Health	Space_Heat	0.8825
8	1	1	2 Health	Space_Heat	0.97075
8	1	1	3 Health	Space_Heat	1.059
8	1	1	4 Health	Space_Heat	1.14725
8	1	2	1 Health	Space_Heat	0.706
8	1	2	2 Health	Space_Heat	0.7766
8	1	2	3 Health	Space_Heat	0.8472
8	1	2	4 Health	Space_Heat	0.9178
8	2	1	1 Health	Water_Heat	5.33917
8	2	1	2 Health	Water_Heat	5.87309
8	2	1	3 Health	Water_Heat	6.407
8	2	1	4 Health	Water_Heat	6.94092
8	2	2	1 Health	Water_Heat	4.27134
8	2	2	2 Health	Water_Heat	4.69847
8	2	2	3 Health	Water_Heat	5.1256
8	2	2	4 Health	Water_Heat	5.55274
8	4	1	1 Health	Cook_top	3.37409
8	4	1	2 Health	Cook_top	3.7115
8	4	2	1 Health	Cook_top	2.69927
8	4	2	2 Health	Cook_top	2.9692

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b	n	f	e	hname	iname	Cost
	8	5	1	1 Health	Fryer	3.37409
	8	5	1	2 Health	Fryer	3.7115
	8	5	2	1 Health	Fryer	2.69927
	8	5	2	2 Health	Fryer	2.9692
	8	6	1	1 Health	Griddle	3.37409
	8	6	1	2 Health	Griddle	3.7115
	8	6	2	1 Health	Griddle	2.69927
	8	6	2	2 Health	Griddle	2.9692
	8	7	1	1 Health	Other_Cooking	0.33743
	8	7	1	2 Health	Other_Cooking	0.37118
	8	7	2	1 Health	Other_Cooking	0.26995
	8	7	2	2 Health	Other_Cooking	0.29694
	8	8	1	1 Health	Drying	1.86871
	8	8	1	2 Health	Drying	2.05558
	8	8	2	1 Health	Drying	1.49497
	8	8	2	2 Health	Drying	1.64446
	8	10	1	1 Health	AC_Compressor	1.45749
	8	10	1	2 Health	AC_Compressor	1.60324
	8	10	2	1 Health	AC_Compressor	1.16599
	8	10	2	2 Health	AC_Compressor	1.28259
	8	11	1	1 Health	Other	0
	8	11	2	1 Health	Other	0
	9	1	1	1 Lodging	Space_Heat	4.85892
	9	1	1	2 Lodging	Space_Heat	5.3448
	9	1	1	3 Lodging	Space_Heat	5.8307
	9	1	1	4 Lodging	Space_Heat	6.3166
	9	1	2	1 Lodging	Space_Heat	3.8871
	9	1	2	2 Lodging	Space_Heat	4.2759
	9	1	2	3 Lodging	Space_Heat	4.6646
	9	1	2	4 Lodging	Space_Heat	5.0533
	9	2	1	1 Lodging	Water_Heat	8.6651
	9	2	1	2 Lodging	Water_Heat	9.5317
	9	2	1	3 Lodging	Water_Heat	10.3982
	9	2	1	4 Lodging	Water_Heat	11.2647
	9	2	2	1 Lodging	Water_Heat	6.9321
	9	2	2	2 Lodging	Water_Heat	7.6253
	9	2	2	3 Lodging	Water_Heat	8.3185
	9	2	2	4 Lodging	Water_Heat	9.0118
	9	4	1	1 Lodging	Cook_top	4.0305
	9	4	1	2 Lodging	Cook_top	4.4335
	9	4	2	1 Lodging	Cook_top	3.2244
	9	4	2	2 Lodging	Cook_top	3.5468
	9	5	1	1 Lodging	Fryer	5.2524
	9	5	1	2 Lodging	Fryer	5.7777
	9	5	2	1 Lodging	Fryer	4.2019
	9	5	2	2 Lodging	Fryer	4.6221
	9	6	1	1 Lodging	Griddle	5.2524
	9	6	1	2 Lodging	Griddle	5.7777
	9	6	2	1 Lodging	Griddle	4.2019
	9	6	2	2 Lodging	Griddle	4.6221
	9	7	1	1 Lodging	Other_Cooking	0.5148
	9	7	1	2 Lodging	Other_Cooking	0.5663
	9	7	2	1 Lodging	Other_Cooking	0.4118
	9	7	2	2 Lodging	Other_Cooking	0.453
	9	8	1	1 Lodging	Drying	2.1663
	9	8	1	2 Lodging	Drying	2.3829
	9	8	2	1 Lodging	Drying	1.733
	9	8	2	2 Lodging	Drying	1.9063
	9	10	1	1 Lodging	AC_Compressor	0.7157
	9	10	1	2 Lodging	AC_Compressor	0.7872
	9	10	2	1 Lodging	AC_Compressor	0.5725
	9	10	2	2 Lodging	AC_Compressor	0.6298
	9	11	1	1 Lodging	Other	0
	9	11	2	1 Lodging	Other	0
	10	1	1	1 Misc	Space_Heat	2.1455
	10	1	1	2 Misc	Space_Heat	2.36
	10	1	1	3 Misc	Space_Heat	2.5746
	10	1	1	4 Misc	Space_Heat	2.7891
	10	1	2	1 Misc	Space_Heat	1.7164
	10	1	2	2 Misc	Space_Heat	1.888
	10	1	2	3 Misc	Space_Heat	2.0597
	10	1	2	4 Misc	Space_Heat	2.2313
	10	2	1	1 Misc	Water_Heat	2.9412
	10	2	1	2 Misc	Water_Heat	3.2354
	10	2	1	3 Misc	Water_Heat	3.5295
	10	2	1	4 Misc	Water_Heat	3.8236
	10	2	2	1 Misc	Water_Heat	2.353
	10	2	2	2 Misc	Water_Heat	2.5883

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b	f	e	name	name	Cost
10	2	2	3 Misc	Water_Heat	2.8236
10	2	2	4 Misc	Water_Heat	3.0589
10	4	1	1 Misc	Cook_top	0.6282
10	4	1	2 Misc	Cook_top	0.691
10	4	2	1 Misc	Cook_top	0.5025
10	4	2	2 Misc	Cook_top	0.5528
10	5	1	1 Misc	Fryer	0.6285
10	5	1	2 Misc	Fryer	0.6913
10	5	2	1 Misc	Fryer	0.5028
10	5	2	2 Misc	Fryer	0.5531
10	6	1	1 Misc	Griddle	0.6285
10	6	1	2 Misc	Griddle	0.6913
10	6	2	1 Misc	Griddle	0.5028
10	6	2	2 Misc	Griddle	0.5531
10	7	1	1 Misc	Other_Cooking	0.6282
10	7	1	2 Misc	Other_Cooking	0.691
10	7	2	1 Misc	Other_Cooking	0.5025
10	7	2	2 Misc	Other_Cooking	0.5528
10	10	1	1 Misc	AC_Compressor	1.9306
10	10	1	2 Misc	AC_Compressor	2.1237
10	10	2	1 Misc	AC_Compressor	1.5445
10	10	2	2 Misc	AC_Compressor	1.6989
10	11	1	1 Misc	Other	0
10	11	2	1 Misc	Other	0
11	1	1	1 Government	Space_Heat	3.815
11	1	1	2 Government	Space_Heat	4.1965
11	1	1	3 Government	Space_Heat	4.578
11	1	1	4 Government	Space_Heat	4.9595
11	1	2	1 Government	Space_Heat	3.052
11	1	2	2 Government	Space_Heat	3.3572
11	1	2	3 Government	Space_Heat	3.6624
11	1	2	4 Government	Space_Heat	3.9676
11	2	1	1 Government	Water_Heat	0.5935
11	2	1	2 Government	Water_Heat	0.6528
11	2	1	3 Government	Water_Heat	0.7122
11	2	1	4 Government	Water_Heat	0.7715
11	2	2	1 Government	Water_Heat	0.4748
11	2	2	2 Government	Water_Heat	0.5222
11	2	2	3 Government	Water_Heat	0.5697
11	2	2	4 Government	Water_Heat	0.6172
11	4	1	1 Government	Cook_top	0.4333
11	4	1	2 Government	Cook_top	0.4766
11	4	2	1 Government	Cook_top	0.3466
11	4	2	2 Government	Cook_top	0.3813
11	5	1	1 Government	Fryer	0.4332
11	5	1	2 Government	Fryer	0.4765
11	5	2	1 Government	Fryer	0.3465
11	5	2	2 Government	Fryer	0.3812
11	6	1	1 Government	Griddle	0.4332
11	6	1	2 Government	Griddle	0.4765
11	6	2	1 Government	Griddle	0.3465
11	6	2	2 Government	Griddle	0.3812
11	7	1	1 Government	Other_Cooking	0.4333
11	7	1	2 Government	Other_Cooking	0.4766
11	7	2	1 Government	Other_Cooking	0.3466
11	7	2	2 Government	Other_Cooking	0.3813
11	10	1	1 Government	AC_Compressor	1.3062
11	10	1	2 Government	AC_Compressor	1.4368
11	10	2	1 Government	AC_Compressor	1.0449
11	10	2	2 Government	AC_Compressor	1.1494
11	11	1	1 Government	Other	0
11	11	2	1 Government	Other	0
12	1	1	1 TCU	Space_Heat	1.8457
12	1	1	2 TCU	Space_Heat	2.0303
12	1	1	3 TCU	Space_Heat	2.2149
12	1	1	4 TCU	Space_Heat	2.3995
12	1	2	1 TCU	Space_Heat	1.4766
12	1	2	2 TCU	Space_Heat	1.6242
12	1	2	3 TCU	Space_Heat	1.7719
12	1	2	4 TCU	Space_Heat	1.9196
12	2	1	1 TCU	Water_Heat	2.5303
12	2	1	2 TCU	Water_Heat	2.7833
12	2	1	3 TCU	Water_Heat	3.0364
12	2	1	4 TCU	Water_Heat	3.2894
12	2	2	1 TCU	Water_Heat	2.0243
12	2	2	2 TCU	Water_Heat	2.2267
12	2	2	3 TCU	Water_Heat	2.4291
12	2	2	4 TCU	Water_Heat	2.6315

