2012 California Gas Report Workpapers

REDACTED– Internal Distribution Only

Prepared by

SDGE

A Sempra Energy utility℠

TABLE OF CONTENTS

2012 CALIFORNIA GAS REPORT

HISTORICAL DATA
JULY 2012

San Diego Gas And Electric Company

Annual Gas Supply and Sendout (MMcf/Day)
Recorded Years 2007-2011

LINE			2007	2008	2009	2010	2011
	Actual Deliveries by End-Use						
1	**CORE**	Residential	89	149	82	85	88
2		Commercial	46	62	45	46	47
3		Industrial	0	0	0	0	0
4		NGV	2.6	2.8	2.8	2.7	2.9
5	*Subtotal -*	*CORE*	138	214	130	133	138
6	**NONCORE**	Commercial	0	0	0	0	0
7		Industrial	9	13	11	12	12
8		Non-EOR Cogen/EG	101	136	115	98	69
9		Electric Utilities	63	24	64	81	87
10	*Subtotal -*	*NONCORE*	173	173	191	191	169
11	**WHOLESALE**	All End Uses	0	0	0	0	0
12	*Subtotal -*	*Co Use & LUAF*	11	6	3	6	5
13	**SYSTEM TOTAL THROUGHPUT**		322	393	324	330	312
	Actual Transport & Exchange						
14	**CORE**	Residential	0	0	0	0	0
15		Commercial	4	8	8	10	10
16	**NONCORE**	Industrial	9	12	11	12	12
17		Non-EOR Cogen/EG	100	136	115	98	69
18		Electric Utilities	63	24	64	81	87
19	*Subtotal -*	*RETAIL*	176	180	199	201	179
20	**WHOLESALE**	All End Uses	0	0	0	0	0
21	**TOTAL TRANSPORT & EXCHANGE**		176	180	199	201	179
	Storage						
22		*Storage Injection*	15	0	0	0	0
23		*Storage Withdrawal*	15	74	0	0	0
	Actual Curtailment						
24		Residential	0	0	0	0	0
25		Com/Indl & Cogen	0	0	0	0	0
26		Electric Generation	0	0	0	0	0
27	**TOTAL CURTAILMENT**		0	0	0	0	0
28	**REFUSAL**		0	0	0	0	0
	ACTUAL DELIVERIES BY END-USE includes sales and transportation volumes						
		MMbtu/Mcf:	1.022	1.023	1.020	1.019	1.018

San Diego Gas And Electric Company

Annual Gas Supply Taken (MMcf/Day)
Recorded Years 2007-2011

LINE		2007	2008	2009	2010	2011
	CAPACITY AVAILABLE					
1	**California Sources**					
	Out of State gas					
2	California Offshore (POPCO/PIOC)					
3	El Paso Natural Gas Company					
4	Transwestern Pipeline company					
5	Kern River/Mojave Pipeline Company					
6	TransCanada GTN/PG&E					
7	Other					
8	**TOTAL Output of State**					
9	Underground storage withdrawal					
10	**TOTAL Gas Supply available**					
	Gas Supply Taken	**2007**	**2008**	**2009**	**2010**	**2011**
	California Source Gas					
11	Regular Purchases	9	17	0	0	0
12	Received for Exchange/Transport	0	0	0	0	0
13	**Total California Source Gas**	9	17	0	0	0
14	**Purchases from Other Utilities**	0	0	0	0	0
	Out-of-State Gas					
15	Pacific Interstate Companies	0	0	0	0	0
16	Additional Core Supplies	0	0	0	0	0
17	Supplemental Supplies-Utility	136	196	125	130	132
18	Out-of-State Transport-Others	176	180	199	201	179
19	**Total Out-of-State Gas**	313	376	324	330	312
20	**TOTAL Gas Supply Taken & Transported**	322	393	324	330	312

2012 CALIFORNIA GAS REPORT

FORECAST OF REQUIREMENTS - SUMMARY
JULY 2012

2012 CALIFORNIA GAS REPORT

AVERAGE TEMPERATURE YEAR
JULY 2012

TABLE 1-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2012 THRU 2014

AVERAGE TEMPERATURE YEAR

LINE			2012	2013	2014	LINE
	CAPACITY AVAILABLE [1/ & 2/]					
1	California Source Gas		0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	3
	GAS SUPPLY TAKEN					
4	California Source Gas		0	0	0	4
5	Southern Zone of SoCalGas		345	327	326	5
6	TOTAL SUPPLY TAKEN		345	327	326	6
7	Net Underground Storage Withdrawal		0	0	0	7
8	TOTAL THROUGHPUT		345	327	326	8
	REQUIREMENTS FORECAST BY END-USE [3/]					
9	CORE [4/]	Residential	87	87	87	9
10		Commercial	45	45	44	10
11		Industrial	4	4	4	11
12		NGV	3	3	3	12
13		Subtotal-CORE	139	139	138	13
14	NONCORE	Commercial	6	7	7	14
15		Industrial	4	4	4	15
16		Electric Generation (EG)	191	173	173	16
17		Subtotal-NONCORE	201	184	184	17
18		Co. Use & LUAF	5	4	4	18
19	SYSTEM TOTAL THROUGHPUT		345	327	326	19
	TRANSPORTATION AND EXCHANGE					
20	CORE	All End Uses	9	9	9	20
21	NONCORE	Commercial/Industrial	11	10	10	21
22		Electric Generation (EG)	191	173	173	22
23	TOTAL TRANSPORTATION & EXCHANGE		211	192	192	23
	CURTAILMENT					
24		Core	0	0	0	24
25		Noncore	0	0	0	25
26		TOTAL - Curtailment	0	0	0	26

NOTES:

1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on w
non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).

2/ For 2012 and after, assume capacity at same levels.

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Core end-use demand exclusive of core aggregation
transportation (CAT) in MDth/d: 131 131 130

TABLE 2-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2015 THRU 2030

AVERAGE TEMPERATURE YEAR

LINE			2015	2020	2025	2030	LINE
	CAPACITY AVAILABLE [1/ & 2/]						
1	California Source Gas		0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	3
	GAS SUPPLY TAKEN						
4	California Source Gas		0	0	0	0	4
5	Out-of-State		326	315	322	331	5
6	TOTAL SUPPLY TAKEN		326	315	322	331	6
7	Net Underground Storage Withdrawal		0	0	0	0	7
8	TOTAL THROUGHPUT		326	315	322	331	8
	REQUIREMENTS FORECAST BY END-USE [3/]						
9	CORE [4/]	Residential	87	88	91	93	9
10		Commercial	43	39	38	39	10
11		Industrial	4	4	4	4	11
12		NGV	3	3	4	4	12
13		Subtotal-CORE	137	134	137	140	13
14	NONCORE	Commercial	7	7	8	9	14
15		Industrial	4	4	3	3	15
16		Electric Generation (EG)	174	166	170	174	16
17		Subtotal-NONCORE	185	177	181	186	17
18		Co. Use & LUAF	4	4	4	5	18
19	SYSTEM TOTAL THROUGHPUT		326	315	322	331	19
	TRANSPORTATION AND EXCHANGE						
20	CORE	All End Uses	9	8	8	9	20
21	NONCORE	Commercial/Industrial	11	11	11	12	21
22		Electric Generation (EG)	174	166	170	174	22
23	TOTAL TRANSPORTATION & EXCHANGE		194	185	189	195	23
	CURTAILMENT						
24		Core	0	0	0	0	24
25		Noncore	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 129 127 130 132

Work Paper: TABLE 1-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2012

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		367	351	356	346	308	303	382	380	373	274	306	406	345	5
6	TOTAL SUPPLY TAKEN		367	351	356	346	308	303	382	380	373	274	306	406	345	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		367	351	356	346	308	303	382	380	373	274	306	406	346	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	140	128	116	95	68	53	49	48	49	58	97	145	87	9
10		Commercial	57	60	49	48	42	39	36	34	38	38	49	56	45	10
11		Industrial	5	5	5	4	4	4	3	3	3	3	4	5	4	11
12		NGV	3	3	3	3	3	3	3	3	3	3	3	3	3	12
13		Subtotal-CORE	204	196	171	150	117	99	91	89	94	103	154	209	140	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	158	149	179	191	187	200	285	286	275	168	148	191	202	17
18		Co. Use & LUAF	5	5	5	5	4	4	5	5	5	4	4	6	5	18
19	SYSTEM TOTAL THROUGHPUT		367	351	356	346	308	303	382	380	373	274	306	406	346	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	11	12	10	10	8	8	8	7	8	8	10	11	9	20
21																21
22	NONCORE	All End Uses	158	149	179	191	187	200	285	286	275	168	148	191	202	22
23	TOTAL TRANSPORTATION & EXCHANGE		169	161	189	200	196	208	293	293	283	176	158	202	211	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 195 187 164 142 110 92 84 83 86 96 145 200 132

Work Paper: **TABLE 1-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2013

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		341	346	306	289	252	280	375	373	371	280	301	408	327	5
6	TOTAL SUPPLY TAKEN		341	346	306	289	252	280	375	373	371	280	301	408	327	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		341	346	306	289	252	280	375	373	371	280	301	408	326	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	139	133	115	95	68	53	49	48	49	58	97	145	87	9
10		Commercial	56	61	48	47	41	38	36	34	37	37	49	55	45	10
11		Industrial	5	5	4	4	4	4	3	3	3	3	4	5	4	11
12		NGV	3	3	3	3	3	3	3	3	3	3	3	3	3	12
13		Subtotal-CORE	203	202	170	150	117	99	91	89	93	102	153	208	139	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	133	139	132	136	132	178	279	279	273	174	144	194	183	17
18		Co. Use & LUAF	5	5	4	4	3	4	5	5	5	4	4	6	4	18
19	SYSTEM TOTAL THROUGHPUT		341	346	306	289	252	280	375	373	371	280	301	408	326	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	11	12	9	10	8	8	8	7	8	8	10	11	9	20
21																21
22	NONCORE	All End Uses	133	139	132	136	132	178	279	279	273	174	144	194	183	22
23	TOTAL TRANSPORTATION & EXCHANGE		144	151	141	145	141	186	287	286	281	182	154	205	192	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 194 192 163 142 109 91 84 82 86 95 145 199 131

Work Paper: **TABLE 1-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: **2014**

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		340	344	303	288	249	274	375	377	371	276	306	411	326	5
6	TOTAL SUPPLY TAKEN		340	344	303	288	249	274	375	377	371	276	306	411	326	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		340	344	303	288	249	274	375	377	371	276	306	411	326	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	139	133	115	95	68	53	49	48	49	58	97	145	87	9
10		Commercial	55	60	47	46	41	38	35	33	37	37	48	54	44	10
11		Industrial	5	5	4	4	4	4	3	3	3	3	4	5	4	11
12		NGV	3	3	3	3	3	3	3	3	3	3	3	3	3	12
13		Subtotal-CORE	202	201	170	149	116	98	90	88	92	101	152	207	138	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	133	137	130	135	130	172	280	284	274	171	150	198	183	17
18		Co. Use & LUAF	5	5	4	4	3	4	5	5	5	4	4	6	4	18
19	SYSTEM TOTAL THROUGHPUT		340	344	303	288	249	274	375	377	371	276	306	411	326	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	11	12	9	9	8	8	8	7	8	8	10	11	9	20
21																21
22	NONCORE	All End Uses	133	137	130	135	130	172	280	284	274	171	150	198	183	22
23	TOTAL TRANSPORTATION & EXCHANGE		143	149	139	145	139	180	287	291	282	179	160	208	192	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 193 191 162 141 109 91 83 82 85 94 144 199 131

Work Paper: TABLE 2-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2015

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		341	345	305	291	251	274	376	378	373	277	302	413	326	5
6	TOTAL SUPPLY TAKEN		341	345	305	291	251	274	376	378	373	277	302	413	326	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		341	345	305	291	251	274	376	378	373	277	302	413	327	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	140	133	115	95	68	53	49	48	49	58	97	145	87	9
10		Commercial	54	59	46	46	40	37	34	33	36	36	47	53	43	10
11		Industrial	5	5	4	4	4	4	3	3	3	3	4	5	4	11
12		NGV	3	3	3	3	3	3	3	3	3	3	4	3	3	12
13		Subtotal-CORE	201	200	169	148	115	97	89	88	92	101	151	206	138	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	135	139	132	139	133	173	282	285	277	172	147	201	185	17
18		Co. Use & LUAF	5	5	4	4	3	4	5	5	5	4	4	6	4	18
19	SYSTEM TOTAL THROUGHPUT		341	345	305	291	251	274	376	378	373	277	302	413	327	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	10	12	9	9	8	8	7	7	8	8	10	11	9	20
21																21
22	NONCORE	All End Uses	135	139	132	139	133	173	282	285	277	172	147	201	185	22
23	TOTAL TRANSPORTATION & EXCHANGE		146	151	142	148	141	181	289	292	285	180	156	211	194	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 192 191 161 140 108 90 83 81 85 94 143 198 130

Work Paper: TABLE 2-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2020

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		347	337	308	294	254	277	320	320	316	282	316	422	315	5
6	TOTAL SUPPLY TAKEN		347	337	308	294	254	277	320	320	316	282	316	422	315	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		347	337	308	294	254	277	320	320	316	282	316	422	316	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	141	130	117	96	69	54	49	49	49	59	98	147	88	9
10		Commercial	49	51	42	41	36	34	31	30	33	32	42	48	39	10
11		Industrial	5	5	4	4	4	4	3	3	3	3	4	4	4	11
12		NGV	3	3	3	3	3	3	3	3	4	3	4	3	3	12
13		Subtotal-CORE	197	190	166	145	112	94	87	85	89	98	148	203	134	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	144	142	138	145	138	179	229	230	223	180	164	212	177	17
18		Co. Use & LUAF	5	5	4	4	3	4	4	4	4	4	4	6	4	18
19	SYSTEM TOTAL THROUGHPUT		347	337	308	294	254	277	320	320	316	282	316	422	316	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	10	11	9	9	8	8	7	7	8	7	9	10	8	20
21																21
22	NONCORE	All End Uses	144	142	138	145	138	179	229	230	223	180	164	212	177	22
23	TOTAL TRANSPORTATION & EXCHANGE		154	153	146	154	146	186	236	237	230	187	173	222	186	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 190 181 159 138 106 88 80 79 82 92 140 195 127

Work Paper: TABLE 2-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2025

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		353	355	313	299	259	282	324	324	320	286	322	428	322	5
6	TOTAL SUPPLY TAKEN		353	355	313	299	259	282	324	324	320	286	322	428	322	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		353	355	313	299	259	282	324	324	320	286	322	428	322	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	145	138	120	99	71	55	50	50	51	60	100	150	91	9
10		Commercial	47	52	41	40	35	33	30	29	32	32	41	47	38	10
11		Industrial	4	5	4	4	4	3	3	3	3	3	4	4	4	11
12		NGV	3	4	3	4	3	4	3	4	4	4	4	4	4	12
13		Subtotal-CORE	200	198	168	146	113	95	87	86	89	99	150	205	136	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	148	152	141	149	142	183	233	234	226	183	168	216	181	17
18		Co. Use & LUAF	5	5	4	4	4	4	4	4	4	4	4	6	4	18
19	SYSTEM TOTAL THROUGHPUT		353	355	313	299	259	282	324	324	320	286	322	428	322	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	10	11	9	9	8	8	7	7	8	7	9	10	8	20
21																21
22	NONCORE	All End Uses	148	152	141	149	142	183	233	234	226	183	168	216	181	22
23	TOTAL TRANSPORTATION & EXCHANGE		158	162	150	158	150	190	240	241	234	191	177	226	190	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 192 189 161 139 106 88 81 79 83 92 142 198 129

Work Paper: TABLE 2-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2030

AVERAGE TEMPERATURE with BASE HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		362	364	321	307	266	288	331	331	326	293	330	437	331	5
6	TOTAL SUPPLY TAKEN		362	364	321	307	266	288	331	331	326	293	330	437	331	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		362	364	321	307	266	288	331	331	326	293	330	437	330	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	148	141	123	101	72	57	52	51	52	62	103	154	93	9
10		Commercial	48	53	42	41	36	33	31	29	32	32	42	48	39	10
11		Industrial	4	5	4	4	4	3	3	3	3	3	4	4	4	11
12		NGV	3	4	3	4	4	4	4	4	4	4	4	4	4	12
13		Subtotal-CORE	204	203	171	149	116	97	89	88	91	101	153	210	139	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	153	157	146	154	147	187	237	239	231	188	173	221	186	17
18		Co. Use & LUAF	5	5	4	4	4	4	5	5	4	4	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		362	364	321	307	266	288	331	331	326	293	330	437	330	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	10	11	9	9	8	8	7	7	8	8	10	10	9	20
21																21
22	NONCORE	All End Uses	153	157	146	154	147	187	237	239	231	188	173	221	186	22
23	TOTAL TRANSPORTATION & EXCHANGE		163	168	155	163	155	195	244	246	239	196	182	231	195	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 196 193 164 142 109 90 83 81 84 94 145 202 132

2012 CALIFORNIA GAS REPORT

COLD TEMPERATURE YEAR
JULY 2012

TABLE 3-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2012 THRU 2014

COLD TEMPERATURE YEAR & DRY HYDRO YEAR

LINE			2012	2013	2014	LINE
	CAPACITY AVAILABLE [1/ & 2/]					
1	California Source Gas		0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	3
	GAS SUPPLY TAKEN					
4	California Source Gas		0	0	0	4
5	Southern Zone of SoCalGas		356	347	346	5
6	TOTAL SUPPLY TAKEN		356	347	346	6
7	Net Underground Storage Withdrawal		0	0	0	7
8	TOTAL THROUGHPUT		356	347	346	8
	REQUIREMENTS FORECAST BY END-USE [3/]					
9	CORE [4/]	Residential	96	97	97	9
10		Commercial	47	47	46	10
11		Industrial	4	4	4	11
12		NGV	3	3	3	12
13		Subtotal-CORE	150	151	150	13
14	NONCORE	Commercial	6	7	7	14
15		Industrial	4	4	4	15
16		Electric Generation (EG)	191	180	180	16
17		Subtotal-NONCORE	201	191	191	17
18		Co. Use & LUAF	5	5	5	18
19	SYSTEM TOTAL THROUGHPUT		356	347	346	19
	TRANSPORTATION AND EXCHANGE					
20	CORE	All End Uses	9	9	9	20
21	NONCORE	Commercial/Industrial	11	10	10	21
22		Electric Generation (EG)	191	180	180	22
23	TOTAL TRANSPORTATION & EXCHANGE		211	199	199	23
	CURTAILMENT					
24		Core	0	0	0	24
25		Noncore	0	0	0	25
26		TOTAL - Curtailment	0	0	0	26

NOTES:

1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on w non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).