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b	f	e	name	mname	Cost
12	9	1	1 TCU	Engine	30.6768
12	9	1	2 TCU	Engine	33.7445
12	9	2	1 TCU	Engine	24.5415
12	9	2	2 TCU	Engine	26.9956
12	11	1	1 TCU	Other	0
12	11	2	1 TCU	Other	0
13	1	1	1 Construction	Space_Heat	2.2951
13	1	1	2 Construction	Space_Heat	2.5246
13	1	1	3 Construction	Space_Heat	2.7542
13	1	1	4 Construction	Space_Heat	2.9837
13	1	2	1 Construction	Space_Heat	1.8361
13	1	2	2 Construction	Space_Heat	2.0197
13	1	2	3 Construction	Space_Heat	2.2033
13	1	2	4 Construction	Space_Heat	2.3869
13	2	1	1 Construction	Water_Heat	3.1464
13	2	1	2 Construction	Water_Heat	3.461
13	2	1	3 Construction	Water_Heat	3.7757
13	2	1	4 Construction	Water_Heat	4.0903
13	2	2	1 Construction	Water_Heat	2.5171
13	2	2	2 Construction	Water_Heat	2.7688
13	2	2	3 Construction	Water_Heat	3.0205
13	2	2	4 Construction	Water_Heat	3.2722
13	11	1	1 Construction	Other	0
13	11	2	1 Construction	Other	0
14	1	1	1 Agriculture	Space_Heat	1.6583
14	1	1	2 Agriculture	Space_Heat	1.8242
14	1	1	3 Agriculture	Space_Heat	1.99
14	1	1	4 Agriculture	Space_Heat	2.1558
14	1	2	1 Agriculture	Space_Heat	1.3267
14	1	2	2 Agriculture	Space_Heat	1.4593
14	1	2	3 Agriculture	Space_Heat	1.592
14	1	2	4 Agriculture	Space_Heat	1.7247
14	2	1	1 Agriculture	Water_Heat	2.2734
14	2	1	2 Agriculture	Water_Heat	2.5008
14	2	1	3 Agriculture	Water_Heat	2.7281
14	2	1	4 Agriculture	Water_Heat	2.9554
14	2	2	1 Agriculture	Water_Heat	1.8187
14	2	2	2 Agriculture	Water_Heat	2.0006
14	2	2	3 Agriculture	Water_Heat	2.1825
14	2	2	4 Agriculture	Water_Heat	2.3644
14	8	1	1 Agriculture	Drying	2.2734
14	8	1	2 Agriculture	Drying	2.5008
14	8	2	1 Agriculture	Drying	1.8187
14	8	2	2 Agriculture	Drying	2.0006
14	9	1	1 Agriculture	Engine	9.7757
14	9	1	2 Agriculture	Engine	10.7533
14	9	2	1 Agriculture	Engine	7.8206
14	9	2	2 Agriculture	Engine	8.6026
14	11	1	1 Agriculture	Other	0
14	11	2	1 Agriculture	Other	0

TCAP PHASE II: CORE COMMERCIAL FORECAST (MDTH)

AVERAGE YEAR

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2014	1804	1781	1549	1479	1339	1203	1153	1098	1170	1205	1520	1792	17093
2015	1800	1777	1545	1476	1335	1200	1150	1095	1167	1202	1516	1787	17052
2016	1804	1781	1549	1479	1338	1203	1153	1098	1170	1205	1520	1792	17092
2017	1786	1763	1533	1464	1325	1191	1142	1087	1159	1193	1505	1774	16922
2018	1768	1746	1518	1450	1312	1179	1130	1076	1147	1181	1490	1756	16754
2019	1744	1721	1497	1430	1294	1163	1115	1061	1131	1165	1469	1732	16522
2020	1708	1686	1466	1400	1267	1139	1092	1039	1108	1141	1439	1696	16179

TCAP PHASE II: CORE COMMERCIAL FORECAST (MDTH)
 COLD YEAR

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2014	1935.67	1906.90	1619.44	1533.05	1358.64	1190.80	1127.84	1254.85	1147.15	1193.21	1583.46	1920.16	17,771
2015	1931.02	1902.32	1615.55	1529.37	1355.38	1187.94	1125.14	1251.84	1144.39	1190.35	1579.66	1915.55	17,729
2016	1935.57	1906.80	1619.36	1532.97	1358.57	1190.74	1127.79	1254.79	1147.09	1193.15	1583.38	1920.07	17,770
2017	1916.31	1887.82	1603.24	1517.71	1345.05	1178.89	1116.56	1242.30	1135.67	1181.28	1567.62	1900.96	17,593
2018	1897.36	1869.15	1587.39	1502.70	1331.75	1167.23	1105.52	1230.01	1124.44	1169.60	1552.11	1882.15	17,419
2019	1871.01	1843.19	1565.34	1481.83	1313.26	1151.02	1090.17	1212.93	1108.83	1153.35	1530.56	1856.02	17,178
2020	1832.22	1804.98	1532.89	1451.11	1286.03	1127.16	1067.57	1187.79	1085.84	1129.44	1498.83	1817.54	16,821

TCAP PHASE II: CORE COMMERCIAL FORECAST (MDTH)
 HOT YEAR

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2014	1672.64	1654.91	1478.47	1425.62	1318.48	1215.67	1178.65	1254.85	1185.61	1217.03	1456.46	1663.08	16,721
2015	1668.63	1650.93	1474.92	1422.20	1315.32	1212.75	1175.82	1251.84	1182.77	1214.11	1452.97	1659.09	16,681
2016	1672.56	1654.82	1478.40	1425.55	1318.42	1215.61	1178.59	1254.79	1185.55	1216.97	1456.39	1663.00	16,721
2017	1655.91	1638.35	1463.68	1411.36	1305.30	1203.51	1166.86	1242.30	1173.75	1204.86	1441.89	1646.45	16,554
2018	1639.53	1622.15	1449.21	1397.40	1292.39	1191.61	1155.32	1230.01	1162.15	1192.94	1427.63	1630.16	16,390
2019	1616.76	1599.62	1429.08	1378.00	1274.44	1175.06	1139.27	1212.93	1146.01	1176.37	1407.81	1607.53	16,163
2020	1583.25	1566.46	1399.45	1349.43	1248.02	1150.70	1115.65	1187.79	1122.25	1151.98	1378.62	1574.20	15,828

TCAP PHASE II: CORE COMMERCIAL FORECAST (MDTH)
 BASE YEAR

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2014	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	1254.85	15,058
2015	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	1251.84	15,022
2016	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	1254.79	15,057
2017	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	1242.30	14,908
2018	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	1230.01	14,760
2019	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	1212.93	14,555
2020	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	1187.79	14,253

GN3 Industrial DATA TABLES

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
 The Year the Equipment Was Installed by Business Types

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	1981	1974	1978	1978	1968	1980	1973	1980	1975
Food	1980	1982	1975	1978	1976	1983	1970	1987	1977
Textile	1985	1979	1977	1978	1981	1976	1976 .		1979
Wood_Paper	1979	1975	1975	1976	1976	1976	1976 .		1980
Chemical	1980	1980	1976	1977	1967	1976	1974	1980	1979
Petroleum	1980	1981	1974	1977	1975	1979 .		1972	1978
Stone	1980	1973	1975	1977	1980	1978	1982 .		1977
Prim_Metal	1986	1979	1975	1976	1976	1977	1978 .		1974
Fab_Metal	1982	1981	1976	1977	1979	1979	1976	1972	1976
Transport	1980	1978	1976	1976	1980	1980	1974	1988	1976
Misc	1979	1980	1976	1976	1978	1978	1976	1979	1977

San Diego Gas and Electric Company

2016 TCAP - Industrial GNS

Electric Price Forecast

(Cent/KWH)

Year	Chemical		Chemical		Fab Metal		Fab Metal		Food		Food		Mining		Mining		Petroleum		Petroleum		
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	
2014	13.10	10.47	13.17	10.53	15.83	12.18	17.04	12.33	12.83	10.33											
2015	13.03	10.43	13.12	10.49	16.20	12.46	17.56	12.64	12.72	10.25											
2016	13.53	10.85	13.63	10.92	16.99	13.03	18.55	13.22	13.20	10.67											
2017	14.01	11.24	14.10	11.30	17.27	13.23	18.82	13.40	13.70	11.07											
2018	14.58	11.69	14.66	11.75	17.87	13.69	19.43	13.86	14.26	11.52											
2019	15.12	12.12	15.21	12.18	18.34	14.06	19.86	14.23	14.81	11.95											
2020	15.74	12.59	15.82	12.65	18.68	14.35	20.07	14.51	15.46	12.44											

Year	Prim Metal		Prim Metal		Stone		Stone		Textile		Textile		Transport		Transport		Wood Paper		Wood Paper		Misc		Misc	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	15.19	11.90	13.02	10.47	12.92	10.51	13.50	10.68	12.42	10.06	12.84	10.31												
2015	15.49	12.14	12.94	10.43	12.82	10.47	13.50	10.67	12.23	9.93	12.72	10.22												
2016	16.17	12.68	13.44	10.85	13.31	10.90	14.04	11.12	12.68	10.32	13.21	10.64												
2017	16.46	12.91	13.93	11.24	13.80	11.28	14.49	11.48	13.22	10.76	13.71	11.04												
2018	17.04	13.37	14.49	11.69	14.36	11.73	15.05	11.93	13.78	11.20	14.27	11.49												
2019	17.53	13.75	15.04	12.12	14.91	12.16	15.59	12.35	14.34	11.64	14.83	11.92												
2020	17.94	14.07	15.67	12.59	15.55	12.63	16.17	12.81	15.03	12.16	15.47	12.42												

San Diego Gas and Electric Company
2016 TCAP Industrial GN3
Gas Price Forecast

(\$/Therm)

Year	<u>Price</u>	<u>Chemical</u>	<u>Chemical</u>	<u>Fab Metal</u>	<u>Fab Metal</u>	<u>Food</u>	<u>Food</u>	<u>Mining</u>	<u>Mining</u>	<u>Petroleum</u>	<u>Petroleum</u>
	Deflator	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	100.00	0.7910	0.7484	0.7955	0.7522	0.9559	0.8701	1.0290	0.8807	0.7749	0.7380
2015	99.45	0.7026	0.6581	0.7074	0.6622	0.8739	0.7866	0.9470	0.7979	0.6859	0.6471
2016	101.77	0.6370	0.5951	0.6414	0.5989	0.7997	0.7144	0.8728	0.7248	0.6212	0.5849
2017	104.48	0.6631	0.6237	0.6671	0.6272	0.8173	0.7339	0.8904	0.7435	0.6482	0.6143
2018	107.21	0.6828	0.6434	0.6867	0.6469	0.8370	0.7535	0.9101	0.7632	0.6679	0.6340
2019	109.85	0.7257	0.6863	0.7297	0.6898	0.8799	0.7965	0.9531	0.8062	0.7109	0.6769
2020	112.55	0.8274	0.7880	0.8314	0.7915	0.9816	0.8982	1.0547	0.9078	0.8125	0.7786

Year	<u>Prim Metal</u>	<u>Prim Metal</u>	<u>Stone</u>	<u>Stone</u>	<u>Textile</u>	<u>Textile</u>	<u>Transport</u>	<u>Transport</u>	<u>Wood Paper</u>	<u>Wood Paper</u>	<u>Misc</u>	<u>Misc</u>
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2014	0.9173	0.8506	0.7866	0.7484	0.7801	0.7510	0.8152	0.7632	0.7503	0.7187	0.7754	0.7363
2015	0.8352	0.7661	0.6980	0.6581	0.6914	0.6609	0.7279	0.6737	0.6599	0.6267	0.6861	0.6454
2016	0.7611	0.6953	0.6327	0.5951	0.6263	0.5977	0.6608	0.6096	0.5970	0.5659	0.6217	0.5833
2017	0.7787	0.7163	0.6592	0.6237	0.6529	0.6261	0.6854	0.6371	0.6257	0.5968	0.6489	0.6128
2018	0.7984	0.7360	0.6788	0.6434	0.6725	0.6458	0.7051	0.6568	0.6454	0.6165	0.6686	0.6325
2019	0.8414	0.7789	0.7218	0.6864	0.7155	0.6887	0.7481	0.6997	0.6883	0.6594	0.7115	0.6755
2020	0.9430	0.8806	0.8235	0.7880	0.8172	0.7904	0.8497	0.8014	0.7900	0.7611	0.8132	0.7771

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 Historical Throughput and Customer Counts**

<u>Business Type</u>	<u>therms_2014</u> <u>Temp. Adj.</u>	<u>meters_2014</u>	<u>meters_2014</u> <u>ExCust</u>	<u>meters_2014</u> <u>NewCust</u>	<u>avgUse_2014</u> <u>ExCust</u>	<u>avgUse_2014</u> <u>NewCust</u>	<u>Price Elasticity</u>	<u>Employment Elasticity</u>
Mining	98841	6	6	0	16473	0	0.000000	0.321451
Food	1623540	170	161	9	9460	11169	-0.190795	1.242506
Textile	49634	25	25	0	1985	0	0.000000	0.033325
Wood_Paper	31002	17	17	0	1824	0	0.000000	0.508272
Chemical	2046932	83	82	1	24848	9386	-0.080517	0.650067
Petroleum	14839	2	2	0	7420	0	-0.180563	0.084537
Stone	360093	29	29	0	12417	0	0.000000	0.416909
Prim_Metal	377700	14	14	0	26979	0	0.000000	0.956685
Fab_Metal	1376623	153	152	1	9050	1022	-0.137441	1.023881
Transport	1741065	54	54	0	32242	0	0.000000	0.402505
Misc	7496103	556	554	2	13433	27229	-0.108307	0.879307
Total	15,216,371	1,109	1,096					

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
 Average Use Per Meter therm

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>	<u>Total</u>
Mining	4366.6	42.6	491.8	121.7	1553.1	1535.6	11.0	1218.1	4169.3	13509.8
Food	16172.7	3829.2	1397.9	549.5	1970.7	4751.6	95.4	397.2	3383.0	32547.2
Textile	13453.1	3495.6	435.2	874.1	8247.0	1773.6	282.9	0.0	904.9	29466.4
Wood_Paper	4003.5	1313.9	895.2	91.2	727.6	1271.4	12.3	0.0	1333.4	9648.5
Chemical	5933.3	3338.2	757.4	575.4	49.0	1093.9	6.3	0.3	3051.2	14805.0
Petroleum	7748.0	1953.7	342.9	449.8	25523.9	112.3	0.0	34.5	10240.9	46406.0
Stone	1797.2	357.2	697.5	675.5	3176.5	6897.1	127.4	0.0	1204.3	14932.7
Prim_Metal	442.0	1396.6	1205.0	287.3	59.1	25647.9	237.4	0.0	2342.9	31618.2
Fab_Metal	1535.4	1498.7	1207.0	266.6	133.7	3842.0	20.7	0.0	2434.7	10938.7
Transport	387.3	225.6	666.8	192.0	424.5	723.0	5.7	2.5	373.0	3000.4
Misc	750.9	528.1	496.4	138.2	336.2	1853.1	33.0	6.0	952.2	5094.1

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
 Use Per Meter for New Customers therm

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>	<u>Total</u>
Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35872.2	0.0	35872.2
Food	13791.7	2.8	205.1	225.3	0.0	0.0	0.0	0.0	0.0	14224.8
Textile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wood_Paper										0.0
Chemical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17866.6	17866.6
Petroleum	0.0	0.0	0.0	0.0	140409.4	0.0	0.0	0.0	0.0	140409.4
Stone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prim_Metal	0.0	0.0	0.0	891.7	0.0	14986.1	0.0	0.0	4995.4	20873.2
Fab_Metal	0.0	0.0	558.2	0.0	0.0	3041.6	0.0	0.0	8110.9	11710.8
Transport	0.0	0.0	0.0	0.0	0.0	2306.4	0.0	0.0	331.4	2637.8
Misc	612.3	0.0	0.0	5.0	2182.2	1428.8	0.0	0.0	983.8	5212.0

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 Electric UEC (Kwh/SqFt)**

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
Mining	12053557	117480	22540	4117	3349437	1388699	3261	2871579	.
Food	992080	234899	77958	15939	1062552	781260	24817	1163891	.
Textile	1428304	371125	20797	30369	3811277	1069238	74615	0	.
Wood_Paper	11051345	3626956	48301	2915	523062	985476	3282	0	.
Chemical	1169880	658201	34723	19440	26417	593554	1620	738	.
Petroleum	1527674	385215	15711	15192	13761553	60935	0	101154	.
Stone	4960873	985989	31975	22824	6850607	6237158	37820	0	.
Primary_Metal	174313	550730	55233	9317	25494	13916258	66288	0	.
Fabricated_Metal	605450	591011	55315	8658	57653	2084618	5763	0	.
Transportation	76358	44486	30560	6490	228869	392291	1456	7240	.
Miscellaneous	148060	104128	22745	4673	181266	1005453	8471	17618	.

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
 Gas UEC (Therm per SqFt.)