2/ For 2012 and after, assume capacity at same levels.

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.

4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 142 143 142

TABLE 4-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2015 THRU 2030

COLD TEMPERATURE YEAR & DRY HYDRO YEAR

LINE			2015	2020	2025	2030	LINE
	CAPACITY AVAILABLE [1/ & 2/]						
1	California Source Gas		0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	3
	GAS SUPPLY TAKEN						
4	California Source Gas		0	0	0	0	4
5	Out-of-State		348	335	341	350	5
6	TOTAL SUPPLY TAKEN		348	335	341	350	6
7	Net Underground Storage Withdrawal		0	0	0	0	7
8	TOTAL THROUGHPUT		348	335	341	350	8
	REQUIREMENTS FORECAST BY END-USE [3/]						
9	CORE [4/]	Residential	97	98	100	103	9
10		Commercial	45	41	40	41	10
11		Industrial	4	4	4	4	11
12		NGV	3	3	4	4	12
13		Subtotal-CORE	149	146	148	152	13
14	NONCORE	Commercial	7	7	8	9	14
15		Industrial	4	4	3	3	15
16		Electric Generation (EG)	183	173	177	181	16
17		Subtotal-NONCORE	194	184	188	193	17
18		Co. Use & LUAF	5	5	5	5	18
19	SYSTEM TOTAL THROUGHPUT		348	335	341	350	19
	TRANSPORTATION AND EXCHANGE						
20	CORE	All End Uses	9	9	9	9	20
21	NONCORE	Commercial/Industrial	11	11	11	12	21
22		Electric Generation (EG)	183	173	177	181	22
23	TOTAL TRANSPORTATION & EXCHANGE		203	193	197	202	23
	CURTAILMENT						
24		Core	0	0	0	0	24
25		Noncore	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2012 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 141 138 140 145

Work Paper: **TABLE 3-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2012

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		434	408	375	316	296	318	340	341	336	339	386	466	356	5
6	TOTAL SUPPLY TAKEN		434	408	375	316	296	318	340	341	336	339	386	466	356	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		434	408	375	316	296	318	340	341	336	339	386	466	363	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	151	139	122	95	66	49	43	43	44	54	98	158	89	9
10		Commercial	64	65	58	47	53	39	38	35	36	35	47	62	48	10
11		Industrial	5	6	5	5	4	4	3	3	4	4	5	5	4	11
12		NGV	5	5	5	5	5	5	3	3	3	3	3	3	4	12
13		Subtotal-CORE	224	215	189	152	127	97	87	84	86	96	153	228	145	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	204	187	181	160	165	217	247	252	245	238	227	232	213	17
18		Co. Use & LUAF	6	6	5	4	4	4	5	5	5	5	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		434	408	375	316	296	318	340	341	336	339	386	466	363	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	12	11	9	10	8	8	7	8	8	10	12	10	20
21																21
22	NONCORE	All End Uses	204	187	181	160	165	217	247	252	245	238	227	232	213	22
23	TOTAL TRANSPORTATION & EXCHANGE		215	199	192	169	175	226	255	259	253	245	237	244	223	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 217 207 182 146 119 90 81 78 80 90 147 221 138

Work Paper: **TABLE 3-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2013

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		434	418	369	315	293	319	342	340	338	340	384	467	347	5
6	TOTAL SUPPLY TAKEN		434	418	369	315	293	319	342	340	338	340	384	467	347	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		434	418	369	315	293	319	342	340	338	340	384	467	363	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	151	144	122	95	65	49	43	43	44	54	98	158	89	9
10		Commercial	63	66	57	46	52	39	37	34	36	35	47	62	48	10
11		Industrial	5	6	5	5	4	4	3	3	4	4	5	5	4	11
12		NGV	5	5	5	5	5	5	3	3	3	3	3	3	4	12
13		Subtotal-CORE	224	222	189	152	127	96	87	84	86	96	153	228	145	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	205	191	175	160	162	219	250	252	247	239	227	233	213	17
18		Co. Use & LUAF	6	6	5	4	4	4	5	5	5	5	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		434	418	369	315	293	319	342	340	338	340	384	467	363	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	13	11	9	10	8	8	7	8	8	9	12	10	20
21																21
22	NONCORE	All End Uses	205	191	175	160	162	219	250	252	247	239	227	233	213	22
23	TOTAL TRANSPORTATION & EXCHANGE		216	203	186	169	172	227	258	259	255	247	236	245	223	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 216 213 181 145 119 90 80 78 80 90 146 220 138

Work Paper: **TABLE 3-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2014

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Southern Zone of SoCalGas		436	417	368	313	292	315	344	348	342	341	386	464	346	5
6	TOTAL SUPPLY TAKEN		436	417	368	313	292	315	344	348	342	341	386	464	346	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		436	417	368	313	292	315	344	348	342	341	386	464	364	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	151	144	122	95	66	49	43	43	44	54	98	158	89	9
10		Commercial	62	66	56	46	52	38	37	34	35	35	46	61	47	10
11		Industrial	5	6	5	5	4	4	3	3	4	4	5	5	4	11
12		NGV	5	5	5	5	5	5	3	3	3	3	3	3	4	12
13		Subtotal-CORE	223	221	188	151	126	96	86	83	86	95	152	227	144	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	207	190	175	158	162	216	253	259	251	240	229	231	215	17
18		Co. Use & LUAF	6	6	5	4	4	4	5	5	5	5	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		436	417	368	313	292	315	344	348	342	341	386	464	364	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	12	11	9	10	8	8	7	8	8	9	12	9	20
21																21
22	NONCORE	All End Uses	207	190	175	158	162	216	253	259	251	240	229	231	215	22
23	TOTAL TRANSPORTATION & EXCHANGE		219	202	186	167	172	224	261	267	259	248	238	243	224	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 216 213 181 145 118 89 80 78 79 90 146 220 137

Work Paper: **TABLE 4-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2015

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		441	426	375	314	291	317	353	356	344	350	394	468	348	5
6	TOTAL SUPPLY TAKEN		441	426	375	314	291	317	353	356	344	350	394	468	348	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		441	426	375	314	291	317	353	356	344	350	394	468	369	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	151	145	122	96	66	49	44	43	44	54	99	159	89	9
10		Commercial	61	65	56	45	51	38	36	34	35	34	46	60	47	10
11		Industrial	5	6	5	5	4	4	3	3	3	4	5	5	4	11
12		NGV	5	5	5	5	5	5	3	3	3	3	3	3	4	12
13		Subtotal-CORE	223	220	188	151	126	95	86	83	85	95	152	227	144	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	212	199	183	159	161	218	262	268	253	250	237	235	220	17
18		Co. Use & LUAF	6	6	5	4	4	4	5	5	5	5	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		441	426	375	314	291	317	353	356	344	350	394	468	369	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	12	10	9	10	8	8	7	8	7	9	11	9	20
21																21
22	NONCORE	All End Uses	212	199	183	159	161	218	262	268	253	250	237	235	220	22
23	TOTAL TRANSPORTATION & EXCHANGE		224	212	193	169	171	226	270	275	261	257	247	247	229	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 215 212 181 144 118 89 80 77 79 89 145 219 137

Work Paper: **TABLE 4-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2020

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		435	395	364	309	284	284	316	325	312	318	351	440	335	5
6	TOTAL SUPPLY TAKEN		435	395	364	309	284	284	316	325	312	318	351	440	335	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		435	395	364	309	284	284	316	325	312	318	351	440	345	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	154	142	125	98	67	50	44	44	45	55	101	162	90	9
10		Commercial	60	61	55	44	50	37	36	33	34	34	45	59	46	10
11		Industrial	5	5	4	4	4	4	3	3	3	3	4	5	4	11
12		NGV	5	5	5	5	5	5	3	3	3	3	3	3	4	12
13		Subtotal-CORE	224	214	189	152	126	96	86	83	85	95	153	228	144	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	204	176	170	153	154	185	226	237	223	218	193	206	196	17
18		Co. Use & LUAF	6	5	5	4	4	4	4	4	4	4	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		435	395	364	309	284	284	316	325	312	318	351	440	345	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	11	12	10	9	10	8	8	7	8	7	9	11	9	20
21																21
22	NONCORE	All End Uses	204	176	170	153	154	185	226	237	223	218	193	206	196	22
23	TOTAL TRANSPORTATION & EXCHANGE		216	187	180	162	164	193	234	245	231	226	202	217	205	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 217 206 182 145 118 89 80 77 79 90 146 221 138

Work Paper: **TABLE 4-SDGE**

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2025

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		435	410	364	309	284	283	315	323	311	317	350	441	341	5
6	TOTAL SUPPLY TAKEN		435	410	364	309	284	283	315	323	311	317	350	441	341	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		435	410	364	309	284	283	315	323	311	317	350	441	345	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	157	150	126	99	68	50	45	45	45	56	102	164	92	9
10		Commercial	61	64	55	45	51	37	36	33	35	34	45	60	46	10
11		Industrial	4	5	4	4	3	3	3	3	3	3	4	4	4	11
12		NGV	5	6	5	6	6	6	3	3	3	3	3	3	4	12
13		Subtotal-CORE	227	225	191	154	128	97	87	84	86	97	155	231	146	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	202	179	167	151	152	182	224	235	221	216	190	204	194	17
18		Co. Use & LUAF	6	6	5	4	4	4	4	4	4	4	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		435	410	364	309	284	283	315	323	311	317	350	441	345	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	12	11	9	10	8	8	8	8	8	10	12	10	20
21																21
22	NONCORE	All End Uses	202	179	167	151	152	182	224	235	221	216	190	204	194	22
23	TOTAL TRANSPORTATION & EXCHANGE		214	192	178	160	162	191	232	242	228	224	200	215	203	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 220 216 184 147 120 90 81 78 80 91 148 224 140

Work Paper: TABLE 4-SDGE

SAN DIEGO GAS & ELECTRIC COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED FOR YEAR: 2030

COLD TEMPERATURE with DRY HYDRO YEAR

LINE			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	LINE
	CAPACITY AVAILABLE [1/ & 2/]															
1	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	Southern Zone of SoCalGas [1/]		607	607	607	607	607	607	607	607	607	607	607	607	607	2
3	TOTAL CAPACITY AVAILABLE		607	607	607	607	607	607	607	607	607	607	607	607	607	3
	GAS SUPPLY TAKEN															
4	California Source Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	4
5	Out-of-State		437	411	365	309	283	283	314	322	310	316	350	442	350	5
6	TOTAL SUPPLY TAKEN		437	411	365	309	283	283	314	322	310	316	350	442	350	6
7	Net Underground Storage Withdrawal		0	0	0	0	0	0	0	0	0	0	0	0	0	7
8	TOTAL THROUGHPUT		437	411	365	309	283	283	314	322	310	316	350	442	345	8
	REQUIREMENTS FORECAST BY END-USE [3/]															
9	CORE [4/]	Residential	159	152	128	100	69	51	46	46	46	57	104	167	93	9
10		Commercial	62	66	56	46	51	38	37	34	35	35	46	61	47	10
11		Industrial	4	5	4	4	3	3	3	3	3	3	4	4	3	11
12		NGV	6	6	6	6	6	6	3	3	3	3	3	3	5	12
13		Subtotal-CORE	231	228	194	156	129	98	88	85	87	98	157	235	149	13
14																14
15																15
16																16
17	NONCORE	Subtotal-NONCORE	200	177	165	149	150	180	222	233	218	214	188	202	192	17
18		Co. Use & LUAF	6	6	5	4	4	4	4	4	4	4	5	6	5	18
19	SYSTEM TOTAL THROUGHPUT		437	411	365	309	283	283	314	322	310	316	350	442	345	19
	TRANSPORTATION AND EXCHANGE															
20	CORE	All End Uses	12	13	11	10	10	8	8	8	8	8	10	12	10	20
21																21
22	NONCORE	All End Uses	200	177	165	149	150	180	222	233	218	214	188	202	192	22
23	TOTAL TRANSPORTATION & EXCHANGE		212	190	176	158	160	189	230	241	226	222	198	214	202	23
	CURTAILMENT															
24		Core	0	0	0	0	0	0	0	0	0	0	0	0	0	24
25		Noncore	0	0	0	0	0	0	0	0	0	0	0	0	0	25
26		TOTAL - Curtailment	0	0	0	0	0	0	0	0	0	0	0	0	0	26

NOTES:
1/ Capacity to receive gas from the Southern Zone of SoCalGas is an annual value based on weighting winter and non-winter season values: 607 = (630 winter) x (151/365) + (590 non-winter) x (214/365).
2/ For 2010 and after, assume capacity at same levels.
3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Core end-use demand exclusive of core aggregation transportation (CAT) in MDth/d: 223 219 187 149 121 92 82 79 81 92 150 227 141

2012 CALIFORNIA GAS REPORT

FORECAST OF REQUIREMENTS – DETAIL
JULY 2012

2012 CALIFORNIA GAS REPORT

CUSTOMER FORECAST
JULY 2012

SAN DIEGO GAS and ELECTRIC COMPANY: CUSTOMER FORECAST
2012 CGR
(annual averages)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Residential	821,874	828,312	837,035	847,583	859,640	872,589	885,405	898,046	910,511	922,802	934,915	946,687
Core C/I	30,114	30,088	29,934	29,833	29,829	29,892	30,000	30,115	30,232	30,361	30,471	30,560
NGV	29	29	30	31	31	31	32	32	33	33	34	34
Non-Core C/I	57	58	58	57	57	58	58	58	58	58	59	59
Electric Generation	61	64	67	70	74	77	80	82	85	88	91	94
TOTAL	852,135	858,551	867,123	877,574	889,631	902,647	915,574	928,332	940,919	953,343	965,569	977,433
Net Gain	4,830	6,416	8,572	10,451	12,057	13,017	12,927	12,758	12,587	12,424	12,226	11,864
Meter Growth	0.57%	0.75%	1.00%	1.21%	1.37%	1.46%	1.43%	1.39%	1.36%	1.32%	1.28%	1.23%

SAN DIEGO GAS and ELECTRIC COMPANY: CUSTOMER FORECAST
(annual averages)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential	958,256	969,829	981,420	993,315	1,005,373	1,017,449	1,029,517	1,041,665	1,053,970	1,066,375	1,078,978	1,091,802
Core C/I	30,641	30,731	30,822	30,919	31,021	31,119	31,216	31,315	31,400	31,481	31,559	31,633
NGV	35	35	36	36	37	37	38	38	39	39	40	40
Non-Core C/I	59	59	59	60	60	60	60	60	61	61	61	61
Electric Generation	97	100	103	106	109	112	115	118	121	124	127	130
TOTAL	989,088	1,000,753	1,012,440	1,024,436	1,036,599	1,048,776	1,060,946	1,073,196	1,085,590	1,098,079	1,110,764	1,123,666
Net Gain	11,655	11,665	11,687	11,996	12,163	12,178	12,169	12,250	12,394	12,490	12,685	12,902
Meter Growth	1.19%	1.18%	1.17%	1.18%	1.19%	1.17%	1.16%	1.15%	1.15%	1.15%	1.16%	1.16%

2012 CALIFORNIA GAS REPORT

EUFORECASTER
JULY 2012

Refer to the 2012 California Gas Report 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.

2012 CALIFORNIA GAS REPORT

RESIDENTIAL DEMAND FORECAST
JULY 2012

Core Residential End-Use Model
2012 California Gas Report

Introduction:

SDG&E used the End Use Forecaster model to generate annual gas demand forecasts for the residential market from 2012 through 2030. The software's market segmentation and end-use modeling framework analyzes the impacts of competitive strategies (gas vs. electricity) and market scenarios on gas demand and market shares.

The model separates the residential market into four building types (B-level). These groups are identified by the premise code classification found in the company billing files. The four residential groups are:

- Single-Family (SF);
- Multi-Family (MF);
- Master Metered (MM); and
- Sub-Metered (SM).

The residential model identifies eight end-uses (N-level) that are the primary drivers of natural gas demand:

- Space heating;
- Water heating;
- Cooking;
- Drying;
- Pool heating;
- Spa heating;
- Fireplace; and
- Barbeque.

The model assumes two fuel choices (F-level) for end-uses:

- Natural gas; and
- Electricity.

The model assumes up to four efficiency levels (E-level) for the various end-uses. In general, the efficiency levels are:

- Stock;
- Standard;
- High efficiency; and
- Premium efficiency.

See Figure 1 for a classification of the number of efficiency levels for each end use by customer segment type.

See Figure 1 for a classification of the number of efficiency levels for each end use by customer segment type.

A set of post-model adjustments were applied to the model's annual demand forecast. The first adjustment calibrates to the recorded 2011 weather-adjusted demand. Next, the annual forecast was parceled out to a series of monthly forecasts by a process which involves two steps. These two steps consist of (1) using the fitted equation[1] for customer demand to generate a forecast of use per customer that varies with the number of calendar days and heating degree days in a given month and (2) calculating a series of weights based on the customer's predicted monthly usage share in total annual consumption. The shares obtained from the latter step were then applied to annual totals to derive the stream of monthly forecasts which are conditional on the particular weather design specification for the entire year. An adjustment to the forecast offsets the throughput by the energy efficiency savings. Annual conservation benefits associated with AMI are estimated by SDGE to represent 1% of the core gas throughput in the post deployment period.

Figures 3-6 illustrate the monthly forecasts for each weather scenario.

Data Sources:

The information used to perform the modeling and to generate the forecast includes historical 2011 consumption and customer counts; meter counts, growth, and decay; use per customer by vintage and unit energy consumption (UEC) values; fuel costs and price elasticity; equipment capital costs and availability; building and equipment lives and decay. The historical 2011 data is in Figure 7.

Meter Counts, Growth and Decay:

Regression equations were developed for each of the 5 building types. The meter count forecast is a company-specific forecast based on actual meter counts within the SoCalGas service territory. Data on meter decay rates were obtained from the Energy Information Administration (EIA). See Figure 8 for the meter forecast

Use Per Customer by Vintage and UEC:

Use per customer and Unit Energy Consumption (UEC) data were based on company marketing data and the California Measurement Advisory Council. See Figure 9 for the appliance UEC's.