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	587697	5728	1099	281	163309	67709	159	140010	4169
Food	48371	11453	3801	1088	51807	38092	1210	56748	3383
Textile	69640	18095	1014	2073	185827	52133	3638	0	905
Wood_Paper	538832	176840	2355	199	25503	48049	160	0	1333
Chemical	57040	32092	1693	1327	1288	28940	79	36	3051
Petroleum	74485	18782	766	1037	670974	2971	0	4932	10241
Stone	241878	48074	1559	1558	334016	304106	1844	0	1204
Primary_Metal	8499	26852	2693	636	1243	678517	3232	0	2343
Fabricated_Metal	29520	28816	2697	591	2811	101640	281	0	2435
Transportation	3723	2169	1490	443	11159	19127	71	353	373
Miscellaneous	7219	5077	1109	319	8838	49023	413	859	952

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 Gas Market Shares**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Chemical	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Fabricated_Metal	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Food	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Mining	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Miscllaneous	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Petroleum	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Primary_Metal	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Stone	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Textile	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Transportation	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1
Wood_Paper	0.74	0.74	0.61	0.59	0.32	0.38	0.11	0.01	1

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 Saturation Rate**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	0.01	0.01	0.73	0.73	0.03	0.06	0.64	0.87	1.00
Food	0.45	0.45	0.60	0.85	0.12	0.33	0.73	0.70	1.00
Textile	0.26	0.26	0.70	0.71	0.14	0.09	0.72	0.46	1.00
Wood_Paper	0.01	0.01	0.62	0.77	0.09	0.07	0.71	0.50	1.00
Chemical	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Petroleum	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Stone	0.01	0.01	0.73	0.73	0.03	0.06	0.64	0.87	1.00
Prim_Metal	0.07	0.07	0.73	0.76	0.15	0.10	0.68	0.86	1.00
Fab_Metal	0.07	0.07	0.73	0.76	0.15	0.10	0.68	0.86	1.00
Transport	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Misc	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 UEC, Equipment Cost and Efficiency Shares**

Where **Fuel = 1 (gas) and = 2 (electric), and
 Efficiency =1 (stock), =2 (standard), =3 (high) and =4 (premium)**

<u>Business Type</u>	<u>End Use</u>	<u>Fuel</u>	<u>Efficiency</u>	<u>EQcost</u>
Mining	Fire_Tube_Boiler	1	1	3,907,010
Mining	Fire_Tube_Boiler	1	2	4,297,711
Mining	Fire_Tube_Boiler	1	3	4,688,412
Mining	Fire_Tube_Boiler	2	1	3,125,608
Mining	Fire_Tube_Boiler	2	2	3,438,169
Mining	Fire_Tube_Boiler	2	3	3,750,729
Mining	Water_Tube_Boiler	1	1	38,080
Mining	Water_Tube_Boiler	1	2	41,888
Mining	Water_Tube_Boiler	1	3	45,696
Mining	Water_Tube_Boiler	2	1	30,464
Mining	Water_Tube_Boiler	2	2	33,510
Mining	Water_Tube_Boiler	2	3	36,557
Mining	Space_Heat	1	1	7,306
Mining	Space_Heat	1	2	8,037
Mining	Space_Heat	1	3	8,767
Mining	Space_Heat	2	1	5,845
Mining	Space_Heat	2	2	6,429
Mining	Space_Heat	2	3	7,014
Mining	Water_Heat	1	1	1,868
Mining	Water_Heat	1	2	2,055
Mining	Water_Heat	1	3	2,242
Mining	Water_Heat	2	1	1,494
Mining	Water_Heat	2	2	1,644
Mining	Water_Heat	2	3	1,793
Mining	Dryer	1	1	1,085,678
Mining	Dryer	1	2	1,194,246
Mining	Dryer	1	3	1,302,814
Mining	Dryer	2	1	868,543
Mining	Dryer	2	2	955,397
Mining	Dryer	2	3	1,042,251
Mining	Furnace_Oven_Kiln	1	1	450,129
Mining	Furnace_Oven_Kiln	1	2	495,142
Mining	Furnace_Oven_Kiln	1	3	540,155
Mining	Furnace_Oven_Kiln	2	1	360,104
Mining	Furnace_Oven_Kiln	2	2	396,114
Mining	Furnace_Oven_Kiln	2	3	432,124
Mining	AC	1	1	1,057
Mining	AC	1	2	1,163
Mining	AC	1	3	1,268
Mining	AC	2	1	846
Mining	AC	2	2	930
Mining	AC	2	3	1,015
Mining	Engine	1	1	930,786
Mining	Engine	1	2	1,023,865
Mining	Engine	1	3	1,116,944
Mining	Engine	2	1	744,629
Mining	Engine	2	2	819,092
Mining	Engine	2	3	893,555
Mining	Other	1	1	-
Mining	Other	1	2	-
Mining	Other	1	3	-
Mining	Other	2	1	-
Mining	Other	2	2	-
Mining	Other	2	3	-
Food	Fire_Tube_Boiler	1	1	303,093
Food	Fire_Tube_Boiler	1	2	333,402
Food	Fire_Tube_Boiler	1	3	363,711
Food	Fire_Tube_Boiler	2	1	242,474
Food	Fire_Tube_Boiler	2	2	266,722
Food	Fire_Tube_Boiler	2	3	290,969
Food	Water_Tube_Boiler	1	1	71,765

Food	Water_Tube_Boiler	1	2	78,941
Food	Water_Tube_Boiler	1	3	86,117
Food	Water_Tube_Boiler	2	1	57,412
Food	Water_Tube_Boiler	2	2	63,153
Food	Water_Tube_Boiler	2	3	68,894
Food	Space_Heat	1	1	23,817
Food	Space_Heat	1	2	26,199
Food	Space_Heat	1	3	28,580
Food	Space_Heat	2	1	19,054
Food	Space_Heat	2	2	20,959
Food	Space_Heat	2	3	22,864
Food	Water_Heat	1	1	6,817
Food	Water_Heat	1	2	7,499
Food	Water_Heat	1	3	8,181
Food	Water_Heat	2	1	5,454
Food	Water_Heat	2	2	5,999
Food	Water_Heat	2	3	6,545
Food	Dryer	1	1	324,623
Food	Dryer	1	2	357,085
Food	Dryer	1	3	389,547
Food	Dryer	2	1	259,698
Food	Dryer	2	2	285,668
Food	Dryer	2	3	311,638
Food	Furnace_Oven_Kiln	1	1	238,684
Food	Furnace_Oven_Kiln	1	2	262,553
Food	Furnace_Oven_Kiln	1	3	286,421
Food	Furnace_Oven_Kiln	2	1	190,948
Food	Furnace_Oven_Kiln	2	2	210,042
Food	Furnace_Oven_Kiln	2	3	229,137
Food	AC	1	1	7,582
Food	AC	1	2	8,340
Food	AC	1	3	9,098
Food	AC	2	1	6,065
Food	AC	2	2	6,672
Food	AC	2	3	7,279
Food	Engine	1	1	355,583
Food	Engine	1	2	391,141
Food	Engine	1	3	426,700
Food	Engine	2	1	284,466
Food	Engine	2	2	312,913
Food	Engine	2	3	341,360
Food	Other	1	1	-
Food	Other	1	2	-
Food	Other	1	3	-
Food	Other	2	1	-
Food	Other	2	2	-
Food	Other	2	3	-
Textile	Fire_Tube_Boiler	1	1	440,682
Textile	Fire_Tube_Boiler	1	2	484,750
Textile	Fire_Tube_Boiler	1	3	528,818
Textile	Fire_Tube_Boiler	2	1	352,546
Textile	Fire_Tube_Boiler	2	2	387,800
Textile	Fire_Tube_Boiler	2	3	423,055
Textile	Water_Tube_Boiler	1	1	114,505
Textile	Water_Tube_Boiler	1	2	125,956
Textile	Water_Tube_Boiler	1	3	137,406
Textile	Water_Tube_Boiler	2	1	91,604
Textile	Water_Tube_Boiler	2	2	100,765
Textile	Water_Tube_Boiler	2	3	109,925
Textile	Space_Heat	1	1	6,417
Textile	Space_Heat	1	2	7,058
Textile	Space_Heat	1	3	7,700
Textile	Space_Heat	2	1	5,133
Textile	Space_Heat	2	2	5,647
Textile	Space_Heat	2	3	6,160
Textile	Water_Heat	1	1	13,118
Textile	Water_Heat	1	2	14,430
Textile	Water_Heat	1	3	15,742
Textile	Water_Heat	2	1	10,494
Textile	Water_Heat	2	2	11,544
Textile	Water_Heat	2	3	12,593
Textile	Dryer	1	1	1,175,913

Textile	Dryer	1	2	1,293,505
Textile	Dryer	1	3	1,411,096
Textile	Dryer	2	1	940,731
Textile	Dryer	2	2	1,034,804
Textile	Dryer	2	3	1,128,877
Textile	Furnace_Oven_Kiln	1	1	329,898
Textile	Furnace_Oven_Kiln	1	2	362,887
Textile	Furnace_Oven_Kiln	1	3	395,877
Textile	Furnace_Oven_Kiln	2	1	263,918
Textile	Furnace_Oven_Kiln	2	2	290,310
Textile	Furnace_Oven_Kiln	2	3	316,702
Textile	AC	1	1	23,021
Textile	AC	1	2	25,323
Textile	AC	1	3	27,626
Textile	AC	2	1	18,417
Textile	AC	2	2	20,259
Textile	AC	2	3	22,100
Textile	Engine	1	1	-
Textile	Engine	1	2	-
Textile	Engine	1	3	-
Textile	Engine	2	1	-
Textile	Engine	2	2	-
Textile	Engine	2	3	-
Textile	Other	1	1	-
Textile	Other	1	2	-
Textile	Other	1	3	-
Textile	Other	2	1	-
Textile	Other	2	2	-
Textile	Other	2	3	-
Wood_Paper	Fire_Tube_Boiler	1	1	3,531,505
Wood_Paper	Fire_Tube_Boiler	1	2	3,884,655
Wood_Paper	Fire_Tube_Boiler	1	3	4,237,806
Wood_Paper	Fire_Tube_Boiler	2	1	2,825,204
Wood_Paper	Fire_Tube_Boiler	2	2	3,107,724
Wood_Paper	Fire_Tube_Boiler	2	3	3,390,245
Wood_Paper	Water_Tube_Boiler	1	1	1,159,009
Wood_Paper	Water_Tube_Boiler	1	2	1,274,910
Wood_Paper	Water_Tube_Boiler	1	3	1,390,811
Wood_Paper	Water_Tube_Boiler	2	1	927,207
Wood_Paper	Water_Tube_Boiler	2	2	1,019,928
Wood_Paper	Water_Tube_Boiler	2	3	1,112,649
Wood_Paper	Space_Heat	1	1	15,435
Wood_Paper	Space_Heat	1	2	16,978
Wood_Paper	Space_Heat	1	3	18,522
Wood_Paper	Space_Heat	2	1	12,348
Wood_Paper	Space_Heat	2	2	13,583
Wood_Paper	Space_Heat	2	3	14,817
Wood_Paper	Water_Heat	1	1	1,304
Wood_Paper	Water_Heat	1	2	1,435
Wood_Paper	Water_Heat	1	3	1,565
Wood_Paper	Water_Heat	2	1	1,043
Wood_Paper	Water_Heat	2	2	1,148
Wood_Paper	Water_Heat	2	3	1,252
Wood_Paper	Dryer	1	1	167,147
Wood_Paper	Dryer	1	2	183,861
Wood_Paper	Dryer	1	3	200,576
Wood_Paper	Dryer	2	1	133,717
Wood_Paper	Dryer	2	2	147,089
Wood_Paper	Dryer	2	3	160,461
Wood_Paper	Furnace_Oven_Kiln	1	1	314,913
Wood_Paper	Furnace_Oven_Kiln	1	2	346,404
Wood_Paper	Furnace_Oven_Kiln	1	3	377,896
Wood_Paper	Furnace_Oven_Kiln	2	1	251,931
Wood_Paper	Furnace_Oven_Kiln	2	2	277,124
Wood_Paper	Furnace_Oven_Kiln	2	3	302,317
Wood_Paper	AC	1	1	1,049
Wood_Paper	AC	1	2	1,154
Wood_Paper	AC	1	3	1,258
Wood_Paper	AC	2	1	839
Wood_Paper	AC	2	2	923
Wood_Paper	AC	2	3	1,007
Wood_Paper	Engine	1	1	-

Wood_Paper	Engine	1	2	-
Wood_Paper	Engine	1	3	-
Wood_Paper	Engine	2	1	-
Wood_Paper	Engine	2	2	-
Wood_Paper	Engine	2	3	-
Wood_Paper	Other	1	1	-
Wood_Paper	Other	1	2	-
Wood_Paper	Other	1	3	-
Wood_Paper	Other	2	1	-
Wood_Paper	Other	2	2	-
Wood_Paper	Other	2	3	-
Chemical	Fire_Tube_Boiler	1	1	374,525
Chemical	Fire_Tube_Boiler	1	2	411,977
Chemical	Fire_Tube_Boiler	1	3	449,430
Chemical	Fire_Tube_Boiler	2	1	299,620
Chemical	Fire_Tube_Boiler	2	2	329,582
Chemical	Fire_Tube_Boiler	2	3	359,544
Chemical	Water_Tube_Boiler	1	1	210,716
Chemical	Water_Tube_Boiler	1	2	231,788
Chemical	Water_Tube_Boiler	1	3	252,859
Chemical	Water_Tube_Boiler	2	1	168,573
Chemical	Water_Tube_Boiler	2	2	185,430
Chemical	Water_Tube_Boiler	2	3	202,287
Chemical	Space_Heat	1	1	11,116
Chemical	Space_Heat	1	2	12,228
Chemical	Space_Heat	1	3	13,339
Chemical	Space_Heat	2	1	8,893
Chemical	Space_Heat	2	2	9,782
Chemical	Space_Heat	2	3	10,672
Chemical	Water_Heat	1	1	8,713
Chemical	Water_Heat	1	2	9,584
Chemical	Water_Heat	1	3	10,456
Chemical	Water_Heat	2	1	6,970
Chemical	Water_Heat	2	2	7,668
Chemical	Water_Heat	2	3	8,365
Chemical	Dryer	1	1	8,457
Chemical	Dryer	1	2	9,303
Chemical	Dryer	1	3	10,148
Chemical	Dryer	2	1	6,766
Chemical	Dryer	2	2	7,442
Chemical	Dryer	2	3	8,119
Chemical	Furnace_Oven_Kiln	1	1	190,020
Chemical	Furnace_Oven_Kiln	1	2	209,022
Chemical	Furnace_Oven_Kiln	1	3	228,024
Chemical	Furnace_Oven_Kiln	2	1	152,016
Chemical	Furnace_Oven_Kiln	2	2	167,218
Chemical	Furnace_Oven_Kiln	2	3	182,419
Chemical	AC	1	1	519
Chemical	AC	1	2	571
Chemical	AC	1	3	622
Chemical	AC	2	1	415
Chemical	AC	2	2	456
Chemical	AC	2	3	498
Chemical	Engine	1	1	236
Chemical	Engine	1	2	260
Chemical	Engine	1	3	284
Chemical	Engine	2	1	189
Chemical	Engine	2	2	208
Chemical	Engine	2	3	227
Chemical	Other	1	1	-
Chemical	Other	1	2	-
Chemical	Other	1	3	-
Chemical	Other	2	1	-
Chemical	Other	2	2	-
Chemical	Other	2	3	-
Petroleum	Fire_Tube_Boiler	1	1	461,658
Petroleum	Fire_Tube_Boiler	1	2	507,824
Petroleum	Fire_Tube_Boiler	1	3	553,990
Petroleum	Fire_Tube_Boiler	2	1	369,326
Petroleum	Fire_Tube_Boiler	2	2	406,259
Petroleum	Fire_Tube_Boiler	2	3	443,192
Petroleum	Water_Tube_Boiler	1	1	116,411

Petroleum	Water_Tube_Boiler	1	2	128,052
Petroleum	Water_Tube_Boiler	1	3	139,693
Petroleum	Water_Tube_Boiler	2	1	93,129
Petroleum	Water_Tube_Boiler	2	2	102,442
Petroleum	Water_Tube_Boiler	2	3	111,754
Petroleum	Space_Heat	1	1	4,748
Petroleum	Space_Heat	1	2	5,222
Petroleum	Space_Heat	1	3	5,697
Petroleum	Space_Heat	2	1	3,798
Petroleum	Space_Heat	2	2	4,178
Petroleum	Space_Heat	2	3	4,558
Petroleum	Water_Heat	1	1	6,427
Petroleum	Water_Heat	1	2	7,070
Petroleum	Water_Heat	1	3	7,713
Petroleum	Water_Heat	2	1	5,142
Petroleum	Water_Heat	2	2	5,656
Petroleum	Water_Heat	2	3	6,170
Petroleum	Dryer	1	1	4,158,697
Petroleum	Dryer	1	2	4,574,567
Petroleum	Dryer	1	3	4,990,436
Petroleum	Dryer	2	1	3,326,957
Petroleum	Dryer	2	2	3,659,653
Petroleum	Dryer	2	3	3,992,349
Petroleum	Furnace_Oven_Kiln	1	1	18,414
Petroleum	Furnace_Oven_Kiln	1	2	20,256
Petroleum	Furnace_Oven_Kiln	1	3	22,097
Petroleum	Furnace_Oven_Kiln	2	1	14,731
Petroleum	Furnace_Oven_Kiln	2	2	16,205
Petroleum	Furnace_Oven_Kiln	2	3	17,678
Petroleum	AC	1	1	-
Petroleum	AC	1	2	-
Petroleum	AC	1	3	-
Petroleum	AC	2	1	-
Petroleum	AC	2	2	-
Petroleum	AC	2	3	-
Petroleum	Engine	1	1	30,569
Petroleum	Engine	1	2	33,625
Petroleum	Engine	1	3	36,682
Petroleum	Engine	2	1	24,455
Petroleum	Engine	2	2	26,900
Petroleum	Engine	2	3	29,346
Petroleum	Other	1	1	-
Petroleum	Other	1	2	-
Petroleum	Other	1	3	-
Petroleum	Other	2	1	-
Petroleum	Other	2	2	-
Petroleum	Other	2	3	-
Stone	Fire_Tube_Boiler	1	1	1,591,073
Stone	Fire_Tube_Boiler	1	2	1,750,181
Stone	Fire_Tube_Boiler	1	3	1,909,288
Stone	Fire_Tube_Boiler	2	1	1,272,859
Stone	Fire_Tube_Boiler	2	2	1,400,145
Stone	Fire_Tube_Boiler	2	3	1,527,431
Stone	Water_Tube_Boiler	1	1	316,231
Stone	Water_Tube_Boiler	1	2	347,854
Stone	Water_Tube_Boiler	1	3	379,477
Stone	Water_Tube_Boiler	2	1	252,985
Stone	Water_Tube_Boiler	2	2	278,283
Stone	Water_Tube_Boiler	2	3	303,582
Stone	Space_Heat	1	1	10,255
Stone	Space_Heat	1	2	11,281
Stone	Space_Heat	1	3	12,306
Stone	Space_Heat	2	1	8,204
Stone	Space_Heat	2	2	9,024
Stone	Space_Heat	2	3	9,845
Stone	Water_Heat	1	1	10,249
Stone	Water_Heat	1	2	11,273
Stone	Water_Heat	1	3	12,298
Stone	Water_Heat	2	1	8,199
Stone	Water_Heat	2	2	9,019
Stone	Water_Heat	2	3	9,839
Stone	Dryer	1	1	2,197,157