Fuel Costs and Price Elasticity:

Average and marginal gas prices ($/therm) were calculated from forecasts of the residential rate components. Residential rates have two consumption tiers. We used the simple average of the second tiers' projected monthly prices for each forecast year as the marginal rate. The marginal rate was used for each housing segment type.

For a given housing segment type, the average gas commodity rate was calculated using a pair of weights for the two consumption tiers applied to the simple average of each tier's monthly rate. The average commodity rate in each forecast year was developed using the same consumption tier weights, but with the forecasts of rates for each residential 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 price. Figure 10 illustrates the gas price forecasts.

Electric Price Data:

The electricity price inputs consist of average prices (cents/kWh) and marginal prices (cents/kWh). The forecasts for the residential customer class were developed by SDG&E's electricity rate analysis group for 2011 through 2030.

A ratio of the housing type's average gas price to the overall residential gas price was constructed. The weight was then multiplied by the overall average electricity price to derive residential market-specific electricity prices.

The marginal prices for each residential housing type were calculated by multiplying each year's respective average price by a ratio. These ratios were 1.513 for the SF, MF2 and MF3 housing types, 1.034 for the MM housing type and 1.125 for the SM housing type. These various ratios ware estimated from analyses of SCE Schedule D rate schedule for housing types SF, MF2 and MF3; SCE Schedule DM for housing type MM; and SCE Schedule D as applied to sub-metered buildings for housing type SM. Copies of these rate schedules were obtained from the SCE web-site. Figure 11 illustrates the electricity price forecasts.

Price elasticities for each building type were based on the SoCalGas Residential Econometric Demand Forecasting Model. See Figure 7 for price elasticities.

Equipment Capital Costs and Availability:

Data on equipment capital costs and availability were from EIA, the Residential Appliance Saturation Survey (RASS), Energy Star (EPA & DOE), and SDGE company data. See Figures 12 and 13 for gas and electric appliance equipment cost.

Building and Equipment Lives and Decay:

Building decay rates are based on the building shell lifetimes, where the lifetime is defined as the length of time it takes for either a demolition or a major renovation to occur. For single-family residential buildings, an exponential rate of decay of 0.3% per year was assumed. See Figure 14 for the building decay rates.

Data on equipment lives and decay rates are based on EIA, RASS, Energy Star, and SoCalGas company data. See Figure 15 for the average lifetimes of gas appliances.

Saturations, Fuel and Efficiency Shares:

Saturation values, fuel shares, and efficiency shares were extracted from SoCalGas company data files and the most recent 2004 RASS Update. Please see Figures 16-19 for saturations, fuel, and efficiency shares.

AMI:

Mass deployment of AMI gas modules began in 2009. The conservtion benefits estimated by SDGE represent approximately 1% of core gas throughput.

RESIDENTIAL DATA

San Diego Gas and Electric
2012 California Gas Report
Figure 3: Average Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	4,376.2	3,759.5	3,620.0	2,886.9	2,139.1	1,617.0	1,526.0	1,518.4	1,482.5	1,822.2	2,937.2	4,552.2	32,237.1
2013	4,368.4	3,752.8	3,613.5	2,881.7	2,135.3	1,614.1	1,523.3	1,515.7	1,479.9	1,819.0	2,931.9	4,544.1	32,179.7
2014	4,367.8	3,752.2	3,613.0	2,881.3	2,135.0	1,613.8	1,523.1	1,515.4	1,479.7	1,818.7	2,931.5	4,543.4	32,174.8
2015	4,372.0	3,755.8	3,616.5	2,884.1	2,137.1	1,615.4	1,524.6	1,516.9	1,481.1	1,820.4	2,934.3	4,547.8	32,206.1
2016	4,383.0	3,765.3	3,625.6	2,891.4	2,142.4	1,619.5	1,528.4	1,520.7	1,484.8	1,825.0	2,941.7	4,559.2	32,287.0
2017	4,394.6	3,775.3	3,635.2	2,899.0	2,148.1	1,623.8	1,532.4	1,524.8	1,488.8	1,829.9	2,949.5	4,571.3	32,372.6
2018	4,406.2	3,785.2	3,644.7	2,906.6	2,153.8	1,628.0	1,536.5	1,528.8	1,492.7	1,834.7	2,957.3	4,583.3	32,457.8
2019	4,417.3	3,794.7	3,653.9	2,914.0	2,159.2	1,632.1	1,540.4	1,532.6	1,496.5	1,839.3	2,964.7	4,594.9	32,539.6
2020	4,427.9	3,803.8	3,662.7	2,921.0	2,164.4	1,636.1	1,544.0	1,536.3	1,500.1	1,843.7	2,971.8	4,605.9	32,617.7
2021	4,437.8	3,812.4	3,670.9	2,927.5	2,169.2	1,639.7	1,547.5	1,539.8	1,503.4	1,847.9	2,978.5	4,616.3	32,691.0
2022	4,461.9	3,833.1	3,690.9	2,943.4	2,181.0	1,648.6	1,555.9	1,548.1	1,511.6	1,857.9	2,994.7	4,641.3	32,868.4
2023	4,485.7	3,853.5	3,710.5	2,959.1	2,192.6	1,657.4	1,564.2	1,556.4	1,519.6	1,867.8	3,010.6	4,666.1	33,043.6
2024	4,509.0	3,873.5	3,729.8	2,974.5	2,204.0	1,666.0	1,572.3	1,564.5	1,527.5	1,877.5	3,026.3	4,690.3	33,215.3
2025	4,531.8	3,893.1	3,748.6	2,989.5	2,215.2	1,674.4	1,580.3	1,572.4	1,535.2	1,887.0	3,041.6	4,714.0	33,383.0
2026	4,554.3	3,912.5	3,767.3	3,004.4	2,226.2	1,682.8	1,588.1	1,580.2	1,542.9	1,896.4	3,056.7	4,737.5	33,549.2
2027	4,577.1	3,932.0	3,786.1	3,019.4	2,237.3	1,691.2	1,596.1	1,588.1	1,550.6	1,905.8	3,072.0	4,761.1	33,716.6
2028	4,599.6	3,951.4	3,804.8	3,034.3	2,248.3	1,699.5	1,603.9	1,595.9	1,558.2	1,915.2	3,087.1	4,784.6	33,882.8
2029	4,621.7	3,970.3	3,823.0	3,048.8	2,259.1	1,707.7	1,611.6	1,603.5	1,565.7	1,924.4	3,101.9	4,807.5	34,045.3
2030	4,643.2	3,988.8	3,840.8	3,063.0	2,269.6	1,715.6	1,619.1	1,611.0	1,573.0	1,933.4	3,116.4	4,829.9	34,203.9

San Diego Gas and Electric
2012 California Gas Report
Figure 4 Cold Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	5,113.2	4,372.6	4,151.5	3,233.9	2,267.4	1,617.6	1,487.1	1,477.2	1,446.0	1,864.1	3,296.2	5,337.2	35,664.1
2013	5,104.1	4,364.8	4,144.1	3,228.2	2,263.3	1,614.7	1,484.4	1,474.6	1,443.4	1,860.8	3,290.4	5,327.7	35,600.6
2014	5,103.3	4,364.1	4,143.5	3,227.7	2,263.0	1,614.5	1,484.2	1,474.4	1,443.2	1,860.5	3,289.9	5,326.9	35,595.2
2015	5,108.3	4,368.4	4,147.5	3,230.8	2,265.2	1,616.0	1,485.6	1,475.8	1,444.6	1,862.3	3,293.1	5,332.1	35,629.8
2016	5,121.1	4,379.3	4,157.9	3,239.0	2,270.9	1,620.1	1,489.4	1,479.5	1,448.3	1,867.0	3,301.3	5,345.5	35,719.3
2017	5,134.7	4,390.9	4,168.9	3,247.5	2,276.9	1,624.4	1,493.3	1,483.4	1,452.1	1,871.9	3,310.1	5,359.7	35,813.9
2018	5,148.2	4,402.5	4,179.9	3,256.1	2,282.9	1,628.7	1,497.3	1,487.4	1,455.9	1,876.9	3,318.8	5,373.8	35,908.3
2019	5,161.2	4,413.6	4,190.4	3,264.3	2,288.7	1,632.8	1,501.0	1,491.1	1,459.6	1,881.6	3,327.2	5,387.3	35,998.8
2020	5,173.6	4,424.2	4,200.5	3,272.1	2,294.2	1,636.7	1,504.6	1,494.7	1,463.1	1,886.1	3,335.2	5,400.2	36,085.1
2021	5,185.2	4,434.1	4,209.9	3,279.5	2,299.3	1,640.4	1,508.0	1,498.0	1,466.4	1,890.4	3,342.6	5,412.4	36,166.2
2022	5,213.3	4,458.2	4,232.8	3,297.3	2,311.8	1,649.3	1,516.2	1,506.2	1,474.3	1,900.6	3,360.8	5,441.8	36,362.5
2023	5,241.1	4,481.9	4,255.3	3,314.9	2,324.1	1,658.1	1,524.3	1,514.2	1,482.2	1,910.8	3,378.7	5,470.8	36,556.3
2024	5,268.4	4,505.2	4,277.5	3,332.1	2,336.2	1,666.7	1,532.2	1,522.1	1,489.9	1,920.7	3,396.3	5,499.2	36,746.3
2025	5,295.0	4,528.0	4,299.1	3,348.9	2,348.0	1,675.1	1,539.9	1,529.8	1,497.4	1,930.4	3,413.4	5,527.0	36,931.8
2026	5,321.3	4,550.5	4,320.5	3,365.6	2,359.7	1,683.4	1,547.6	1,537.4	1,504.9	1,940.0	3,430.4	5,554.5	37,115.7
2027	5,347.9	4,573.2	4,342.0	3,382.4	2,371.4	1,691.8	1,555.3	1,545.0	1,512.4	1,949.7	3,447.5	5,582.2	37,300.9
2028	5,374.2	4,595.8	4,363.4	3,399.0	2,383.1	1,700.2	1,563.0	1,552.7	1,519.8	1,959.3	3,464.5	5,609.7	37,484.7
2029	5,400.0	4,617.8	4,384.3	3,415.3	2,394.6	1,708.3	1,570.5	1,560.1	1,527.1	1,968.7	3,481.1	5,636.6	37,664.6
2030	5,425.2	4,639.3	4,404.8	3,431.3	2,405.7	1,716.3	1,577.8	1,567.4	1,534.2	1,977.8	3,497.3	5,662.9	37,840.0

San Diego Gas and Electric
2012 California Gas Report
Figure 5: Hot Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	3,558.2	3,073.1	3,007.2	2,462.1	1,929.2	1,537.2	1,483.2	1,476.6	1,438.9	1,698.6	2,499.3	3,686.1	27,849.7
2013	3,551.8	3,067.6	3,001.8	2,457.7	1,925.8	1,534.5	1,480.6	1,474.0	1,436.3	1,695.6	2,494.8	3,679.5	27,800.2
2014	3,551.3	3,067.1	3,001.4	2,457.4	1,925.5	1,534.3	1,480.3	1,473.8	1,436.1	1,695.3	2,494.5	3,679.0	27,795.9
2015	3,554.8	3,070.1	3,004.3	2,459.8	1,927.4	1,535.8	1,481.8	1,475.2	1,437.5	1,696.9	2,496.9	3,682.5	27,823.0
2016	3,563.7	3,077.8	3,011.8	2,465.9	1,932.2	1,539.6	1,485.5	1,478.9	1,441.1	1,701.2	2,503.2	3,691.8	27,892.8
2017	3,573.1	3,086.0	3,019.8	2,472.5	1,937.4	1,543.7	1,489.4	1,482.9	1,444.9	1,705.7	2,509.8	3,701.6	27,966.7
2018	3,582.5	3,094.1	3,027.8	2,479.0	1,942.5	1,547.8	1,493.4	1,486.8	1,448.7	1,710.2	2,516.4	3,711.3	28,040.4
2019	3,591.6	3,101.9	3,035.4	2,485.2	1,947.4	1,551.7	1,497.1	1,490.5	1,452.4	1,714.5	2,522.7	3,720.7	28,111.1
2020	3,600.2	3,109.4	3,042.7	2,491.2	1,952.0	1,555.4	1,500.7	1,494.1	1,455.8	1,718.6	2,528.8	3,729.6	28,178.5
2021	3,608.3	3,116.4	3,049.5	2,496.8	1,956.4	1,558.9	1,504.1	1,497.4	1,459.1	1,722.5	2,534.5	3,738.0	28,241.8
2022	3,627.9	3,133.3	3,066.1	2,510.3	1,967.0	1,567.4	1,512.3	1,505.6	1,467.0	1,731.8	2,548.2	3,758.3	28,395.1
2023	3,647.2	3,150.0	3,082.4	2,523.7	1,977.5	1,575.7	1,520.3	1,513.6	1,474.9	1,741.1	2,561.8	3,778.3	28,546.5
2024	3,666.1	3,166.3	3,098.4	2,536.8	1,987.8	1,583.9	1,528.2	1,521.5	1,482.5	1,750.1	2,575.1	3,797.9	28,694.8
2025	3,684.6	3,182.3	3,114.1	2,549.6	1,997.8	1,591.9	1,535.9	1,529.1	1,490.0	1,759.0	2,588.1	3,817.1	28,839.7
2026	3,703.0	3,198.2	3,129.6	2,562.3	2,007.8	1,599.8	1,543.6	1,536.8	1,497.4	1,767.7	2,601.0	3,836.1	28,983.2
2027	3,721.5	3,214.1	3,145.2	2,575.1	2,017.8	1,607.8	1,551.3	1,544.4	1,504.9	1,776.5	2,614.0	3,855.3	29,127.9
2028	3,739.8	3,230.0	3,160.7	2,587.8	2,027.7	1,615.7	1,558.9	1,552.0	1,512.3	1,785.3	2,626.9	3,874.3	29,271.4
2029	3,757.8	3,245.5	3,175.9	2,600.2	2,037.5	1,623.5	1,566.4	1,559.5	1,519.6	1,793.9	2,639.5	3,892.8	29,411.9
2030	3,775.3	3,260.6	3,190.7	2,612.3	2,047.0	1,631.0	1,573.7	1,566.7	1,526.6	1,802.2	2,651.8	3,911.0	29,548.9

San Diego Gas and Electric
2012 California Gas Report
Figure 6: Base Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	1,477	1,334	1,477	1,429	1,477	1,429	1,477	1,477	1,429	1,477	1,429	1,477	17,386
2013	1,474	1,331	1,474	1,426	1,474	1,426	1,474	1,474	1,426	1,474	1,426	1,474	17,355
2014	1,474	1,331	1,474	1,426	1,474	1,426	1,474	1,474	1,426	1,474	1,426	1,474	17,353
2015	1,475	1,332	1,475	1,428	1,475	1,428	1,475	1,475	1,428	1,475	1,428	1,475	17,370
2016	1,479	1,336	1,479	1,431	1,479	1,431	1,479	1,479	1,431	1,479	1,431	1,479	17,413
2017	1,483	1,339	1,483	1,435	1,483	1,435	1,483	1,483	1,435	1,483	1,435	1,483	17,459
2018	1,487	1,343	1,487	1,439	1,487	1,439	1,487	1,487	1,439	1,487	1,439	1,487	17,505
2019	1,491	1,346	1,491	1,442	1,491	1,442	1,491	1,491	1,442	1,491	1,442	1,491	17,550
2020	1,494	1,349	1,494	1,446	1,494	1,446	1,494	1,494	1,446	1,494	1,446	1,494	17,592
2021	1,497	1,353	1,497	1,449	1,497	1,449	1,497	1,497	1,449	1,497	1,449	1,497	17,631
2022	1,506	1,360	1,506	1,457	1,506	1,457	1,506	1,506	1,457	1,506	1,457	1,506	17,727
2023	1,514	1,367	1,514	1,465	1,514	1,465	1,514	1,514	1,465	1,514	1,465	1,514	17,821
2024	1,521	1,374	1,521	1,472	1,521	1,472	1,521	1,521	1,472	1,521	1,472	1,521	17,914
2025	1,529	1,381	1,529	1,480	1,529	1,480	1,529	1,529	1,480	1,529	1,480	1,529	18,004
2026	1,537	1,388	1,537	1,487	1,537	1,487	1,537	1,537	1,487	1,537	1,487	1,537	18,094
2027	1,544	1,395	1,544	1,495	1,544	1,495	1,544	1,544	1,495	1,544	1,495	1,544	18,184
2028	1,552	1,402	1,552	1,502	1,552	1,502	1,552	1,552	1,502	1,552	1,502	1,552	18,274
2029	1,559	1,409	1,559	1,509	1,559	1,509	1,559	1,559	1,509	1,559	1,509	1,559	18,362
2030	1,567	1,415	1,567	1,516	1,567	1,516	1,567	1,567	1,516	1,567	1,516	1,567	18,447

San Diego Gas & Electric
2012 California Gas Report
Figure 1: Number of Efficiency Levels by End Use by Customer Segment

	Space Heating		Water Heating		Cooking		Drying		Pool		Spa		Fireplace		BBQ	
	Gas	Electric	Gas	Electric	Gas	Electric	Gas	Electric	Gas	Electric	Gas	Electric	Gas	Electric	Gas	Electric
Single Family	4	1	4	4	2	2	2	4	2	0	2	0	1	0	1	1
Multi-Family	4	1	4	4	2	2	2	4	0	0	0	0	0	0	1	1
Master Meter	4	1	4	4	2	2	2	4	0	0	0	0	0	0	1	1
Sub-Meter	4	1	4	4	2	2	2	4	0	0	0	0	0	0	1	1

San Diego Gas And Electric
Figure 6: 2011 Historical Data

	Single Family	Multi Family	Master Meter	Sub Meter
Total Therm Sales	230,430,913	47,503,467	31,257,509	10,319,941
Meter Count				
Pre 1979 Customers	550,184	140,577	11,107	475
1979-2004 Customers	84,684	31,015	316	1
2005-2010 Customers	1,987	1,512	15	1
TOTAL	636,855	173,104	11,437	477
Use Per Customer (UPC, Therms)				
Pre 1979	354	269	2,604	22,451
1979-2004	415	312	9,408	25,718
2005-2010	361	273	6,457	12,447
Price Elasticity	-0.105	-0.071	-0.069	-0.105

San Diego Gas And Electric
Figure 7: Meter Count Forecast

Year	Total	Single Family	Multi Family	Master Meter	Sub Meter
2011		636,855	173,104	11,437	477
2012		641,217	174,194	11,688	475
2013		646,983	175,636	11,688	475
2014		654,320	177,470	11,688	475
2015		663,198	179,690	11,688	475
2016		673,059	182,155	11,688	475
2017		683,420	184,745	11,688	475
2018		693,798	187,340	11,688	475
2019		704,079	189,910	11,688	475
2020		714,225	192,446	11,688	475
2021		724,219	194,945	11,688	475
2022		734,128	197,422	11,688	475
2023		743,960	199,880	11,688	475
2024		753,672	202,308	11,688	475
2025		763,267	204,707	11,688	475
2026		772,734	207,074	11,688	475
2027		782,252	209,453	11,688	475
2028		791,748	211,827	11,688	475
2029		801,151	214,178	11,688	475
2030		810,431	216,498	11,688	475

Note: The master meter and sub meter groups are expected to decline.
A decay rate was built into the model specification.