Stone	Dryer	1	2	2,416,873
Stone	Dryer	1	3	2,636,589
Stone	Dryer	2	1	1,757,726
Stone	Dryer	2	2	1,933,498
Stone	Dryer	2	3	2,109,271
Stone	Furnace_Oven_Kiln	1	1	2,000,409
Stone	Furnace_Oven_Kiln	1	2	2,200,450
Stone	Furnace_Oven_Kiln	1	3	2,400,491
Stone	Furnace_Oven_Kiln	2	1	1,600,327
Stone	Furnace_Oven_Kiln	2	2	1,760,360
Stone	Furnace_Oven_Kiln	2	3	1,920,393
Stone	AC	1	1	12,130
Stone	AC	1	2	13,343
Stone	AC	1	3	14,556
Stone	AC	2	1	9,704
Stone	AC	2	2	10,674
Stone	AC	2	3	11,645
Stone	Engine	1	1	-
Stone	Engine	1	2	-
Stone	Engine	1	3	-
Stone	Engine	2	1	-
Stone	Engine	2	2	-
Stone	Engine	2	3	-
Stone	Other	1	1	-
Stone	Other	1	2	-
Stone	Other	1	3	-
Stone	Other	2	1	-
Stone	Other	2	2	-
Stone	Other	2	3	-
Prim_Metal	Fire_Tube_Boiler	1	1	54,853
Prim_Metal	Fire_Tube_Boiler	1	2	60,338
Prim_Metal	Fire_Tube_Boiler	1	3	65,823
Prim_Metal	Fire_Tube_Boiler	2	1	43,882
Prim_Metal	Fire_Tube_Boiler	2	2	48,270
Prim_Metal	Fire_Tube_Boiler	2	3	52,658
Prim_Metal	Water_Tube_Boiler	1	1	173,303
Prim_Metal	Water_Tube_Boiler	1	2	190,633
Prim_Metal	Water_Tube_Boiler	1	3	207,963
Prim_Metal	Water_Tube_Boiler	2	1	138,642
Prim_Metal	Water_Tube_Boiler	2	2	152,506
Prim_Metal	Water_Tube_Boiler	2	3	166,371
Prim_Metal	Space_Heat	1	1	17,381
Prim_Metal	Space_Heat	1	2	19,119
Prim_Metal	Space_Heat	1	3	20,857
Prim_Metal	Space_Heat	2	1	13,905
Prim_Metal	Space_Heat	2	2	15,295
Prim_Metal	Space_Heat	2	3	16,685
Prim_Metal	Water_Heat	1	1	4,105
Prim_Metal	Water_Heat	1	2	4,515
Prim_Metal	Water_Heat	1	3	4,926
Prim_Metal	Water_Heat	2	1	3,284
Prim_Metal	Water_Heat	2	2	3,612
Prim_Metal	Water_Heat	2	3	3,941
Prim_Metal	Dryer	1	1	8,022
Prim_Metal	Dryer	1	2	8,825
Prim_Metal	Dryer	1	3	9,627
Prim_Metal	Dryer	2	1	6,418
Prim_Metal	Dryer	2	2	7,060
Prim_Metal	Dryer	2	3	7,701
Prim_Metal	Furnace_Oven_Kiln	1	1	4,379,149
Prim_Metal	Furnace_Oven_Kiln	1	2	4,817,064
Prim_Metal	Furnace_Oven_Kiln	1	3	5,254,978
Prim_Metal	Furnace_Oven_Kiln	2	1	3,503,319
Prim_Metal	Furnace_Oven_Kiln	2	2	3,853,651
Prim_Metal	Furnace_Oven_Kiln	2	3	4,203,983
Prim_Metal	AC	1	1	20,859
Prim_Metal	AC	1	2	22,945
Prim_Metal	AC	1	3	25,031
Prim_Metal	AC	2	1	16,687
Prim_Metal	AC	2	2	18,356
Prim_Metal	AC	2	3	20,025
Prim_Metal	Engine	1	1	-

Prim_Metal	Engine	1	2	-
Prim_Metal	Engine	1	3	-
Prim_Metal	Engine	2	1	-
Prim_Metal	Engine	2	2	-
Prim_Metal	Engine	2	3	-
Prim_Metal	Other	1	1	-
Prim_Metal	Other	1	2	-
Prim_Metal	Other	1	3	-
Prim_Metal	Other	2	1	-
Prim_Metal	Other	2	2	-
Prim_Metal	Other	2	3	-
Fab_Metal	Fire_Tube_Boiler	1	1	199,496
Fab_Metal	Fire_Tube_Boiler	1	2	219,446
Fab_Metal	Fire_Tube_Boiler	1	3	239,395
Fab_Metal	Fire_Tube_Boiler	2	1	159,597
Fab_Metal	Fire_Tube_Boiler	2	2	175,557
Fab_Metal	Fire_Tube_Boiler	2	3	191,516
Fab_Metal	Water_Tube_Boiler	1	1	194,739
Fab_Metal	Water_Tube_Boiler	1	2	214,212
Fab_Metal	Water_Tube_Boiler	1	3	233,686
Fab_Metal	Water_Tube_Boiler	2	1	155,791
Fab_Metal	Water_Tube_Boiler	2	2	171,370
Fab_Metal	Water_Tube_Boiler	2	3	186,949
Fab_Metal	Space_Heat	1	1	18,226
Fab_Metal	Space_Heat	1	2	20,049
Fab_Metal	Space_Heat	1	3	21,872
Fab_Metal	Space_Heat	2	1	14,581
Fab_Metal	Space_Heat	2	2	16,039
Fab_Metal	Space_Heat	2	3	17,497
Fab_Metal	Water_Heat	1	1	3,994
Fab_Metal	Water_Heat	1	2	4,393
Fab_Metal	Water_Heat	1	3	4,793
Fab_Metal	Water_Heat	2	1	3,195
Fab_Metal	Water_Heat	2	2	3,515
Fab_Metal	Water_Heat	2	3	3,834
Fab_Metal	Dryer	1	1	18,997
Fab_Metal	Dryer	1	2	20,896
Fab_Metal	Dryer	1	3	22,796
Fab_Metal	Dryer	2	1	15,197
Fab_Metal	Dryer	2	2	16,717
Fab_Metal	Dryer	2	3	18,237
Fab_Metal	Furnace_Oven_Kiln	1	1	686,883
Fab_Metal	Furnace_Oven_Kiln	1	2	755,571
Fab_Metal	Furnace_Oven_Kiln	1	3	824,260
Fab_Metal	Furnace_Oven_Kiln	2	1	549,507
Fab_Metal	Furnace_Oven_Kiln	2	2	604,457
Fab_Metal	Furnace_Oven_Kiln	2	3	659,408
Fab_Metal	AC	1	1	1,899
Fab_Metal	AC	1	2	2,089
Fab_Metal	AC	1	3	2,279
Fab_Metal	AC	2	1	1,519
Fab_Metal	AC	2	2	1,671
Fab_Metal	AC	2	3	1,823
Fab_Metal	Engine	1	1	-
Fab_Metal	Engine	1	2	-
Fab_Metal	Engine	1	3	-
Fab_Metal	Engine	2	1	-
Fab_Metal	Engine	2	2	-
Fab_Metal	Engine	2	3	-
Fab_Metal	Other	1	1	-
Fab_Metal	Other	1	2	-
Fab_Metal	Other	1	3	-
Fab_Metal	Other	2	1	-
Fab_Metal	Other	2	2	-
Fab_Metal	Other	2	3	-
Transport	Fire_Tube_Boiler	1	1	27,156
Transport	Fire_Tube_Boiler	1	2	29,871
Transport	Fire_Tube_Boiler	1	3	32,587
Transport	Fire_Tube_Boiler	2	1	21,724
Transport	Fire_Tube_Boiler	2	2	23,897
Transport	Fire_Tube_Boiler	2	3	26,069
Transport	Water_Tube_Boiler	1	1	15,821

Transport	Water_Tube_Boiler	1	2	17,403
Transport	Water_Tube_Boiler	1	3	18,985
Transport	Water_Tube_Boiler	2	1	12,657
Transport	Water_Tube_Boiler	2	2	13,922
Transport	Water_Tube_Boiler	2	3	15,188
Transport	Space_Heat	1	1	10,868
Transport	Space_Heat	1	2	11,955
Transport	Space_Heat	1	3	13,042
Transport	Space_Heat	2	1	8,694
Transport	Space_Heat	2	2	9,564
Transport	Space_Heat	2	3	10,433
Transport	Water_Heat	1	1	3,231
Transport	Water_Heat	1	2	3,554
Transport	Water_Heat	1	3	3,877
Transport	Water_Heat	2	1	2,585
Transport	Water_Heat	2	2	2,843
Transport	Water_Heat	2	3	3,102
Transport	Dryer	1	1	81,394
Transport	Dryer	1	2	89,533
Transport	Dryer	1	3	97,673
Transport	Dryer	2	1	65,115
Transport	Dryer	2	2	71,627
Transport	Dryer	2	3	78,138
Transport	Furnace_Oven_Kiln	1	1	139,512
Transport	Furnace_Oven_Kiln	1	2	153,464
Transport	Furnace_Oven_Kiln	1	3	167,415
Transport	Furnace_Oven_Kiln	2	1	111,610
Transport	Furnace_Oven_Kiln	2	2	122,771
Transport	Furnace_Oven_Kiln	2	3	133,932
Transport	AC	1	1	518
Transport	AC	1	2	570
Transport	AC	1	3	621
Transport	AC	2	1	414
Transport	AC	2	2	456
Transport	AC	2	3	497
Transport	Engine	1	1	2,575
Transport	Engine	1	2	2,832
Transport	Engine	1	3	3,090
Transport	Engine	2	1	2,060
Transport	Engine	2	2	2,266
Transport	Engine	2	3	2,472
Transport	Other	1	1	-
Transport	Other	1	2	-
Transport	Other	1	3	-
Transport	Other	2	1	-
Transport	Other	2	2	-
Transport	Other	2	3	-
Misc	Fire_Tube_Boiler	1	1	50,324
Misc	Fire_Tube_Boiler	1	2	55,356
Misc	Fire_Tube_Boiler	1	3	60,388
Misc	Fire_Tube_Boiler	2	1	40,259
Misc	Fire_Tube_Boiler	2	2	44,285
Misc	Fire_Tube_Boiler	2	3	48,311
Misc	Water_Tube_Boiler	1	1	35,392
Misc	Water_Tube_Boiler	1	2	38,931
Misc	Water_Tube_Boiler	1	3	42,470
Misc	Water_Tube_Boiler	2	1	28,313
Misc	Water_Tube_Boiler	2	2	31,145
Misc	Water_Tube_Boiler	2	3	33,976
Misc	Space_Heat	1	1	7,731
Misc	Space_Heat	1	2	8,504
Misc	Space_Heat	1	3	9,277
Misc	Space_Heat	2	1	6,185
Misc	Space_Heat	2	2	6,803
Misc	Space_Heat	2	3	7,422
Misc	Water_Heat	1	1	2,224
Misc	Water_Heat	1	2	2,446
Misc	Water_Heat	1	3	2,669
Misc	Water_Heat	2	1	1,779
Misc	Water_Heat	2	2	1,957
Misc	Water_Heat	2	3	2,135
Misc	Dryer	1	1	61,610