San Diego Gas & Electric
2012 California Gas Report
Figure 9: Appliance Unit Energy Consumption (Gas in therms, Electric in Kwh)

		Single Family		Multi-Family		Master Meter		Sub Meter	
End-Use	**Vintage**	**Gas**	**Electric**	**Gas**	**Electric**	**Gas**	**Electric**	**Gas**	**Electric**
Space Heat	Stock	370	4,110	200	730	200	730	330	1,340
	Standard	330	3,730	180	-	180	-	300	-
	High	310	3,450	170	-	170	-	280	-
	Premium	280	3,170	150	-	150	-	260	-
Water Heat	Stock	260	2,440	230	2,440	230	2,440	210	2,010
	Standard	240	2,220	210	2,220	210	2,220	190	1,830
	High	230	2,110	200	2,110	200	2,110	180	1,740
	Premium	220	2,050	190	2,050	190	2,050	180	1,690
Cooking	Stock	50	574	34	465	34	465	45	514
	Standard	42.5	487.9	29	395	29	395	38	437
Drying	Stock	45.1	1442.1	24	1,442	24	1,442	26	873
	Standard	42.8	1369.9	23	1,370	23	1,370	25	830
Pool	Stock	177	3,431	177	3,431	177	3,431	177	3,431
Spa	Stock	146	430	146	430	146	430	146	430
Fireplace	Stock	21	-	21	-	21	-	21	-
BBQ	Stock	28	-	28	-	28	-	28	-

San Diego Gas and Electric
Average Gas Prices ($/Therm)

Year	Res Price Deflator	R SF Average Price	R MF2 Average Price	R MF3 Average Price	R MM Average Price	R SM Average Price
2011	100.00	0.6958	0.6708	0.6732	0.6556	0.6645
2012	101.56	0.6133	0.5900	0.5923	0.5759	0.5841
2013	103.59	0.6327	0.6102	0.6124	0.5966	0.6046
2014	105.59	0.6438	0.6203	0.6226	0.6060	0.6144
2015	107.71	0.6596	0.6351	0.6375	0.6201	0.6289
2016	109.89	0.6733	0.6485	0.6509	0.6334	0.6422
2017	111.97	0.6872	0.6615	0.6641	0.6459	0.6550
2018	114.07	0.7013	0.6747	0.6773	0.6585	0.6680
2019	116.09	0.7150	0.6874	0.6902	0.6707	0.6805
2020	118.11	0.7286	0.7001	0.7029	0.6828	0.6929
2021	120.62	0.7454	0.7159	0.7188	0.6980	0.7085
2022	123.23	0.7628	0.7323	0.7353	0.7137	0.7246
2023	125.72	0.7794	0.7479	0.7510	0.7287	0.7399
2024	128.32	0.7967	0.7642	0.7674	0.7444	0.7560
2025	131.04	0.8148	0.7813	0.7846	0.7609	0.7728
2026	133.89	0.8335	0.7991	0.8025	0.7782	0.7904
2027	136.78	0.8524	0.8172	0.8207	0.7957	0.8083
2028	139.73	0.8717	0.8356	0.8392	0.8136	0.8264
2029	142.69	0.8912	0.8541	0.8578	0.8315	0.8447
2030	145.70	0.9110	0.8729	0.8767	0.8498	0.8633

San Diego Gas and Electric
MARGINAL Gas Prices ($/Therm)

Year	R SF Average Price	R MF2 Average Price	R MF3 Average Price	R MM Average Price	R SM Average Price
2011	0.7898	0.7898	0.7898	0.7898	0.7898
2012	0.7008	0.7008	0.7008	0.7008	0.7008
2013	0.7171	0.7171	0.7171	0.7171	0.7171
2014	0.7324	0.7324	0.7324	0.7324	0.7324
2015	0.7519	0.7519	0.7519	0.7519	0.7519
2016	0.7667	0.7667	0.7667	0.7667	0.7667
2017	0.7839	0.7839	0.7839	0.7839	0.7839
2018	0.8015	0.8015	0.8015	0.8015	0.8015
2019	0.8187	0.8187	0.8187	0.8187	0.8187
2020	0.8358	0.8358	0.8358	0.8358	0.8358
2021	0.8564	0.8564	0.8564	0.8564	0.8564
2022	0.8776	0.8776	0.8776	0.8776	0.8776
2023	0.8979	0.8979	0.8979	0.8979	0.8979
2024	0.9189	0.9189	0.9189	0.9189	0.9189
2025	0.9408	0.9408	0.9408	0.9408	0.9408
2026	0.9628	0.9628	0.9628	0.9628	0.9628
2027	0.9851	0.9851	0.9851	0.9851	0.9851
2028	1.0079	1.0079	1.0079	1.0079	1.0079
2029	1.0309	1.0309	1.0309	1.0309	1.0309
2030	1.0542	1.0542	1.0542	1.0542	1.0542

San Diego Gas and Electric
Average Electric Prices (Cents/KWh)

Year	R SF Average Price	R MF2 Average Price	R MF3 Average Price	R MM Average Price	R SM Average Price
2011	18.36	17.70	17.76	17.30	17.53
2012	18.25	17.56	17.63	17.14	17.39
2013	18.87	18.20	18.27	17.79	18.03
2014	19.52	18.81	18.88	18.38	18.63
2015	20.17	19.42	19.49	18.96	19.23
2016	20.81	20.04	20.12	19.58	19.85
2017	21.48	20.67	20.75	20.18	20.47
2018	22.18	21.34	21.42	20.82	21.12
2019	22.88	21.99	22.08	21.46	21.77
2020	23.66	22.74	22.83	22.17	22.50
2021	24.65	23.67	23.77	23.08	23.43
2022	25.68	24.66	24.76	24.03	24.40
2023	26.72	25.64	25.75	24.99	25.37
2024	27.82	26.68	26.79	25.99	26.40
2025	28.97	27.78	27.90	27.05	27.48
2026	30.18	28.94	29.06	28.18	28.62
2027	31.43	30.13	30.26	29.34	29.81
2028	32.74	31.38	31.52	30.55	31.04
2029	34.09	32.67	32.81	31.81	32.31
2030	35.49	34.01	34.16	33.11	33.63

San Diego Gas and Electric
Marginal Electric Prices (Cents/KWh)

Year	R SF Marginal Price	R MF2 Marginal Price	R MF3 Marginal Price	R MM Marginal Price	R SM Marginal Price
2011	27.78	26.78	26.88	17.89	19.73
2012	27.62	26.57	26.68	17.72	19.57
2013	28.55	27.54	27.64	18.40	20.29
2014	29.54	28.46	28.57	19.00	20.97
2015	30.52	29.39	29.50	19.61	21.64
2016	31.49	30.33	30.45	20.24	22.34
2017	32.50	31.28	31.40	20.87	23.04
2018	33.56	32.29	32.41	21.53	23.77
2019	34.62	33.28	33.41	22.19	24.50
2020	35.81	34.41	34.55	22.93	25.33
2021	37.30	35.82	35.97	23.87	26.36
2022	38.86	37.31	37.46	24.85	27.45
2023	40.44	38.80	38.96	25.84	28.55
2024	42.09	40.38	40.54	26.88	29.70
2025	43.84	42.03	42.21	27.97	30.92
2026	45.67	43.78	43.97	29.14	32.21
2027	47.57	45.60	45.79	30.34	33.54
2028	49.54	47.49	47.69	31.60	34.93
2029	51.59	49.44	49.65	32.89	36.36
2030	53.71	51.46	51.68	34.23	37.85

San Diego Gas & Electric
2012 California Gas Report
Figure 12: Gas Appliance Equipment Cost (Nominal $)

End-use	Efficiency Level	Single Family	Multi-Family	Master Meter	Sub Meter
Space Heat	Stock	4,000	1,600	1,000	1,600
	Standard	4,600	1,840	1,150	1,840
	High	4,800	1,920	1,200	1,920
	Premium	5,000	1,980	1,250	1,980
Water Heat	Stock	550	330	330	330
	Standard	650	390	390	390
	High	700	420	420	420
	Premium	750	450	450	450
Cooking	Stock	500	250	250	250
	Standard	1,400	1,400	1,400	1,400
Drying	Stock	328	328	328	328
	Standard	482	482	482	482
Pool	Stock	1,200	1,200	1,200	1,200
Spa	Stock	2,000	2,000	2,000	2,000
Fireplace	Stock	150	150	150	150
BBQ	Stock	1,000	600	600	600

San Diego Gas & Electric
2012 California Gas Report
Figure 13: Electric Appliance Equipment Cost (Nominal $)

End-use	Efficiency Level	Single Family	Multi-Family	Master Meter	Sub Meter
Space Heat	Stock	4,100	1,640	1,025	1,640
Water Heat	Stock	550	330	330	330
	Standard	650	390	390	390
	High	700	420	420	420
	Premium	750	450	450	450
Cooking	Stock	500	250	250	250
	Standard	1,400	1,400	1,400	1,400
Drying	Stock	328	328	328	328
	Standard	482	482	482	482
Pool	Stock	1,200	1,200	1,200	1,200
Spa	Stock	2,000	2,000	2,000	2,000
Fireplace	Stock	150	150	150	150
BBQ	Stock	1,000	600	600	600

San Diego Gas and Electric Company
2012 California Gas Report
Figure 14: Building Lives and Decay Rates

Building Type	Building Decay Rate
Single Family	0.003
Multi Family 2-4 Units	0.006
Multi Family > 4 units	0.006
Master Meter	0.008
Sub Meter	0.008

		Single Family		Multi Family >4 Units		Master Meter		Sub Meter	
	Vintage	Max	Average	Max	Average	Max	Average	Max	Average	Max
Space Heat										
	Pre 1979	17	17	17	15	15	16	16	16	16
	1979-2004	17	10	17	11	15	11	16	11	16
	2005-base Yr	1	3	17	4	15	4	16	4	16
Water Heat	Pre 1979	7	7	7	6	8	6	8	6	8
	1979-2004	7	7	7	8	8	8	8	8	8
	2005-base Yr	7	3	7	4	8	4	8	4	8
Cooking	Pre 1979	12	10	12	10	11	14	14	14	14
	1979-2004	12	10	12	11	11	11	14	11	14
	2005-base Yr	12	2	12	4	11	3	14	3	14
Drying	Pre 1979	8	8	8	6	8	8	8	8	8
	1979-2004	8	8	8	8	8	8	8	8	8
	2005-base Yr	8	6	8	3	8	4	8	4	8
Pool	Pre 1979	13	13	13	13	13	13	13	13	13
	1979-2004	13	9	13	9	13	9	13	9	13
	2005-base Yr	13	3	13	3	13	3	13	3	13
Spa	Pre 1979	11	11	11	11	11	11	11	11	11
	1979-2004	11	8	11	8	11	8	11	8	11
	2005-base Yr	11	3	11	3	11	3	11	3	11
Fireplace	Pre 1979	15	15	15	15	15	15	15	15	15
	1979-2004	15	15	15	15	15	15	15	15	15
	2005-base Yr	15	15	15	15	15	15	15	15	15
BBQ	Pre 1979	7	7	7	5	5	5	9	5	9
	1979-2004	7	7	7	5	5	9	9	9	9
	2005-base Yr	7	5	7	5	5	2	9	2	9
Other	Pre 1979	15	15	15	15	15	15	15	15	15
	1979-2004	15	15	15	15	15	15	15	15	15
	2005-base Yr	15	15	15	15	15	15	15	15	15

San Diego Gas & Electric
2012 California Gas Report
Figure 16: End-Use Saturations

End-use	Vintage	Single Family	Multi-Family	Master Meter	Sub Meter
Space Heat	Pre-1979	0.9976	0.9664	0.9727	1.0000
	1979 - 2004	0.9969	1.0000	0.9183	1.0000
	2005-2011	0.99	1.00	1.00	1.0000
Water Heat	Pre-1979	1.0000	0.9915	0.9561	1.0000
	1979 - 2004	1.0000	1.0000	0.9800	1.0000
	2005-2011	1.000	1.000	1.000	1.0000
Cooking	Pre-1979	0.9892	0.9890	0.9745	0.6000
	1979 - 2004	0.9895	0.9788	0.9622	0.6000
	2005-2011	1.000	1.000	1.000	1.0000
Drying	Pre-1979	0.8714	0.7781	0.9067	0.8000
	1979 - 2004	0.9301	0.8422	0.8679	0.8000
	2005-2011	0.973	0.867	0.500	0.5000
Pool	Pre-1979	0.0711	0.1045	0.1179	0.1179
	1979 - 2004	0.1686	0.1941	0.0053	0.0053
	2005-2011	0.241	0.194	0.005	0.0053
Spa	Pre-1979	0.1299	0.0668	0.1329	0.1329
	1979 - 2004	0.2802	0.2896	0.2012	0.2012
	2005-2011	0.27	0.28	0.20	0.2012
Fireplace	Pre-1979	0.5493	0.1519	0.1894	0.1894
	1979 - 2004	0.7149	0.4775	0.4156	0.4156
	2005-2011	0.714	0.477	0.415	0.4156
Barbecue	Pre-1979	0.5240	0.2706	0.1875	0.4000
	1979 - 2004	0.6040	0.3838	0.3600	0.0000
	2005-2011	0.64	0.45	0.00	0.0000

San Diego Gas & Electric
2012 California Gas Report
Figure 17: Gas Fuel Shares

End-use	Single Family	Multi-Family	Master Meter	Sub Meter
Space Heat	0.9399	0.8168	0.7710	0.7304
Water Heat	0.9878	0.9673	0.9356	0.7403
Cooking	0.6621	0.7440	0.5861	0.6871
Drying	0.7592	0.6962	0.8156	0.5469
Pool	0.7263	0.7263	0.7263	0.7263
Spa	0.5462	0.5819	0.5819	0.5819
Fireplace	0.5815	0.5816	0.5816	0.5816
Barbecue	0.2814	0.2344	0.3114	0.1364

San Diego Gas & Electric
2012 California Gas Report
Figure 18: Gas Efficiency Shares

Gas End-use	Efficiency Level	Single Family		Multi-Family		Master Meter		Sub Meter	
		Existing	New	Existing	New	Existing	New	Existing	New
Space Heat	Stock	0.59	0.59	0.50	0.50	0.50	0.50	0.59	0.59
	Standard	0.34	0.34	0.48	0.48	0.48	0.48	0.34	0.34
	High	0.06	0.06	0.01	0.01	0.01	0.01	0.06	0.06
	Premium	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Water Heat	Stock	0.10	0.10	0.13	0.13	0.13	0.13	0.10	0.10
	Standard	0.68	0.68	0.76	0.76	0.76	0.76	0.68	0.68
	High	0.21	0.21	0.10	0.10	0.10	0.10	0.21	0.21
	Premium	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cooking	Stock	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
	Standard	0.10	0.10	0.05	0.05	0.05	0.05	0.05	0.05
Drying	Stock	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	Standard	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Pool	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spa	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fireplace	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Barbeque	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

San Diego Gas & Electric
2012 California Gas Report
Figure 19: Electric Efficiency Shares

Electric End-use	Efficiency Level	Single Family		Multi-Family		Master Meter		Sub Meter	
		Existing	New	Existing	New	Existing	New	Existing	New
Space Heat	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Water Heat	Stock	0.10	0.10	0.13	0.13	0.13	0.13	0.10	0.10
	Standard	0.68	0.68	0.76	0.76	0.76	0.76	0.68	0.68
	High	0.21	0.21	0.10	0.10	0.10	0.10	0.21	0.21
	Premium	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cooking	Stock	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
	Standard	0.10	0.10	0.05	0.05	0.05	0.05	0.05	0.05
Drying	Stock	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
	Standard	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Pool	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spa	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fireplace	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Barbecue	Stock	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

2012 CALIFORNIA GAS REPORT

CORE COMMERCIAL AND INDUSTRIAL DEMAND FORECAST
JULY 2012

Introduction

The core commercial and Industrial GN-3 gas demand forecast used the EUForecaster model to generate annual gas demand forecasts for the years 2011 through 2030.

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 1,314 for an Average Year. The gas demand forecasts under Cold, Hot and Base temperature were then constructed based on Cold Year (Hdd = 1,666), Hot Year (Hdd=962) 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 2011 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 2011 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 1,314 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 a~~nd 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 2007 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 through 2030. 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% to10%.

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.

GN3 COMMERCIAL DATA TABLES

San Diego Gas and Electric Company
2012 California Gas Report - Commercial GN3
The Year the Equipment Was Installed by Business Types

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other
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

San Diego Gas and Electric
2012 California Gas Report
Average Electric Prices (therms)

Year	C Agriculture Average Price	C College Average Price	C Construction Average Price	C Government Average Price	C Health Average Price	C Laundry Average Price	C Lodging Average Price
2011	18.24	19.86	19.27	19.25	18.07	19.44	17.29
2012	18.06	19.97	19.29	19.24	17.87	19.48	16.94
2013	18.73	20.57	19.91	19.87	18.54	20.09	17.66
2014	19.37	21.20	20.53	20.51	19.18	20.72	18.31
2015	20.00	21.84	21.17	21.16	19.81	21.36	18.94
2016	20.64	22.57	21.86	21.86	20.44	22.06	19.54
2017	21.29	23.25	22.52	22.53	21.09	22.73	20.19
2018	21.98	23.97	23.22	23.24	21.77	23.43	20.87
2019	22.66	24.67	23.91	23.94	22.46	24.13	21.55
2020	23.43	25.47	24.69	24.74	23.22	24.92	22.31
2021	24.40	26.50	25.69	25.75	24.19	25.93	23.26
2022	25.41	27.57	26.73	26.81	25.20	26.98	24.25
2023	26.43	28.65	27.78	27.87	26.21	28.04	25.25
2024	27.51	29.79	28.89	28.99	27.28	29.16	26.30
2025	28.64	31.00	30.06	30.18	28.40	30.35	27.40
2026	29.83	32.29	31.31	31.44	29.58	31.60	28.55
2027	31.06	33.62	32.60	32.75	30.81	32.91	29.75
2028	32.35	35.01	33.94	34.10	32.08	34.26	30.99
2029	33.68	36.45	35.32	35.51	33.40	35.66	32.28
2030	35.06	37.93	36.76	36.96	34.77	37.12	33.61

Year	C Misc Average Price	C Office Average Price	C Restaurant Average Price	C Retail Average Price	C School Average Price	C TCU Average Price	C Warehouse Average Price
2011	17.78	17.81	19.12	17.20	17.37	20.11	17.34
2012	17.51	17.55	19.12	16.83	17.03	20.31	16.99
2013	18.21	18.25	19.74	17.55	17.74	20.88	17.71
2014	18.85	18.89	20.36	18.20	18.39	21.48	18.36
2015	19.49	19.53	21.00	18.83	19.02	22.10	18.99
2016	20.11	20.16	21.67	19.42	19.62	22.82	19.59
2017	20.76	20.81	22.33	20.06	20.26	23.47	20.24
2018	21.45	21.50	23.02	20.75	20.94	24.17	20.92
2019	22.14	22.19	23.71	21.42	21.62	24.85	21.60
2020	22.91	22.96	24.49	22.18	22.38	25.63	22.37
2021	23.87	23.93	25.48	23.12	23.33	26.63	23.32
2022	24.88	24.94	26.52	24.11	24.32	27.69	24.31
2023	25.89	25.95	27.56	25.10	25.31	28.75	25.31
2024	26.96	27.02	28.66	26.14	26.36	29.87	26.36
2025	28.08	28.15	29.82	27.24	27.46	31.05	27.47
2026	29.26	29.33	31.05	28.38	28.61	32.31	28.62
2027	30.48	30.56	32.33	29.57	29.80	33.62	29.82
2028	31.75	31.83	33.65	30.80	31.05	34.98	31.07
2029	33.06	33.15	35.03	32.08	32.33	36.39	32.36
2030	34.43	34.52	36.45	33.40	33.66	37.85	33.70

San Diego Gas and Electric

2012 Californoa Gas Report

Marginal Electric Gas Prices (cents/KwH)

Year	C Agriculture Marginal Price	C College Marginal Price	C Construction Marginal Price	C Government Marginal Price	C Health Marginal Price	C Laundry Marginal Price	C Lodging Marginal Price
2011	18.22	19.85	18.84	19.19	18.09	19.36	17.68
2012	18.04	19.98	18.78	19.20	17.88	19.39	17.39
2013	18.71	20.57	19.42	19.82	18.56	20.01	18.10
2014	19.35	21.19	20.06	20.45	19.20	20.64	18.74
2015	19.99	21.83	20.69	21.09	19.83	21.28	19.37
2016	20.62	22.56	21.37	21.78	20.46	21.98	19.98
2017	21.28	23.24	22.03	22.45	21.11	22.65	20.62
2018	21.97	23.95	22.72	23.15	21.80	23.35	21.31
2019	22.65	24.65	23.42	23.85	22.48	24.05	21.98
2020	23.42	25.45	24.20	24.63	23.25	24.84	22.75
2021	24.39	26.47	25.19	25.63	24.22	25.84	23.70
2022	25.41	27.54	26.22	26.68	25.23	26.90	24.70
2023	26.43	28.62	27.27	27.74	26.25	27.96	25.70
2024	27.50	29.76	28.37	28.85	27.32	29.08	26.76
2025	28.64	30.96	29.53	30.03	28.44	30.26	27.87
2026	29.83	32.25	30.76	31.27	29.63	31.52	29.03
2027	31.07	33.58	32.03	32.57	30.86	32.82	30.24
2028	32.36	34.96	33.35	33.91	32.14	34.18	31.49
2029	33.69	36.39	34.72	35.30	33.46	35.58	32.79
2030	35.07	37.88	36.14	36.75	34.83	37.03	34.13

Year	C Misc Marginal Price	C Office Marginal Price	C Restaurant Marginal Price	C Retail Marginal Price	C School Marginal Price	C TCU Marginal Price	C Warehouse Marginal Price
2011	17.93	18.05	18.77	17.58	17.68	19.14	17.77
2012	17.70	17.83	18.70	17.27	17.39	19.13	17.50
2013	18.39	18.51	19.34	17.98	18.09	19.76	18.19
2014	19.03	19.15	19.98	18.62	18.74	20.39	18.84
2015	19.66	19.79	20.61	19.26	19.37	21.03	19.47
2016	20.28	20.41	21.28	19.86	19.98	21.72	20.08
2017	20.93	21.06	21.94	20.50	20.62	22.38	20.73
2018	21.62	21.75	22.64	21.18	21.31	23.08	21.41
2019	22.30	22.43	23.33	21.86	21.98	23.78	22.09
2020	23.07	23.20	24.11	22.62	22.75	24.56	22.86
2021	24.03	24.17	25.10	23.57	23.70	25.56	23.81
2022	25.03	25.18	26.13	24.57	24.70	26.61	24.81
2023	26.04	26.19	27.17	25.57	25.70	27.66	25.82
2024	27.11	27.26	28.27	26.62	26.75	28.77	26.88
2025	28.23	28.39	29.43	27.72	27.86	29.94	27.99
2026	29.41	29.57	30.65	28.88	29.03	31.19	29.16
2027	30.63	30.80	31.92	30.08	30.23	32.48	30.37
2028	31.90	32.08	33.24	31.33	31.49	33.82	31.63
2029	33.21	33.39	34.61	32.62	32.79	35.21	32.93
2030	34.57	34.76	36.02	33.96	34.13	36.65	34.28

San Diego Gas and Electric
2012 California Gas Report
Average gas prices ($/therm)

Year	Comm Price Deflator	C Agriculture Average Price	C College Average Price	C Construction Average Price	C Government Average Price	C Health Average Price	C Laundry Average Price	C Lodging Average Price
2011	100.00	0.7679	0.8362	0.8114	0.8105	0.7609	0.8185	0.7283
2012	101.56	0.6212	0.6867	0.6633	0.6617	0.6145	0.6699	0.5826
2013	103.59	0.6854	0.7526	0.7283	0.7272	0.6785	0.7352	0.6461
2014	105.59	0.7287	0.7975	0.7725	0.7717	0.7216	0.7796	0.6888
2015	107.71	0.7665	0.8371	0.8112	0.8108	0.7592	0.8186	0.7260
2016	109.89	0.7729	0.8454	0.8185	0.8186	0.7655	0.8262	0.7318
2017	111.97	0.8054	0.8797	0.8519	0.8525	0.7978	0.8600	0.7637
2018	114.07	0.8408	0.9169	0.8882	0.8892	0.8331	0.8966	0.7985
2019	116.09	0.8768	0.9546	0.9251	0.9265	0.8689	0.9337	0.8339
2020	118.11	0.9121	0.9916	0.9612	0.9630	0.9040	0.9701	0.8685
2021	120.62	0.9495	1.0312	0.9997	1.0020	0.9413	1.0090	0.9052
2022	123.23	0.9869	1.0708	1.0382	1.0411	0.9785	1.0479	0.9419
2023	125.72	1.0235	1.1095	1.0759	1.0792	1.0149	1.0859	0.9777
2024	128.32	1.0597	1.1479	1.1132	1.1171	1.0509	1.1236	1.0132
2025	131.04	1.0964	1.1869	1.1510	1.1554	1.0873	1.1618	1.0490
2026	133.89	1.1266	1.2195	1.1824	1.1874	1.1173	1.1936	1.0784
2027	136.78	1.1576	1.2530	1.2146	1.2202	1.1481	1.2262	1.1085
2028	139.73	1.1894	1.2873	1.2477	1.2539	1.1796	1.2597	1.1395
2029	142.69	1.2219	1.3223	1.2815	1.2883	1.2119	1.2940	1.1711
2030	145.70	1.2553	1.3583	1.3162	1.3236	1.2451	1.3291	1.2036

Year	Com Price Deflator	C Misc Average Price	C Office Average Price	C Restaurant Average Price	C Retail Average Price	C School Average Price	C TCU Average Price	C Warehouse Average Price
2011	100.00	0.7486	0.7501	0.8052	0.7244	0.7314	0.8470	0.7300
2012	101.56	0.6021	0.6035	0.6574	0.5789	0.5858	0.6986	0.5842
2013	103.59	0.6661	0.6676	0.7222	0.6423	0.6493	0.7638	0.6478
2014	105.59	0.7093	0.7108	0.7661	0.6848	0.6919	0.8081	0.6906
2015	107.71	0.7469	0.7485	0.8046	0.7218	0.7290	0.8470	0.7278
2016	109.89	0.7531	0.7549	0.8117	0.7274	0.7347	0.8545	0.7336
2017	111.97	0.7855	0.7873	0.8448	0.7591	0.7665	0.8881	0.7656
2018	114.07	0.8208	0.8227	0.8809	0.7937	0.8013	0.9245	0.8005
2019	116.09	0.8566	0.8586	0.9175	0.8289	0.8366	0.9616	0.8360
2020	118.11	0.8917	0.8938	0.9534	0.8634	0.8712	0.9979	0.8707
2021	120.62	0.9290	0.9312	0.9916	0.8999	0.9078	1.0366	0.9075
2022	123.23	0.9662	0.9685	1.0298	0.9363	0.9444	1.0753	0.9442
2023	125.72	1.0025	1.0050	1.0672	0.9719	0.9801	1.1132	0.9801
2024	128.32	1.0386	1.0411	1.1042	1.0071	1.0155	1.1507	1.0157
2025	131.04	1.0750	1.0777	1.1417	1.0428	1.0513	1.1888	1.0516
2026	133.89	1.1050	1.1078	1.1728	1.0719	1.0805	1.2204	1.0811
2027	136.78	1.1357	1.1387	1.2046	1.1017	1.1106	1.2529	1.1113
2028	139.73	1.1673	1.1704	1.2373	1.1324	1.1414	1.2862	1.1423
2029	142.69	1.1996	1.2028	1.2708	1.1638	1.1730	1.3202	1.1741
2030	145.70	1.2328	1.2361	1.3051	1.1960	1.2054	1.3552	1.2067

San Diego Gas and Electric
2012 California Gas Report
Marginal gas prices (cents/Kwh)

Year	Com Price Deflator	C Agriculture Marginal Price	C College Marginal Price	C Construction Marginal Price	C Government Marginal Price	C Health Marginal Price	C Laundry Marginal Price	C Lodging Marginal Price
2011	100.00	0.7201	0.7843	0.7446	0.7584	0.7147	0.7650	0.6987
2012	101.56	0.5744	0.6361	0.5980	0.6113	0.5693	0.6175	0.5539
2013	103.59	0.6379	0.7011	0.6621	0.6757	0.6326	0.6821	0.6169
2014	105.59	0.6805	0.7453	0.7053	0.7193	0.6751	0.7258	0.6590
2015	107.71	0.7176	0.7840	0.7431	0.7573	0.7121	0.7641	0.6955
2016	109.89	0.7234	0.7914	0.7494	0.7640	0.7177	0.7709	0.7007
2017	111.97	0.7552	0.8248	0.7818	0.7968	0.7494	0.8039	0.7320
2018	114.07	0.7899	0.8612	0.8172	0.8325	0.7840	0.8398	0.7662
2019	116.09	0.8253	0.8981	0.8532	0.8688	0.8192	0.8762	0.8010
2020	118.11	0.8599	0.9342	0.8883	0.9043	0.8536	0.9119	0.8351
2021	120.62	0.8965	0.9728	0.9257	0.9421	0.8901	0.9499	0.8711
2022	123.23	0.9331	1.0114	0.9630	0.9799	0.9265	0.9878	0.9070
2023	125.72	0.9688	1.0490	0.9995	1.0167	0.9621	1.0249	0.9421
2024	128.32	1.0042	1.0864	1.0356	1.0533	0.9973	1.0617	0.9768
2025	131.04	1.0400	1.1243	1.0722	1.0903	1.0329	1.0989	1.0119
2026	133.89	1.0692	1.1557	1.1023	1.1209	1.0620	1.1297	1.0404
2027	136.78	1.0993	1.1880	1.1332	1.1523	1.0918	1.1613	1.0697
2028	139.73	1.1301	1.2211	1.1649	1.1845	1.1225	1.1937	1.0998
2029	142.69	1.1617	1.2549	1.1974	1.2174	1.1539	1.2269	1.1306
2030	145.70	1.1941	1.2896	1.2307	1.2512	1.1861	1.2609	1.1623

Year	Com Price Deflator	C Misc Marginal Price	C Office Marginal Price	C Restaurant Marginal Price	C Retail Marginal Price	C School Marginal Price	C TCU Marginal Price	C Warehouse Marginal Price
2011	100.00	0.7087	0.7131	0.7418	0.6947	0.6987	0.7562	0.7021
2012	101.56	0.5635	0.5677	0.5953	0.5501	0.5539	0.6091	0.5572
2013	103.59	0.6268	0.6311	0.6594	0.6129	0.6168	0.6735	0.6202
2014	105.59	0.6691	0.6735	0.7025	0.6550	0.6590	0.7170	0.6624
2015	107.71	0.7059	0.7105	0.7402	0.6914	0.6955	0.7550	0.6991
2016	109.89	0.7113	0.7160	0.7464	0.6965	0.7007	0.7616	0.7043
2017	111.97	0.7429	0.7476	0.7788	0.7277	0.7320	0.7944	0.7357
2018	114.07	0.7774	0.7822	0.8141	0.7618	0.7662	0.8300	0.7700
2019	116.09	0.8124	0.8174	0.8500	0.7965	0.8010	0.8663	0.8049
2020	118.11	0.8467	0.8518	0.8851	0.8305	0.8351	0.9017	0.8391
2021	120.62	0.8830	0.8882	0.9224	0.8664	0.8711	0.9394	0.8752
2022	123.23	0.9192	0.9246	0.9596	0.9021	0.9070	0.9771	0.9112
2023	125.72	0.9546	0.9601	0.9960	0.9371	0.9421	1.0139	0.9464
2024	128.32	0.9897	0.9953	1.0321	0.9717	0.9768	1.0504	0.9812
2025	131.04	1.0251	1.0308	1.0686	1.0067	1.0119	1.0874	1.0164
2026	133.89	1.0540	1.0599	1.0986	1.0351	1.0404	1.1179	1.0451
2027	136.78	1.0836	1.0897	1.1294	1.0642	1.0697	1.1492	1.0745
2028	139.73	1.1141	1.1202	1.1610	1.0942	1.0998	1.1813	1.1047
2029	142.69	1.1452	1.1516	1.1933	1.1249	1.1306	1.2141	1.1356
2030	145.70	1.1772	1.1837	1.2265	1.1564	1.1623	1.2479	1.1674

San Diego Gas and Electric
2012 California Gas Report
2011 Historical Data

Segment	2011 Therm Sales	2011 Meter Count	2011Meter Count, Existing/Old customers	2011 Meter Count New Customers	Avg Use Per Meter Existing Customers	Avg Use Per Meter New Customers
Office	14,243,079	6,284	6,235	49	2,389	14,320
Restaurant	50,225,123	4,990	4,944	46	11,064	6,302
Retail	12,125,779	3,029	3,003	26	4,327	10,810
Laundry	12,972,580	492	490	2	28,936	12,556
Warehouse	3,799,887	595	595	1	6,992	9,170
School	8,518,619	772	772	1	12,082	1,450
College	5,663,081	335	332	3	18,602	8,270
Health	11,799,689	705	701	4	18,306	21,676
Lodging	11,988,123	772	770	2	17,025	8,386
Misc	15,098,867	5,437	5,263	174	2,985	4,710
Governmer	5,531,215	1,530	1,517	13	3,931	7,098
TCU	7,147,614	653	648	5	12,076	133
Constructic	1,526,568	706	667	39	2,500	96
Agriculture	7,644,758	135	134	1	62,465	147
	168,284,982	26,435				

San Diego Gas and Electric
2012 California Gas Report
Average Use Per Meter (therms)

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other	Total Building
Office	1,999	830	101	34	26	105	22	34	100	28	1,993	5,272
Restaurant	483	935	1,561	642	1,233	1,365	332	19	9	0	307	6,887
Retail	910	552	201	34	224	386	239	53	102	8	1,260	3,969
Laundry	34	546	4	1	1	6	0	1	5,486	0	5,108	11,188
Warehouse	901	262	37	10	90	103	132	103	300	89	2,899	4,926
School	2,614	881	149	11	34	274	28	33	5	36	765	4,830
College	7,598	3,753	367	108	188	451	104	475	115	161	5,167	18,488
Health	4,980	3,120	500	97	136	385	218	90	685	51	5,265	15,526
Lodging	2,999	6,126	846	206	264	1,030	507	50	1,596	1	6,924	20,548
Misc	1,283	784	159	32	52	130	42	132	51	10	866	3,539
Governmer	5,693	3,310	291	143	85	239	130	152	77	841	2,231	13,192
TCU	1,845	663	58	15	28	51	35	90	6	2,895	3,060	8,746
Constructic	702	219	18	0	3	10	6	21	131	0	1,035	2,145
Agriculture	4,262	1,033	175	29	365	811	737	10	1,075	7,048	14,231	29,777

San Diego Gas And Electric
2012 California Gas Report
Average Use Per Meter-New Customers