Misc	Dryer	1	2	67,771
Misc	Dryer	1	3	73,932
Misc	Dryer	2	1	49,288
Misc	Dryer	2	2	54,217
Misc	Dryer	2	3	59,145
Misc	Furnace_Oven_Kiln	1	1	341,739
Misc	Furnace_Oven_Kiln	1	2	375,913
Misc	Furnace_Oven_Kiln	1	3	410,087
Misc	Furnace_Oven_Kiln	2	1	273,391
Misc	Furnace_Oven_Kiln	2	2	300,731
Misc	Furnace_Oven_Kiln	2	3	328,070
Misc	AC	1	1	2,879
Misc	AC	1	2	3,167
Misc	AC	1	3	3,455
Misc	AC	2	1	2,303
Misc	AC	2	2	2,534
Misc	AC	2	3	2,764
Misc	Engine	1	1	5,988
Misc	Engine	1	2	6,587
Misc	Engine	1	3	7,186
Misc	Engine	2	1	4,790
Misc	Engine	2	2	5,270
Misc	Engine	2	3	5,749
Misc	Other	1	1	-
Misc	Other	1	2	-
Misc	Other	1	3	-
Misc	Other	2	1	-
Misc	Other	2	2	-
Misc	Other	2	3	-

**San Diego Gas and Electric Company
 2016 TCAP - Industrial GN3
 Employment Forecast (in thousands)**

<u>YEAR</u>	<u>Mining</u>	<u>Food</u>	<u>Textile</u>	<u>Wood_Paper</u>	<u>Chemical</u>	<u>Petroleum</u>	<u>Stone</u>	<u>Primary_Metal</u>	<u>Fabricated_Metal</u>	<u>Transportation</u>	<u>Miscellaneous</u>	<u>Total</u>
2014	3063	14014	1513	3846	6140	1141	2303	1598	11739	9925	41809	97092
2015	2954	14133	1490	3972	6201	1146	2416	1601	12159	10186	42734	98992
2016	2905	14338	1454	4166	6294	1159	2458	1643	12758	10231	43198	100604
2017	3065	14534	1410	4310	6394	1151	2507	1694	13063	10068	43444	101640
2018	3178	14742	1371	4385	6494	1133	2553	1726	13100	9860	43561	102103
2019	3255	14843	1329	4458	6547	1114	2573	1733	13141	9586	43546	102125
2020	3293	14978	1286	4553	6549	1097	2565	1726	13198	9272	43470	101987

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
Core Industrial Demand Forecast (Mdt)
Average Temperature

YEAR	<u>Model Output</u>		
	<u>GN-3 - Ind</u>	<u>EE/ DSM</u>	<u>GN-3 - Ind</u>
2014	1521.6	0.0	1521.6
2015	1542.8	5.1	1537.8
2016	1563.2	10.2	1553.1
2017	1561.2	15.2	1546.0
2018	1556.4	20.3	1536.1
2019	1543.5	25.4	1518.1
2020	1519.5	30.5	1489.1

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Cold Temperature

<u>YEAR</u>	<u>Model Output</u>		
	<u>GN-3 - Ind</u>	<u>EE/DSM</u>	<u>GN-3 - Ind</u>
2014	1559.9	0.0	1559.9
2015	1581.6	5.2	1576.4
2016	1602.5	10.4	1592.1
2017	1600.5	15.6	1584.8
2018	1595.5	20.8	1574.7
2019	1582.3	26.0	1556.2
2020	1557.7	31.2	1526.5

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Hot Temperature

<u>YEAR</u>	<u>Model Output</u>		
	<u>GN-3 - Ind</u>	<u>EE/DSM</u>	<u>GN-3 - Ind</u>
2014	1483.4	0.0	1483.4
2015	1504.1	5.0	1499.1
2016	1523.9	9.9	1514.0
2017	1522.0	14.9	1507.1
2018	1517.3	19.8	1497.5
2019	1504.7	24.8	1480.0
2020	1481.4	29.7	1451.6

San Diego Gas and Electric Company
2016 TCAP - Industrial GN3
Core Industrial Demand Forecast
Base Temperature

<u>YEAR</u>	<u>Model Output</u>		
	<u>GN-3 - Ind</u>	<u>EE/DSM</u>	<u>GN-3 - Ind</u>
2014	1362.0	0.0	1362.0
2015	1380.9	4.5	1376.4
2016	1399.2	9.0	1390.2
2017	1397.4	13.7	1383.7
2018	1393.1	18.2	1374.9
2019	1381.5	22.9	1358.6
2020	1360.1	27.7	1332.4

Triennial Cost Allocation Proceeding

NATURAL GAS VEHICLES



1. SDG&E NGV 2016 TCAP

2. Description - SDG&E throughput demand forecast 2014 through 2020

3. Data

Table 1 - Utilities Comb. Volume Forecast Growth Rate						
Years	Total Volume	Total Yearly Volume Change	Yearly growth	Average growth 2009 through 2014	Volumes (mm therms)	Volumes (therms)
	MMTherms	MMTherms	%	%	SDG&E	SoCalGas
End 2014	140.16	9.55	7.31	5.79	14.767072	125,388,584
End 2013	130.60	8.29	6.78		13.640335	116,962,047
End 2012	122.31	8.30	7.28		12.518685	109,794,927
End 2011	114.02	4.65	4.25		11.002706	103,014,171
End 2010	109.37	3.51	3.32		10.315628	1,000,000
End 2009	105.86	n/a	n/a		10.716593	
Compounded Annual growth rate = 5.77%					0.0577	

SDG&E Monthly Forecast Volumes							
Year	January	February	March	April	May	June	July
Compressed Volumes (M Decatherms)							
2014 (therms)	49,891	48,341	58,784	60,070	62,374	61,777	55,026
2014	4.99	4.83	5.88	6.01	6.24	6.18	5.50
2015	5.28	5.11	6.22	6.35	6.60	6.53	5.82
2016	5.58	5.41	6.58	6.72	6.98	6.91	6.16
2017	5.90	5.72	6.96	7.11	7.38	7.31	6.51
2018	6.24	6.05	7.36	7.52	7.81	7.73	6.89
2019	6.60	6.40	7.78	7.95	8.26	8.18	7.28

2020	6.99	6.77	8.23	8.41	8.73	8.65	7.70
Uncompressed Volumes (M Decatherms)							
2014 (therms)	365,597	372,198	375,039	372,271	397,568	395,604	376,914
2014	36.56	37.22	37.50	37.23	39.76	39.56	37.69
2015	38.67	39.37	39.67	39.38	42.05	41.84	39.87
2016	40.90	41.64	41.96	41.65	44.48	44.26	42.17
2017	43.26	44.04	44.38	44.05	47.04	46.81	44.60
2018	45.76	46.58	46.94	46.59	49.76	49.51	47.17
2019	48.40	49.27	49.65	49.28	52.63	52.37	49.89
2020	51.19	52.11	52.51	52.12	55.67	55.39	52.77
Aggregated Transportation Volumes (M Decath							
2014 (therms)	711,851	721,790	673,686	747,607	749,371	763,060	780,994
2014	71.19	72.18	67.37	74.76	74.94	76.31	78.10
2015	75.29	76.34	71.26	79.07	79.26	80.71	82.61
2016	79.64	80.75	75.37	83.64	83.83	85.37	87.37
2017	84.23	85.41	79.72	88.46	88.67	90.29	92.41
2018	89.09	90.34	84.32	93.57	93.79	95.50	97.75
2019	94.23	95.55	89.18	98.97	99.20	101.01	103.39
2020	99.67	101.06	94.33	104.68	104.92	106.84	109.35

- 4. Source - Monthly throughput provided by Downie Beckett (Pricing Analysis, Strategic Analysis Planning Pricing group)
by email on March 23, 2015.**
- 5. Compressed volumes provided by Jim Blake (volumes taken from CISCO and imputed into Access database)**