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other	Total Building
Office	5,400	17,920	708	3,655	3	1,461	270	3	3	3	32	29,446
Restaurant	2,225	7,385	292	1,506	1	602	111	1	1	1	13	12,135
Retail	1,871	6,209	245	1,266	1	506	93	1	1	1	11	10,202
Laundry	4,735	15,713	620	3,205	3	1,281	237	3	3	3	28	25,819
Warehouse	13,683	45,407	1,793	9,261	7	3,702	683	7	7	7	81	74,610
School	846	2,808	111	573	0	229	42	0	0	0	5	4,613
College	3,830	12,711	502	2,592	2	1,036	191	2	2	2	23	20,886
Health	0	1	0	0	0	0	0	0	0	0	0	1
Lodging	11,847	39,315	1,552	8,018	6	3,205	592	6	6	6	70	64,599
Misc	631	2,094	83	427	0	171	32	0	0	0	4	3,440
Governmer	11,138	36,961	1,459	7,538	6	3,013	556	6	6	6	66	60,732
TCU	64	213	8	43	0	17	3	0	0	0	0	349
Constructic	0	1	0	0	0	0	0	0	0	0	0	1
Agriculture	0	1	0	0	0	0	0	0	0	0	0	1

San Diego Gas and Electric Company
2012 California Gas Report Commercial 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)

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

Business Types	End Use	Fuel	Efficiency	uec (therm/SqFt)	Equipment Cost	efficiency shares
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

San Diego Gas and Electric Company
2012 California Gas Report- Commercial GN3
Fuel Market Share

Business Types	End Use	Fuel	Share
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

Business Types	End Use	Fuel	Share
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

Business Types	End Use	Fuel	Share
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
2012 California Gas Report - Commercial GN3
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
2012 California Gas Report - Commercial GN3
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

Business Type	End Use	Saturation
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

2012 California Gas Report - Commercial GN3
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

b	n	f	e	bname	nname	EQcost
	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

b	c	f	e	bname	nname	EQcost
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

b	f	e	bname	nname	EQcost
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

n	f	e	bname	nname	EQcost
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

b	n	f	e	bname	nname	EQcost
	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

San Diego Gas and Electric
2012 California Gas Report
Employment (in millions)

YEAR	Office	Restaurant	Retail	Laundry	Warehouse	School	College
2011	0.28584	0.10381	0.13101	0.01509	0.04311	0.09352	0.04116
2012	0.29365	0.10732	0.13179	0.01525	0.04447	0.09660	0.04250
2013	0.30179	0.10917	0.13311	0.01544	0.04570	0.09803	0.04313
2014	0.31523	0.10950	0.13386	0.01549	0.04674	0.09942	0.04375
2015	0.32947	0.10904	0.13436	0.01537	0.04774	0.10052	0.04423
2016	0.34094	0.10846	0.13476	0.01529	0.04885	0.10264	0.04516
2017	0.35041	0.10806	0.13486	0.01525	0.04976	0.10474	0.04609
2018	0.35829	0.10751	0.13484	0.01519	0.05036	0.10659	0.04690
2019	0.36751	0.10710	0.13468	0.01509	0.05088	0.10806	0.04754
2020	0.37807	0.10686	0.13457	0.01504	0.05130	0.10933	0.04810
2021	0.38805	0.10655	0.13458	0.01498	0.05153	0.11036	0.04856
2022	0.39727	0.10611	0.13444	0.01489	0.05184	0.11122	0.04894
2023	0.40771	0.10625	0.13456	0.01484	0.05219	0.11214	0.04934
2024	0.41834	0.10673	0.13500	0.01484	0.05269	0.11327	0.04984
2025	0.42834	0.10741	0.13578	0.01485	0.05325	0.11469	0.05046
2026	0.43873	0.10849	0.13669	0.01487	0.05374	0.11639	0.05121
2027	0.44901	0.10984	0.13765	0.01491	0.05422	0.11813	0.05198
2028	0.45897	0.11134	0.13876	0.01497	0.05433	0.11986	0.05274
2029	0.46898	0.11303	0.13978	0.01504	0.05453	0.12152	0.05347
2030	0.47960	0.11447	0.14050	0.01510	0.05459	0.12296	0.05410

San Diego Gas and Electric
2012 California Gas Report
Employment (in millions)

YEAR	Office	Health	Lodging	Misc	Government	TCU
2011	0.28584	0.12452	0.03124	0.05543	0.12470	0.05047
2012	0.29365	0.12859	0.03230	0.05599	0.12478	0.05111
2013	0.30179	0.13049	0.03286	0.05671	0.12430	0.05266
2014	0.31523	0.13234	0.03296	0.05689	0.12422	0.05374
2015	0.32947	0.13381	0.03282	0.05646	0.12446	0.05501
2016	0.34094	0.13664	0.03265	0.05613	0.12484	0.05604
2017	0.35041	0.13944	0.03252	0.05599	0.12547	0.05720
2018	0.35829	0.14190	0.03236	0.05576	0.12636	0.05821
2019	0.36751	0.14384	0.03224	0.05542	0.12732	0.05882
2020	0.37807	0.14553	0.03217	0.05521	0.12978	0.05930
2021	0.38805	0.14690	0.03207	0.05500	0.12993	0.05988
2022	0.39727	0.14804	0.03194	0.05467	0.13123	0.06043
2023	0.40771	0.14927	0.03198	0.05450	0.13233	0.06111
2024	0.41834	0.15077	0.03213	0.05451	0.13324	0.06184
2025	0.42834	0.15267	0.03233	0.05454	0.13400	0.06262
2026	0.43873	0.15494	0.03265	0.05462	0.13478	0.06347
2027	0.44901	0.15725	0.03306	0.05475	0.13555	0.06421
2028	0.45897	0.15955	0.03351	0.05498	0.13625	0.06499
2029	0.46898	0.16176	0.03402	0.05522	0.13694	0.06583
2030	0.47960	0.16367	0.03445	0.05546	0.13884	0.06655

San Diego Gas and Electric
2012 California Gas Report
Employment (in millions)

YEAR	Office	Construction	Agriculture
2011	0.28584	0.05402	0.00957
2012	0.29365	0.05388	0.00962
2013	0.30179	0.05665	0.00967
2014	0.31523	0.06394	0.00971
2015	0.32947	0.07351	0.00976
2016	0.34094	0.08135	0.00981
2017	0.35041	0.08589	0.00986
2018	0.35829	0.08852	0.00991
2019	0.36751	0.09053	0.00996
2020	0.37807	0.09283	0.01001
2021	0.38805	0.09483	0.01006
2022	0.39727	0.09618	0.01011
2023	0.40771	0.09759	0.01016
2024	0.41834	0.09989	0.01021
2025	0.42834	0.10299	0.01026
2026	0.43873	0.10587	0.01031
2027	0.44901	0.10892	0.01036
2028	0.45897	0.11145	0.01042
2029	0.46898	0.11355	0.01047
2030	0.47960	0.11548	0.01052

San Diego Gas and Electric
2012 California Gas Report
Figure 3: Average Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	4,376.2	3,759.5	3,620.0	2,886.9	2,139.1	1,617.0	1,526.0	1,518.4	1,482.5	1,822.2	2,937.2	4,552.2	32,237.1
2013	4,368.4	3,752.8	3,613.5	2,881.7	2,135.3	1,614.1	1,523.3	1,515.7	1,479.9	1,819.0	2,931.9	4,544.1	32,179.7
2014	4,367.8	3,752.2	3,613.0	2,881.3	2,135.0	1,613.8	1,523.1	1,515.4	1,479.7	1,818.7	2,931.5	4,543.4	32,174.8
2015	4,372.0	3,755.8	3,616.5	2,884.1	2,137.1	1,615.4	1,524.6	1,516.9	1,481.1	1,820.4	2,934.3	4,547.8	32,206.1
2016	4,383.0	3,765.3	3,625.6	2,891.4	2,142.4	1,619.5	1,528.4	1,520.7	1,484.8	1,825.0	2,941.7	4,559.2	32,287.0
2017	4,394.6	3,775.3	3,635.2	2,899.0	2,148.1	1,623.8	1,532.4	1,524.8	1,488.8	1,829.9	2,949.5	4,571.3	32,372.6
2018	4,406.2	3,785.2	3,644.7	2,906.6	2,153.8	1,628.0	1,536.5	1,528.8	1,492.7	1,834.7	2,957.3	4,583.3	32,457.8
2019	4,417.3	3,794.7	3,653.9	2,914.0	2,159.2	1,632.1	1,540.4	1,532.6	1,496.5	1,839.3	2,964.7	4,594.9	32,539.6
2020	4,427.9	3,803.8	3,662.7	2,921.0	2,164.4	1,636.1	1,544.0	1,536.3	1,500.1	1,843.7	2,971.8	4,605.9	32,617.7
2021	4,437.8	3,812.4	3,670.9	2,927.5	2,169.2	1,639.7	1,547.5	1,539.8	1,503.4	1,847.9	2,978.5	4,616.3	32,691.0
2022	4,461.9	3,833.1	3,690.9	2,943.4	2,181.0	1,648.6	1,555.9	1,548.1	1,511.6	1,857.9	2,994.7	4,641.3	32,868.4
2023	4,485.7	3,853.5	3,710.5	2,959.1	2,192.6	1,657.4	1,564.2	1,556.4	1,519.6	1,867.8	3,010.6	4,666.1	33,043.6
2024	4,509.0	3,873.5	3,729.8	2,974.5	2,204.0	1,666.0	1,572.3	1,564.5	1,527.5	1,877.5	3,026.3	4,690.3	33,215.3
2025	4,531.8	3,893.1	3,748.6	2,989.5	2,215.2	1,674.4	1,580.3	1,572.4	1,535.2	1,887.0	3,041.6	4,714.0	33,383.0
2026	4,554.3	3,912.5	3,767.3	3,004.4	2,226.2	1,682.8	1,588.1	1,580.2	1,542.9	1,896.4	3,056.7	4,737.5	33,549.2
2027	4,577.1	3,932.0	3,786.1	3,019.4	2,237.3	1,691.2	1,596.1	1,588.1	1,550.6	1,905.8	3,072.0	4,761.1	33,716.6
2028	4,599.6	3,951.4	3,804.8	3,034.3	2,248.3	1,699.5	1,603.9	1,595.9	1,558.2	1,915.2	3,087.1	4,784.6	33,882.8
2029	4,621.7	3,970.3	3,823.0	3,048.8	2,259.1	1,707.7	1,611.6	1,603.5	1,565.7	1,924.4	3,101.9	4,807.5	34,045.3
2030	4,643.2	3,988.8	3,840.8	3,063.0	2,269.6	1,715.6	1,619.1	1,611.0	1,573.0	1,933.4	3,116.4	4,829.9	34,203.9

San Diego Gas and Electric
2012 California Gas Report
Figure 4 Cold Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	5,113.2	4,372.6	4,151.5	3,233.9	2,267.4	1,617.6	1,487.1	1,477.2	1,446.0	1,864.1	3,296.2	5,337.2	35,664.1
2013	5,104.1	4,364.8	4,144.1	3,228.2	2,263.3	1,614.7	1,484.4	1,474.6	1,443.4	1,860.8	3,290.4	5,327.7	35,600.6
2014	5,103.3	4,364.1	4,143.5	3,227.7	2,263.0	1,614.5	1,484.2	1,474.4	1,443.2	1,860.5	3,289.9	5,326.9	35,595.2
2015	5,108.3	4,368.4	4,147.5	3,230.8	2,265.2	1,616.0	1,485.6	1,475.8	1,444.6	1,862.3	3,293.1	5,332.1	35,629.8
2016	5,121.1	4,379.3	4,157.9	3,239.0	2,270.9	1,620.1	1,489.4	1,479.5	1,448.3	1,867.0	3,301.3	5,345.5	35,719.3
2017	5,134.7	4,390.9	4,168.9	3,247.5	2,276.9	1,624.4	1,493.3	1,483.4	1,452.1	1,871.9	3,310.1	5,359.7	35,813.9
2018	5,148.2	4,402.5	4,179.9	3,256.1	2,282.9	1,628.7	1,497.3	1,487.4	1,455.9	1,876.9	3,318.8	5,373.8	35,908.3
2019	5,161.2	4,413.6	4,190.4	3,264.3	2,288.7	1,632.8	1,501.0	1,491.1	1,459.6	1,881.6	3,327.2	5,387.3	35,998.8
2020	5,173.6	4,424.2	4,200.5	3,272.1	2,294.2	1,636.7	1,504.6	1,494.7	1,463.1	1,886.1	3,335.2	5,400.2	36,085.1
2021	5,185.2	4,434.1	4,209.9	3,279.5	2,299.3	1,640.4	1,508.0	1,498.0	1,466.4	1,890.4	3,342.6	5,412.4	36,166.2
2022	5,213.3	4,458.2	4,232.8	3,297.3	2,311.8	1,649.3	1,516.2	1,506.2	1,474.3	1,900.6	3,360.8	5,441.8	36,362.5
2023	5,241.1	4,481.9	4,255.3	3,314.9	2,324.1	1,658.1	1,524.3	1,514.2	1,482.2	1,910.8	3,378.7	5,470.8	36,556.3
2024	5,268.4	4,505.2	4,277.5	3,332.1	2,336.2	1,666.7	1,532.2	1,522.1	1,489.9	1,920.7	3,396.3	5,499.2	36,746.3
2025	5,295.0	4,528.0	4,299.1	3,348.9	2,348.0	1,675.1	1,539.9	1,529.8	1,497.4	1,930.4	3,413.4	5,527.0	36,931.8
2026	5,321.3	4,550.5	4,320.5	3,365.6	2,359.7	1,683.4	1,547.6	1,537.4	1,504.9	1,940.0	3,430.4	5,554.5	37,115.7
2027	5,347.9	4,573.2	4,342.0	3,382.4	2,371.4	1,691.8	1,555.3	1,545.0	1,512.4	1,949.7	3,447.5	5,582.2	37,300.9
2028	5,374.2	4,595.8	4,363.4	3,399.0	2,383.1	1,700.2	1,563.0	1,552.7	1,519.8	1,959.3	3,464.5	5,609.7	37,484.7
2029	5,400.0	4,617.8	4,384.3	3,415.3	2,394.6	1,708.3	1,570.5	1,560.1	1,527.1	1,968.7	3,481.1	5,636.6	37,664.6
2030	5,425.2	4,639.3	4,404.8	3,431.3	2,405.7	1,716.3	1,577.8	1,567.4	1,534.2	1,977.8	3,497.3	5,662.9	37,840.0

San Diego Gas and Electric
2012 California Gas Report
Figure 5: Hot Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	3,558.2	3,073.1	3,007.2	2,462.1	1,929.2	1,537.2	1,483.2	1,476.6	1,438.9	1,698.6	2,499.3	3,686.1	27,849.7
2013	3,551.8	3,067.6	3,001.8	2,457.7	1,925.8	1,534.5	1,480.6	1,474.0	1,436.3	1,695.6	2,494.8	3,679.5	27,800.2
2014	3,551.3	3,067.1	3,001.4	2,457.4	1,925.5	1,534.3	1,480.3	1,473.8	1,436.1	1,695.3	2,494.5	3,679.0	27,795.9
2015	3,554.8	3,070.1	3,004.3	2,459.8	1,927.4	1,535.8	1,481.8	1,475.2	1,437.5	1,696.9	2,496.9	3,682.5	27,823.0
2016	3,563.7	3,077.8	3,011.8	2,465.9	1,932.2	1,539.6	1,485.5	1,478.9	1,441.1	1,701.2	2,503.2	3,691.8	27,892.8
2017	3,573.1	3,086.0	3,019.8	2,472.5	1,937.4	1,543.7	1,489.4	1,482.9	1,444.9	1,705.7	2,509.8	3,701.6	27,966.7
2018	3,582.5	3,094.1	3,027.8	2,479.0	1,942.5	1,547.8	1,493.4	1,486.8	1,448.7	1,710.2	2,516.4	3,711.3	28,040.4
2019	3,591.6	3,101.9	3,035.4	2,485.2	1,947.4	1,551.7	1,497.1	1,490.5	1,452.4	1,714.5	2,522.7	3,720.7	28,111.1
2020	3,600.2	3,109.4	3,042.7	2,491.2	1,952.0	1,555.4	1,500.7	1,494.1	1,455.8	1,718.6	2,528.8	3,729.6	28,178.5
2021	3,608.3	3,116.4	3,049.5	2,496.8	1,956.4	1,558.9	1,504.1	1,497.4	1,459.1	1,722.5	2,534.5	3,738.0	28,241.8
2022	3,627.9	3,133.3	3,066.1	2,510.3	1,967.0	1,567.4	1,512.3	1,505.6	1,467.0	1,731.8	2,548.2	3,758.3	28,395.1
2023	3,647.2	3,150.0	3,082.4	2,523.7	1,977.5	1,575.7	1,520.3	1,513.6	1,474.9	1,741.1	2,561.8	3,778.3	28,546.5
2024	3,666.1	3,166.3	3,098.4	2,536.8	1,987.8	1,583.9	1,528.2	1,521.5	1,482.5	1,750.1	2,575.1	3,797.9	28,694.8
2025	3,684.6	3,182.3	3,114.1	2,549.6	1,997.8	1,591.9	1,535.9	1,529.1	1,490.0	1,759.0	2,588.1	3,817.1	28,839.7
2026	3,703.0	3,198.2	3,129.6	2,562.3	2,007.8	1,599.8	1,543.6	1,536.8	1,497.4	1,767.7	2,601.0	3,836.1	28,983.2
2027	3,721.5	3,214.1	3,145.2	2,575.1	2,017.8	1,607.8	1,551.3	1,544.4	1,504.9	1,776.5	2,614.0	3,855.3	29,127.9
2028	3,739.8	3,230.0	3,160.7	2,587.8	2,027.7	1,615.7	1,558.9	1,552.0	1,512.3	1,785.3	2,626.9	3,874.3	29,271.4
2029	3,757.8	3,245.5	3,175.9	2,600.2	2,037.5	1,623.5	1,566.4	1,559.5	1,519.6	1,793.9	2,639.5	3,892.8	29,411.9
2030	3,775.3	3,260.6	3,190.7	2,612.3	2,047.0	1,631.0	1,573.7	1,566.7	1,526.6	1,802.2	2,651.8	3,911.0	29,548.9

San Diego Gas and Electric
2012 California Gas Report
Figure 6: Base Temperature Year Demand Forecast

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2012	1,477	1,334	1,477	1,429	1,477	1,429	1,477	1,477	1,429	1,477	1,429	1,477	17,386
2013	1,474	1,331	1,474	1,426	1,474	1,426	1,474	1,474	1,426	1,474	1,426	1,474	17,355
2014	1,474	1,331	1,474	1,426	1,474	1,426	1,474	1,474	1,426	1,474	1,426	1,474	17,353
2015	1,475	1,332	1,475	1,428	1,475	1,428	1,475	1,475	1,428	1,475	1,428	1,475	17,370
2016	1,479	1,336	1,479	1,431	1,479	1,431	1,479	1,479	1,431	1,479	1,431	1,479	17,413
2017	1,483	1,339	1,483	1,435	1,483	1,435	1,483	1,483	1,435	1,483	1,435	1,483	17,459
2018	1,487	1,343	1,487	1,439	1,487	1,439	1,487	1,487	1,439	1,487	1,439	1,487	17,505
2019	1,491	1,346	1,491	1,442	1,491	1,442	1,491	1,491	1,442	1,491	1,442	1,491	17,550
2020	1,494	1,349	1,494	1,446	1,494	1,446	1,494	1,494	1,446	1,494	1,446	1,494	17,592
2021	1,497	1,353	1,497	1,449	1,497	1,449	1,497	1,497	1,449	1,497	1,449	1,497	17,631
2022	1,506	1,360	1,506	1,457	1,506	1,457	1,506	1,506	1,457	1,506	1,457	1,506	17,727
2023	1,514	1,367	1,514	1,465	1,514	1,465	1,514	1,514	1,465	1,514	1,465	1,514	17,821
2024	1,521	1,374	1,521	1,472	1,521	1,472	1,521	1,521	1,472	1,521	1,472	1,521	17,914
2025	1,529	1,381	1,529	1,480	1,529	1,480	1,529	1,529	1,480	1,529	1,480	1,529	18,004
2026	1,537	1,388	1,537	1,487	1,537	1,487	1,537	1,537	1,487	1,537	1,487	1,537	18,094
2027	1,544	1,395	1,544	1,495	1,544	1,495	1,544	1,544	1,495	1,544	1,495	1,544	18,184
2028	1,552	1,402	1,552	1,502	1,552	1,502	1,552	1,552	1,502	1,552	1,502	1,552	18,274
2029	1,559	1,409	1,559	1,509	1,559	1,509	1,559	1,559	1,509	1,559	1,509	1,559	18,362
2030	1,567	1,415	1,567	1,516	1,567	1,516	1,567	1,567	1,516	1,567	1,516	1,567	18,447

GN3 Industrial DATA TABLES

San Diego Gas and Electric Company

2012 CGR - Industrial GN3

The Year the Equipment Was Installed by Business Types

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
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
2012 CGR - Industrial GN3
Electric Price Forecasat (Cent/KWH)

(a) Average Price Forecast

Year	Chemical	Fab_Metal	Food	Mining	Petroleum	_Prim_Metal	Stone	Textile	Transport	Wood_Paper	Misc
2011	14.31	14.57	16.26	14.07	13.88	14.65	14.11	14.14	14.65	13.59	14.03
2012	14.18	14.50	16.51	13.90	13.67	14.59	13.94	13.98	14.58	13.33	13.86
2013	14.70	15.00	16.93	14.43	14.22	15.10	14.47	14.51	15.09	13.88	14.39
2014	15.20	15.50	17.40	14.93	14.72	15.59	14.97	15.01	15.58	14.39	14.89
2015	15.69	16.00	17.89	15.42	15.22	16.09	15.47	15.51	16.08	14.88	15.39
2016	16.20	16.51	18.49	15.91	15.70	16.62	15.96	16.01	16.60	15.35	15.88
2017	16.70	17.03	19.01	16.42	16.21	17.14	16.47	16.52	17.12	15.86	16.38
2018	17.24	17.57	19.57	16.96	16.74	17.68	17.01	17.06	17.66	16.39	16.92
2019	17.78	18.11	20.11	17.49	17.28	18.23	17.54	17.59	18.20	16.92	17.46
2020	18.38	18.71	20.74	18.09	17.88	18.84	18.14	18.20	18.81	17.52	18.06
2021	19.14	19.48	21.54	18.84	18.63	19.61	18.90	18.96	19.57	18.26	18.81
2022	19.93	20.29	22.39	19.63	19.41	20.42	19.69	19.75	20.38	19.03	19.60
2023	20.73	21.09	23.24	20.42	20.20	21.24	20.48	20.55	21.19	19.81	20.39
2024	21.57	21.95	24.14	21.25	21.03	22.10	21.32	21.39	22.05	20.63	21.22
2025	22.46	22.84	25.10	22.13	21.91	23.01	22.20	22.27	22.95	21.49	22.10
2026	23.39	23.80	26.12	23.05	22.82	23.97	23.12	23.20	23.90	22.39	23.02
2027	24.36	24.78	27.19	24.01	23.78	24.96	24.09	24.17	24.89	23.33	23.98
2028	25.37	25.81	28.29	25.00	24.77	26.00	25.09	25.17	25.92	24.30	24.98
2029	26.41	26.86	29.43	26.03	25.79	27.07	26.12	26.21	26.99	25.31	26.01
2030	27.49	27.96	30.61	27.10	26.85	28.18	27.19	27.29	28.09	26.35	27.07

(b) Marginal Price Forecasat

Year	Chemical	Fab_Metal	Food	Mining	Petroleum	_Prim_Metal	Stone	Textile	Transport	Wood_Paper	Misc
2011	11.31	11.58	12.23	11.35	11.08	11.35	11.21	11.27	11.46	10.84	11.14
2012	11.21	11.54	12.31	11.26	10.94	11.26	11.10	11.17	11.39	10.65	11.01
2013	11.62	11.93	12.67	11.67	11.36	11.67	11.51	11.58	11.80	11.09	11.43
2014	12.02	12.32	13.06	12.06	11.76	12.06	11.91	11.97	12.19	11.48	11.83
2015	12.41	12.72	13.45	12.45	12.15	12.45	12.30	12.36	12.58	11.87	12.21
2016	12.80	13.13	13.90	12.86	12.53	12.85	12.69	12.76	12.98	12.24	12.60
2017	13.21	13.54	14.32	13.26	12.93	13.25	13.09	13.16	13.39	12.64	13.00
2018	13.63	13.96	14.75	13.68	13.35	13.68	13.52	13.59	13.82	13.06	13.43
2019	14.06	14.39	15.19	14.11	13.77	14.10	13.94	14.01	14.24	13.48	13.85
2020	14.53	14.87	15.68	14.58	14.25	14.58	14.41	14.49	14.72	13.95	14.32
2021	15.13	15.48	16.30	15.19	14.84	15.18	15.01	15.08	15.32	14.53	14.92
2022	15.76	16.12	16.97	15.82	15.46	15.81	15.63	15.71	15.96	15.15	15.54
2023	16.39	16.76	17.63	16.45	16.08	16.44	16.26	16.34	16.59	15.76	16.17
2024	17.06	17.43	18.33	17.12	16.74	17.11	16.92	17.01	17.27	16.41	16.82
2025	17.76	18.15	19.07	17.82	17.43	17.81	17.62	17.71	17.97	17.09	17.52
2026	18.50	18.90	19.86	18.56	18.16	18.56	18.36	18.44	18.72	17.80	18.25
2027	19.27	19.68	20.68	19.33	18.91	19.33	19.12	19.21	19.50	18.54	19.01
2028	20.06	20.50	21.54	20.13	19.70	20.13	19.91	20.00	20.30	19.31	19.79
2029	20.89	21.34	22.42	20.96	20.51	20.95	20.73	20.83	21.14	20.11	20.61
2030	21.74	22.21	23.33	21.82	21.35	21.81	21.58	21.68	22.00	20.94	21.45

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Gas Price Forecasat ($/Therm)

(a) Average Price Forecast

Year	Price Deflator	Chemical	Fabricated Metal	Food	Mining	Petroleum	Primary Metal	Stone	Textile	Transport	Wood Paper	Misc
2011	100.00	0.7582	0.7722	0.8616	0.7455	0.7356	0.7766	0.7475	0.7494	0.7762	0.7201	0.7437
2012	101.56	0.6116	0.6250	0.7119	0.5993	0.5895	0.6290	0.6012	0.6028	0.6289	0.5746	0.5975
2013	103.59	0.6757	0.6895	0.7779	0.6632	0.6533	0.6937	0.6651	0.6669	0.6934	0.6380	0.6614
2014	105.59	0.7189	0.7331	0.8230	0.7061	0.6962	0.7375	0.7082	0.7101	0.7371	0.6806	0.7044
2015	107.71	0.7566	0.7711	0.8626	0.7436	0.7335	0.7759	0.7457	0.7478	0.7752	0.7176	0.7418
2016	109.89	0.7629	0.7779	0.8710	0.7496	0.7395	0.7829	0.7519	0.7541	0.7820	0.7232	0.7479
2017	111.97	0.7953	0.8107	0.9053	0.7818	0.7717	0.8160	0.7842	0.7865	0.8149	0.7550	0.7801
2018	114.07	0.8307	0.8464	0.9426	0.8168	0.8067	0.8520	0.8194	0.8218	0.8507	0.7896	0.8152
2019	116.09	0.8666	0.8827	0.9804	0.8525	0.8423	0.8885	0.8552	0.8578	0.8871	0.8249	0.8510
2020	118.11	0.9018	0.9182	1.0175	0.8874	0.8771	0.9243	0.8902	0.8929	0.9227	0.8594	0.8859
2021	120.62	0.9391	0.9560	1.0572	0.9245	0.9141	0.9624	0.9273	0.9302	0.9606	0.8959	0.9230
2022	123.23	0.9764	0.9938	1.0969	0.9615	0.9510	1.0006	0.9645	0.9675	0.9985	0.9324	0.9600
2023	125.72	1.0129	1.0307	1.1356	0.9976	0.9871	1.0378	1.0007	1.0040	1.0355	0.9680	0.9962
2024	128.32	1.0490	1.0673	1.1742	1.0334	1.0228	1.0747	1.0367	1.0401	1.0722	1.0033	1.0320
2025	131.04	1.0856	1.1043	1.2133	1.0696	1.0590	1.1121	1.0730	1.0766	1.1094	1.0389	1.0683
2026	133.89	1.1157	1.1349	1.2460	1.0993	1.0886	1.1431	1.1029	1.1067	1.1401	1.0681	1.0981
2027	136.78	1.1465	1.1663	1.2795	1.1298	1.1190	1.1749	1.1336	1.1375	1.1716	1.0980	1.1286
2028	139.73	1.1782	1.1985	1.3140	1.1611	1.1503	1.2074	1.1650	1.1692	1.2039	1.1287	1.1600
2029	142.69	1.2106	1.2315	1.3491	1.1932	1.1822	1.2408	1.1973	1.2016	1.2370	1.1602	1.1921
2030	145.70	1.2439	1.2653	1.3852	1.2261	1.2151	1.2750	1.2303	1.2348	1.2709	1.1925	1.2250

(b) Marginal Price Forecasat

Year	Price Deflator	Chemical	Fabricated Metal	Food	Mining	Petroleum	Primary Metal	Stone	Textile	Transport	Wood Paper	Misc
2011	100.00	0.7181	0.7353	0.7764	0.7208	0.7036	0.7206	0.7120	0.7157	0.7276	0.6883	0.7074
2012	101.56	0.5725	0.5891	0.6286	0.5751	0.5586	0.5749	0.5666	0.5703	0.5817	0.5439	0.5622
2013	103.59	0.6360	0.6529	0.6934	0.6386	0.6217	0.6384	0.6299	0.6336	0.6454	0.6066	0.6254
2014	105.59	0.6786	0.6959	0.7374	0.6813	0.6639	0.6811	0.6724	0.6762	0.6882	0.6485	0.6678
2015	107.71	0.7156	0.7334	0.7759	0.7184	0.7006	0.7182	0.7093	0.7132	0.7255	0.6848	0.7045
2016	109.89	0.7213	0.7395	0.7831	0.7241	0.7059	0.7239	0.7148	0.7188	0.7314	0.6897	0.7099
2017	111.97	0.7530	0.7717	0.8164	0.7560	0.7373	0.7557	0.7464	0.7505	0.7634	0.7207	0.7414
2018	114.07	0.7877	0.8068	0.8525	0.7907	0.7716	0.7905	0.7809	0.7851	0.7983	0.7547	0.7759
2019	116.09	0.8230	0.8426	0.8892	0.8261	0.8066	0.8259	0.8161	0.8204	0.8339	0.7893	0.8109
2020	118.11	0.8576	0.8775	0.9252	0.8607	0.8408	0.8605	0.8505	0.8548	0.8686	0.8231	0.8452
2021	120.62	0.8941	0.9146	0.9635	0.8973	0.8769	0.8971	0.8869	0.8913	0.9055	0.8588	0.8814
2022	123.23	0.9306	0.9517	1.0018	0.9339	0.9130	0.9337	0.9232	0.9278	0.9423	0.8943	0.9176
2023	125.72	0.9663	0.9878	1.0392	0.9697	0.9482	0.9694	0.9587	0.9634	0.9783	0.9291	0.9530
2024	128.32	1.0016	1.0237	1.0764	1.0051	0.9831	1.0048	0.9938	0.9986	1.0139	0.9635	0.9880
2025	131.04	1.0374	1.0600	1.1140	1.0409	1.0183	1.0406	1.0293	1.0343	1.0499	0.9983	1.0233
2026	133.89	1.0666	1.0898	1.1452	1.0702	1.0470	1.0699	1.0583	1.0634	1.0794	1.0265	1.0522
2027	136.78	1.0965	1.1203	1.1772	1.1002	1.0765	1.1000	1.0881	1.0933	1.1097	1.0554	1.0817
2028	139.73	1.1273	1.1517	1.2100	1.1311	1.1067	1.1308	1.1186	1.1240	1.1408	1.0851	1.1121
2029	142.69	1.1588	1.1838	1.2436	1.1627	1.1377	1.1624	1.1499	1.1554	1.1727	1.1156	1.1433
2030	145.70	1.1911	1.2168	1.2780	1.1952	1.1696	1.1949	1.1821	1.1876	1.2054	1.1468	1.1752

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Historical Throughput and Customer Counts

Business Type	therms_ 2011 Temp. Adj.	meters_ 2011	meters_ 2011 ExCust	meters_ 2011 NewCust	avgUse_ 2011 ExCust	avgUse_ 2011 NewCust	Price Elasticity	Employment Elasticity
Mining	72971	8	8	0	9121	0	0.000000	0.321451
Food	2607842	316	310	6	8311	5253	-0.190795	1.242506
Textile	40732	23	23	0	1771	0	0.000000	0.033325
Wood_Paper	17822	14	14	0	1273	0	0.000000	0.508272
Chemical	1980243	83	83	0	23858	0	-0.080517	0.650067
Petroleum	149356	14	14	0	10668	0	-0.180563	0.084537
Stone	319129	32	32	0	9973	0	0.000000	0.416909
Prim_Metal	313137	14	14	0	22367	0	0.000000	0.956685
Fab_Metal	1200905	159	158	1	7595	842	-0.137441	1.023881
Transport	1950197	66	66	0	29548	0	0.000000	0.402505
Misc	6242111	618	613	5	10165	2251	-0.108307	0.879307
Total	14,894,445	1,347	1,335					

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Average Use Per Meter **therm**

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other	Total
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
2012 CGR - Industrial GN3
Use Per Meter for New Customers therm

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other	Total
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
2012 CGR - 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
2012 CGR - Industrial GN3
Gas UEC **(Therm per SqFt.)**

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
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	

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Gas Market Shares

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
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
2012 CGR - Industrial GN3
Saturation Rate

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
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
2012 CGR - 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)

Business Type	End Use	Fuel	Efficiency	EQcost
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
2012 CGR - Industrial GN3
Employment Forecast (in thousands)

YEAR	Mining	Food	Textile	Wood_Paper	Chemical	Petroleum	Stone	Primary_Metal	Fabricated_Metal	Transportation	Miscellaneous	Total
2011	2474	14306	4887	2294	4289	717	1998	938	9733	8689	42391	92715
2012	2490	14466	4707	2276	4352	736	1999	971	9846	9109	43175	94127
2013	2496	14525	4610	2391	4367	730	2031	984	10233	9786	44040	96192
2014	2490	14601	4499	2596	4392	705	2127	989	10830	10276	43847	97353
2015	2413	14768	4383	2804	4452	684	2197	1015	11411	10613	43995	98735
2016	2354	14991	4254	2943	4524	667	2235	1036	11859	10493	44215	99571
2017	2315	15264	4164	3038	4597	655	2254	1048	12014	10237	44703	100290
2018	2253	15455	4087	3106	4623	643	2269	1049	12007	10114	45090	100696
2019	2171	15549	3992	3141	4618	628	2277	1057	12144	10079	45340	100995
2020	2090	15614	3872	3165	4614	612	2273	1067	12294	10014	45514	101130
2021	2027	15674	3745	3167	4602	598	2269	1077	12494	9953	45818	101424
2022	2000	15720	3614	3152	4581	592	2263	1081	12709	9896	46067	101674
2023	1982	15695	3520	3162	4573	585	2255	1071	12768	9827	45926	101364
2024	1956	15625	3461	3184	4570	576	2238	1043	12670	9746	45665	100734
2025	1935	15568	3424	3204	4560	564	2219	1007	12459	9654	45293	99888
2026	1931	15536	3402	3219	4546	548	2199	976	12204	9561	44810	98931
2027	1930	15494	3399	3202	4514	535	2171	946	11957	9463	44260	97871
2028	1919	15444	3391	3152	4474	523	2140	918	11708	9357	43692	96719
2029	1909	15398	3348	3102	4432	509	2118	892	11487	9250	43190	95636
2030	1898	15344	3313	3075	4392	496	2102	866	11275	9146	42793	94700

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Average Temperature

YEAR	Model Output GN-3 - Ind	IndGN3 EE/DSM	Smart Meter	Core Ind Final
2011	1489.4	0.0	0.0	1489.4
2012	1524.7	5.8	0.0	1518.9
2013	1519.8	11.6	0.0	1508.2
2014	1514.5	17.4	0.0	1497.1
2015	1515.7	23.2	0.0	1492.5
2016	1521.2	29.0	0.0	1492.3
2017	1520.3	34.7	0.0	1485.6
2018	1514.0	40.5	0.0	1473.5
2019	1506.8	46.3	0.0	1460.5
2020	1499.2	52.1	0.0	1447.1
2021	1493.9	57.9	0.0	1436.0
2022	1488.4	57.9	0.0	1430.5
2023	1477.2	57.9	0.0	1419.3
2024	1462.4	57.9	0.0	1404.5
2025	1445.7	57.9	0.0	1387.8
2026	1429.9	57.9	0.0	1372.0
2027	1413.5	57.9	0.0	1355.6
2028	1397.0	57.9	0.0	1339.1
2029	1382.2	57.9	0.0	1324.3
2030	1369.1	57.9	0.0	1311.2