SDG&E Compressed Volume Detail			
Year	Public Access	Utility Timefill	Total
	therms	therms	therms
2014	594,194	57,574	651,768
2015	628,479	60,896	689,375
2016	664,742	64,410	729,152
2017	703,098	68,126	771,224
2018	743,667	72,057	815,724
2019	786,576	76,215	862,791
2017- 2019 Average	744,447	80,612	825,059

COMPRESSED VOLUMES

COMPRESSED VOLUMES					
August	September	October	November	December	Annual
55,758	51,902	51,975	47,627	48,243	651,768
5.58	5.19	5.20	4.76	4.82	65.18
5.90	5.49	5.50	5.04	5.10	68.94
6.24	5.81	5.81	5.33	5.40	72.92
6.60	6.14	6.15	5.64	5.71	77.12
6.98	6.50	6.50	5.96	6.04	81.57
7.38	6.87	6.88	6.30	6.39	86.28

7.81	7.27	7.28	6.67	6.75	91.26
UNCOMPRESSED VOLUMES					
)					
394,243	413,300	412,182	440,594	409,474	4,724,984
39.42	41.33	41.22	44.06	40.95	472
41.70	43.71	43.60	46.60	43.31	500
44.11	46.24	46.11	49.29	45.81	529
46.65	48.90	48.77	52.13	48.45	559
49.34	51.73	51.59	55.14	51.25	591
52.19	54.71	54.56	58.32	54.20	625
55.20	57.87	57.71	61.69	57.33	662
AGGREGATED TRANSPORTATION VOLUMES (MDTH)					
terms)					
832,658	832,004	862,174	891,144	823,981	9,390,320
83.27	83.20	86.22	89.11	82.40	939
88.07	88.00	91.19	94.26	87.15	993
93.15	93.08	96.45	99.69	92.18	1,051
98.53	98.45	102.02	105.45	97.50	1,111
104.21	104.13	107.91	111.53	103.13	1,175
110.22	110.14	114.13	117.97	109.08	1,243
116.58	116.49	120.72	124.77	115.37	1,315

Combined Utilities NGV Station Growth					Utilities	
Year	Total No. of Stations	Yearly change	Yearly % change	Compounded growth rate	SDG&E	SoCalGas
2014	331	12	3.8%	3.5%	33	298
2013	319	13	4.2%		31	288
2012	306	9	3.0%		30	276
2011	297	8	2.8%		29	268
2010	289	n/a	n/a		28	261

3.5 percent growth rate 2016 - 2020

Year	SoCalGas Station Growth (Uncompressed)		SDG&E Station Growth (Uncompressed)		SoCalGas Compressed Station Growth	SDG&E Compressed Station Growth	Total SoCalGas stations	Total SDG&E stations
	Station count	Yearly change	Station count	Yearly change				
2015	288	10	28	1	2	0	310	34
2016	298	10	29	1	6	0	326	35
2017	308	10	30	1	4	1	351	37
2018	319	11	31	1	4	0	355	38
2019	330	11	32	1	4	1	370	40
2020	342	12	33	1	4	0	386	41

O&M Costs by Function (Nominal 2014\$)			
	Public	Private	Total
SCG			
Throughput (CCF)	1,674,988	631,318	2,306,306
Percent of Total Throughput	72.63%	27.37%	100%
Direct O&M Total	\$678,022	\$255,553	933,575
Indirect O&M Total	\$441,229	\$166,303	607,532
Direct O&M \$/CCF	\$0.40	\$0.40	\$0.40
Indirect O&M \$/CCF	\$0.26	\$0.26	\$0.26
Total O&M \$/CCF	\$0.66	\$0.66	\$0.66
SDG&E			
Throughput (CCF)	594,194	60,929	655,123
Percent of Total Throughput	90.70%	9.30%	100%
Direct O&M Total	\$183,345	\$18,800	202,145
Indirect O&M Total	\$61,135	\$6,269	67,404
Direct O&M \$/CCF	\$0.31	\$0.31	0.31
Indirect O&M \$/CCF	\$0.10	\$0.10	0.10
Total O&M \$/CCF	\$0.41	\$0.41	0.41

1. O&M costs taken from table 9 of E3 report
2. SCG electric and O&M rates, and throughput taken from table 13 of E3 report
3. SDG&E electric and O&M rates, and throughput taken from table 15 of E3 report

Electric Costs (Nominal 2014\$)			
SCG	Totals		
	Total Public	Total Private	Total Public + Private
Throughput (CCF)	1,674,988	631,318	2,306,306
Electricity (\$/CCF)	\$0.21	\$0.31	\$0.23
SDG&E	Totals		
	Total Public	Total Private	Total Public + Private
Throughput (CCF)	594,194	60,929	655,123
Electricity (\$/CCF)	\$0.14	\$1.04	\$0.23

Triennial Cost Allocation Proceeding

ENERGY EFFICIENCY



	Forecast 2014 Therms	Forecast 2015 Therms	Forecast 2016 Therms	Forecast 2017 Therms	Forecast 2018 Therms	Forecast 2019 Therms
SDG&E EE Programs TOTAL Recorded	2,107,194					
PUC Goal	2,200,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Difference	(92,806)					

95.8%

SDGE	2014 therms
Core Residential	408,263
Core Commercial	1,497,355
Core Industrial	30,670
NonCore Commercial	17,091
NonCore Industrial retail	153,816
Total	2,107,194

Proportionally scale savings down or up to match PUC Goals for 2011 - 2014

ANNUALSAVINGS	2014 mdth	2015 mdth	2016 mdth	2017 mdth	2018 mdth	2019 mdth
Residential	(28)	(31)	(31)	(31)	(31)	(31)
Core Commercial	218	248	248	248	248	248
Core Industrial	4	5	5	5	5	5
Noncore Commercial	2	3	3	3	3	3
Noncore Industrial	22	25	25	25	25	25
Total	220	250	250	250	250	250

Cumulative Savings mdth	2015 mdth	2016 mdth	2017 mdth	2018 mdth	2019 mdth
SDGE					
Residential	(31)	(63)	(94)	(126)	(157)
Core Commercial	248	496	744	992	1,240
Core Industrial	5	10	15	20	25
Noncore Commercial	3	6	8	11	14
Noncore Industrial	25	51	76	102	127
Total Load Impacts	250	500	750	1,000	1,250

Forecast Year =====> 1 2 3 4 5

NOTES:

2014 Reported data is preliminary. Final reported data will be filed in the EE Annual Report on May 1, 2015.
 Median Life Cycle of 10 years is assumed.

Triennial Cost Allocation Proceeding

SUPPORTING DATA



Triennial Cost Allocation Proceeding

Service Area Economic Forecast



SAN DIEGO GAS & ELECTRIC COMPANY SERVICE AREA ECONOMIC FORECAST

(forecast based on Global Insight's February 2015 Regional Forecasts)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EMPLOYMENT (1000's)												
Total	1,255.6	1,246.9	1,255.7	1,289.0	1,321.8	1,355.8	1,396.6	1,430.1	1,456.9	1,477.0	1,496.6	1,519.3
I: Industrial (all manufacturing + mining)	95.7	93.3	93.5	94.7	95.0	97.1	99.0	100.6	101.6	102.1	102.1	102.0
C1: Office (Financial+Bus. & Professional Svcs)	276.5	274.9	277.4	286.3	294.1	301.8	314.5	326.4	333.7	337.1	342.9	351.7
C2: Restaurants	100.3	101.3	103.2	108.4	113.3	117.7	121.4	123.3	125.6	127.8	129.2	130.3
C3: Retail Trade	131.6	130.7	133.4	137.2	140.8	142.8	145.8	147.4	147.6	147.4	147.4	147.4
C4: Laundry & other Personal Services	15.2	15.0	15.5	16.3	16.6	17.2	17.5	17.6	17.6	17.6	17.6	17.7
C5: Wholesale Trade & Warehouses	42.6	41.9	43.0	44.7	45.7	48.0	49.7	50.9	51.8	52.6	53.4	54.1
C6: Primary & Secondary Schools	88.3	90.2	91.2	90.3	91.5	94.3	97.4	100.2	102.3	104.0	105.6	106.8
C7: Colleges (including other adult education)	38.9	40.4	41.1	42.3	42.8	42.3	43.7	45.0	45.9	46.7	47.4	47.9
C8: Health Services	131.5	134.1	135.7	141.4	149.3	153.8	158.9	163.5	167.0	169.8	172.3	174.2
C9: Accommodation	30.2	29.2	28.3	28.5	28.3	28.3	29.2	29.6	30.2	30.7	31.0	31.3
C10: Misc. (all other commercial employment)	55.8	55.1	56.2	57.6	58.4	60.4	61.4	61.8	61.7	61.7	61.8	62.1
C11: Government (non-education)	124.1	125.3	123.7	124.3	125.2	125.7	126.1	126.0	127.4	128.9	130.6	133.9
C12: Transportation, Information, and Utilities	53.4	49.8	48.6	50.3	49.9	50.3	51.8	53.1	53.8	54.7	55.4	56.2
C13: Construction	61.1	55.3	55.2	56.9	61.2	66.4	70.3	75.0	80.7	85.9	89.8	93.6
C14: Agriculture	10.4	10.5	9.8	9.8	9.8	9.9	9.9	9.9	10.0	10.0	10.1	10.1
OTHER												
Southern California Area Consumer Inflation*	-0.8%	1.2%	2.7%	2.0%	1.1%	1.3%	-0.5%	2.3%	2.7%	2.6%	2.5%	2.5%

* Consumer Price Index for Greater Los Angeles area (Los Angeles, Orange, and Riverside Counties)