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Cold Temperature

YEAR	Model Output GN-3 - Ind	IndGN3 EE/DSM	Smart Meter	Core Ind Final
2011	1568.8	0.0	0.0	1568.8
2012	1605.9	6.1	0.0	1599.8
2013	1600.7	12.2	0.0	1588.5
2014	1595.1	18.3	0.0	1576.8
2015	1596.4	24.4	0.0	1572.0
2016	1602.2	30.5	0.0	1571.7
2017	1601.3	36.6	0.0	1564.7
2018	1594.7	42.7	0.0	1552.0
2019	1587.1	48.8	0.0	1538.3
2020	1579.1	54.9	0.0	1524.2
2021	1573.4	61.0	0.0	1512.4
2022	1567.7	61.0	0.0	1506.7
2023	1555.9	61.0	0.0	1494.9
2024	1540.3	61.0	0.0	1479.3
2025	1522.7	61.0	0.0	1461.7
2026	1506.1	61.0	0.0	1445.1
2027	1488.8	61.0	0.0	1427.8
2028	1471.4	61.0	0.0	1410.4
2029	1455.8	61.0	0.0	1394.9
2030	1442.0	61.0	0.0	1381.0

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Hot Temperature

YEAR	Model Output GN-3 - Ind	IndGN3 EE/DSM	Smart Meter	Core Ind Final
2011	1410.1	0.0	0.0	1410.1
2012	1443.5	5.5	0.0	1438.0
2013	1438.8	11.0	0.0	1427.9
2014	1433.8	16.4	0.0	1417.4
2015	1435.0	21.9	0.0	1413.0
2016	1440.2	27.4	0.0	1412.8
2017	1439.3	32.9	0.0	1406.4
2018	1433.4	38.4	0.0	1395.0
2019	1426.6	43.9	0.0	1382.7
2020	1419.4	49.3	0.0	1370.1
2021	1414.3	54.8	0.0	1359.5
2022	1409.2	54.8	0.0	1354.3
2023	1398.5	54.8	0.0	1343.7
2024	1384.5	54.8	0.0	1329.7
2025	1368.7	54.8	0.0	1313.9
2026	1353.8	54.8	0.0	1299.0
2027	1338.2	54.8	0.0	1283.4
2028	1322.6	54.8	0.0	1267.8
2029	1308.6	54.8	0.0	1253.8
2030	1296.2	54.8	0.0	1241.4

San Diego Gas and Electric Company
2012 CGR - Industrial GN3
Core Industrial Demand Forecast (Mdth)
Base Temperature

YEAR	Model Output GN-3 - Ind	IndGN3 EE/DSM	Smart Meter	Core Ind Final
2011	1198.1	0.0	0.0	1198.1
2012	1226.5	4.5	0.0	1221.9
2013	1222.5	9.3	0.0	1213.1
2014	1218.2	14.0	0.0	1204.2
2015	1219.2	18.6	0.0	1200.6
2016	1223.6	23.2	0.0	1200.4
2017	1222.9	28.0	0.0	1194.9
2018	1217.9	32.7	0.0	1185.1
2019	1212.1	37.4	0.0	1174.6
2020	1206.0	42.1	0.0	1163.8
2021	1201.6	46.7	0.0	1154.9
2022	1197.3	46.7	0.0	1150.5
2023	1188.2	46.9	0.0	1141.3
2024	1176.3	47.0	0.0	1129.3
2025	1162.9	47.1	0.0	1115.8
2026	1150.2	47.1	0.0	1103.1
2027	1137.0	47.1	0.0	1089.9
2028	1123.7	47.1	0.0	1076.6
2029	1111.8	47.1	0.0	1064.8
2030	1101.3	47.0	0.0	1054.2

2012 CALIFORNIA GAS REPORT

NONCORE COMMERCIAL, INDUSTRIAL AND COGEN DEMAND FORECAST
JULY 2012

SDGE
A Sempra Energy utility™

SDG&E Non-Core Demand Equations—before DSM adjustments (Mdth)

Cogeneration (MDTH_CGNNC_SD)

```
Cochrane-Orcutt
MONTHLY data for   71 periods from  FEB 2006 to  DEC 2011

mdth_cgnnc_sd

  =  - 634.675 * dum2006janmay + 1570.25 * dum2009novdec
      (4.14796)                 (10.8974)

     + 1.23317 * (ecsd+eisd)/1000
      (41.9836)

Sum Sq    1693913   Std Err   159.003   LHS Mean  1585.28
R Sq       0.8366   R Bar Sq   0.8293   F  4, 67  85.7445
D.W.( 1)   2.2232   D.W.(12)   1.5888

AR_0 =  + 0.48812 * AR_1
         (3.92883)
```

****

Commercial (MDTH_COMNC_SD)

```
MDTH_COMNC_SD
Cochrane-Orcutt
MONTHLY data for   71 periods from  FEB 2006 to  DEC 2011

mdth_comnc_sd

  =    0.18234 * ecsd/1000 + 172.427 * dum2006janmay
      (39.6693)             (7.01188)

Sum Sq    48113.3   Std Err   26.5997   LHS Mean  225.767
R Sq       0.7775   R Bar Sq   0.7709   F  3, 68  79.1939
D.W.( 1)   2.2557   D.W.(12)   1.2072

AR_0 =  + 0.40738 * AR_1
         (3.36626)
```

****

Industrial (MDTH_INDNC_SD)

```
MDTH_INDNC_SD
Cochrane-Orcutt
MONTHLY data for   70 periods from  MAR 2006 to  DEC 2011

mdth_indnc_sd

  =    1.51427 * eisd/1000
      (8.39037)

Sum Sq    16415.8   Std Err   15.6515   LHS Mean  144.232   Res Mean   0.2050
R Sq       0.6346   R Bar Sq   0.6237   F  3, 67  38.7880   %RMSE     11.9505
D.W.( 1)   1.9230   D.W.(12)   1.1638

AR_0 =  + 0.57080 * AR_1 + 0.31921 * AR_2
         (4.80566)         (2.66778)
```

ANNUAL SUMMARY

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
2006	16,300	3,757	1,374	1,208,058	104,417	0.0	0.0
2007	19,920	2,560	1,483	1,216,850	102,850	0.0	0.0
2008	18,929	2,546	1,886	1,206,108	103,158	0.0	0.0
2009	23,606	2,536	1,670	1,145,233	95,667	0.0	0.0
2010	17,480	2,559	1,912	1,141,906	92,829	0.0	0.0
2011	17,046	2,525	2,019	1,163,499	92,715	0.0	0.0
2012	19,409	2,373	1,582	1,187,849	94,127	5.1	20.6
2013	19,606	2,407	1,449	1,209,697	96,192	10.3	41.2
2014	20,032	2,463	1,398	1,237,795	97,353	15.4	61.8
2015	20,471	2,521	1,384	1,266,571	98,735	20.5	82.3
2016	20,875	2,575	1,372	1,293,534	99,571	25.7	102.9
2017	21,206	2,618	1,362	1,315,534	100,290	30.8	123.5
2018	21,461	2,650	1,348	1,332,709	100,696	35.9	144.1
2019	21,702	2,681	1,332	1,348,968	100,995	41.1	164.7
2020	21,982	2,717	1,314	1,368,092	101,130	46.2	185.3
2021	22,208	2,745	1,299	1,383,279	101,424	51.3	205.8
2022	22,415	2,776	1,303	1,397,316	101,674	51.3	205.8
2023	22,653	2,812	1,298	1,413,968	101,364	51.3	205.8
2024	22,925	2,855	1,286	1,433,304	100,733	51.3	205.8
2025	23,217	2,900	1,271	1,454,197	99,888	51.3	205.8
2026	23,532	2,950	1,254	1,476,783	98,932	51.3	205.8
2027	23,852	3,000	1,234	1,499,858	97,871	51.3	205.8
2028	24,159	3,049	1,214	1,522,106	96,719	51.3	205.8
2029	24,464	3,097	1,194	1,544,138	95,635	51.3	205.8
2030	24,772	3,145	1,177	1,566,296	94,700	51.3	205.8

MONTHLY

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Jan-06	726.9	453.7	119.7	1,183,900	103,700	0.0	0.0
Feb-06	773.8	449.3	128.8	1,193,300	104,300	0.0	0.0
Mar-06	693.2	409.3	108.2	1,199,800	104,900	0.0	0.0
Apr-06	750.4	474.6	130.8	1,201,800	104,500	0.0	0.0
May-06	1,210.4	351.8	134.1	1,210,300	104,700	0.0	0.0
Jun-06	1,716.4	244.8	126.5	1,218,400	105,200	0.0	0.0
Jul-06	1,695.0	231.9	133.6	1,203,900	105,000	0.0	0.0
Aug-06	1,788.4	206.3	98.9	1,208,400	104,600	0.0	0.0
Sep-06	1,778.3	222.2	117.8	1,213,400	104,400	0.0	0.0
Oct-06	1,803.7	214.9	97.9	1,214,200	103,800	0.0	0.0
Nov-06	1,733.6	257.5	96.4	1,223,800	104,000	0.0	0.0
Dec-06	1,630.1	240.2	80.9	1,225,500	103,900	0.0	0.0
Jan-07	1,806.8	235.9	100.4	1,195,400	103,000	0.0	0.0
Feb-07	1,746.5	274.8	127.9	1,204,700	102,800	0.0	0.0
Mar-07	1,542.7	236.5	97.4	1,212,600	103,100	0.0	0.0
Apr-07	1,523.2	263.3	123.3	1,212,000	102,000	0.0	0.0
May-07	1,640.0	228.3	122.3	1,220,800	102,100	0.0	0.0
Jun-07	1,757.6	207.0	123.9	1,228,900	102,200	0.0	0.0
Jul-07	1,634.3	169.5	118.6	1,218,500	103,100	0.0	0.0
Aug-07	1,739.6	167.8	127.4	1,219,600	102,800	0.0	0.0
Sep-07	1,768.7	172.0	141.3	1,219,600	102,500	0.0	0.0
Oct-07	1,739.9	162.9	118.7	1,217,800	103,100	0.0	0.0
Nov-07	1,599.3	201.1	140.0	1,224,000	103,500	0.0	0.0
Dec-07	1,421.7	240.6	142.0	1,228,300	104,000	0.0	0.0
Jan-08	1,726.7	244.4	138.1	1,197,700	103,000	0.0	0.0
Feb-08	1,629.8	263.2	147.7	1,206,700	103,000	0.0	0.0
Mar-08	1,576.5	233.0	165.5	1,211,700	103,400	0.0	0.0
Apr-08	1,578.0	234.3	164.5	1,211,600	103,300	0.0	0.0
May-08	1,530.6	192.1	166.6	1,215,300	103,400	0.0	0.0

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Jun-08	1,443.4	208.4	171.5	1,218,600	103,700	0.0	0.0
Jul-08	1,552.3	171.2	169.1	1,206,500	103,500	0.0	0.0
Aug-08	1,611.5	182.4	172.7	1,205,800	103,700	0.0	0.0
Sep-08	1,551.3	196.6	170.8	1,202,300	103,300	0.0	0.0
Oct-08	1,453.5	209.0	150.2	1,200,800	103,200	0.0	0.0
Nov-08	1,553.0	238.4	145.6	1,200,300	102,500	0.0	0.0
Dec-08	1,722.6	172.6	124.2	1,196,000	101,900	0.0	0.0
Jan-09	1,753.0	216.3	117.6	1,159,000	101,400	0.0	0.0
Feb-09	1,717.4	224.2	123.4	1,156,400	100,300	0.0	0.0
Mar-09	1,287.6	232.7	149.7	1,155,400	99,200	0.0	0.0
Apr-09	1,617.9	235.2	143.8	1,150,500	97,300	0.0	0.0
May-09	1,284.3	274.0	118.7	1,153,800	96,100	0.0	0.0
Jun-09	1,822.4	181.9	110.2	1,153,000	95,600	0.0	0.0
Jul-09	1,728.2	176.4	147.9	1,129,900	94,200	0.0	0.0
Aug-09	1,923.2	174.7	146.0	1,130,800	93,700	0.0	0.0
Sep-09	1,694.0	204.6	159.0	1,126,700	93,200	0.0	0.0
Oct-09	2,133.5	204.3	146.9	1,138,300	92,500	0.0	0.0
Nov-09	3,441.1	198.1	171.5	1,144,100	92,200	0.0	0.0
Dec-09	3,203.8	214.1	135.5	1,144,900	92,300	0.0	0.0
Jan-10	1,578.7	223.0	144.0	1,121,399	92,050	0.0	0.0
Feb-10	1,580.9	220.6	138.3	1,127,460	92,616	0.0	0.0
Mar-10	1,457.6	206.2	128.2	1,134,904	93,190	0.0	0.0
Apr-10	1,700.8	207.0	157.0	1,142,529	94,106	0.0	0.0
May-10	1,462.0	202.3	142.8	1,150,480	93,488	0.0	0.0
Jun-10	1,325.2	221.2	169.0	1,154,067	93,550	0.0	0.0
Jul-10	1,350.5	204.3	178.4	1,139,651	93,044	0.0	0.0
Aug-10	1,424.6	216.1	169.4	1,140,560	92,797	0.0	0.0
Sep-10	1,497.0	207.9	177.2	1,136,402	92,550	0.0	0.0
Oct-10	1,345.8	199.5	176.3	1,144,525	92,440	0.0	0.0
Nov-10	1,392.5	228.3	176.5	1,153,259	92,053	0.0	0.0
Dec-10	1,364.1	223.0	155.0	1,157,633	92,065	0.0	0.0
Jan-11	1,514.2	246.1	144.0	1,141,958	91,786	0.0	0.0
Feb-11	1,518.4	229.5	168.8	1,147,861	92,205	0.0	0.0
Mar-11	1,340.9	226.4	167.9	1,154,183	92,632	0.0	0.0
Apr-11	1,559.1	223.0	165.2	1,157,697	92,886	0.0	0.0
May-11	1,389.4	196.6	152.3	1,167,718	92,640	0.0	0.0
Jun-11	1,430.9	197.8	175.0	1,172,855	93,070	0.0	0.0
Jul-11	1,403.5	189.0	179.9	1,159,484	93,208	0.0	0.0
Aug-11	1,382.0	203.0	186.5	1,161,430	93,056	0.0	0.0
Sep-11	1,532.9	186.9	190.3	1,159,490	92,904	0.0	0.0
Oct-11	1,356.7	186.4	169.1	1,173,009	92,709	0.0	0.0
Nov-11	1,181.2	235.3	176.8	1,181,402	92,596	0.0	0.0
Dec-11	1,437.1	205.2	143.1	1,184,901	92,885	0.0	0.0
Jan-12	1,512.8	196.7	140.6	1,166,992	93,194	0.4	1.7
Feb-12	1,568.4	195.9	138.4	1,173,121	93,580	0.4	1.7
Mar-12	1,600.2	196.3	137.0	1,179,754	93,974	0.4	1.7
Apr-12	1,616.8	196.7	135.3	1,183,799	94,189	0.4	1.7
May-12	1,634.4	198.4	133.1	1,193,841	93,905	0.4	1.7
Jun-12	1,643.7	199.3	132.1	1,198,786	94,305	0.4	1.7
Jul-12	1,629.2	197.0	130.3	1,186,159	94,148	0.4	1.7
Aug-12	1,630.5	197.0	129.0	1,186,590	94,221	0.4	1.7
Sep-12	1,626.6	196.4	127.9	1,183,102	94,294	0.4	1.7
Oct-12	1,640.1	198.3	127.0	1,193,697	94,519	0.4	1.7
Nov-12	1,650.7	199.9	125.8	1,202,369	94,433	0.4	1.7
Dec-12	1,655.6	200.6	125.3	1,205,982	94,756	0.4	1.7
Jan-13	1,606.2	196.8	123.1	1,188,007	95,040	0.9	3.4
Feb-13	1,614.1	197.7	122.4	1,194,072	95,523	0.9	3.4
Mar-13	1,622.7	198.9	122.4	1,200,648	96,014	0.9	3.4
Apr-13	1,627.0	199.5	122.3	1,203,847	96,415	0.9	3.4
May-13	1,639.7	201.5	121.2	1,214,621	96,121	0.9	3.4
Jun-13	1,646.9	202.5	121.2	1,220,133	96,528	0.9	3.4

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Jul-13	1,632.2	200.3	120.6	1,208,008	96,473	0.9	3.4
Aug-13	1,633.1	200.4	120.1	1,208,846	96,435	0.9	3.4
Sep-13	1,629.1	199.8	119.5	1,205,581	96,396	0.9	3.4
Oct-13	1,642.5	201.8	119.5	1,216,370	96,620	0.9	3.4
Nov-13	1,653.7	203.5	118.6	1,225,928	96,314	0.9	3.4
Dec-13	1,659.1	204.3	118.4	1,230,299	96,425	0.9	3.4
Jan-14	1,637.7	200.7	116.3	1,212,639	96,392	1.3	5.1
Feb-14	1,646.4	201.9	116.6	1,219,487	96,769	1.3	5.1
Mar-14	1,655.9	203.3	116.9	1,226,920	97,154	1.3	5.1
Apr-14	1,661.2	204.1	116.8	1,231,214	97,248	1.3	5.1
May-14	1,674.7	206.1	116.2	1,242,549	97,039	1.3	5.1
Jun-14	1,682.5	207.2	116.8	1,248,491	97,536	1.3	5.1
Jul-14	1,668.3	205.1	116.7	1,236,639	97,617	1.3	5.1
Aug-14	1,669.7	205.3	116.5	1,237,822	97,617	1.3	5.1
Sep-14	1,665.8	204.7	116.4	1,234,638	97,615	1.3	5.1
Oct-14	1,680.5	206.9	116.5	1,246,540	97,833	1.3	5.1
Nov-14	1,691.9	208.6	116.1	1,256,155	97,607	1.3	5.1
Dec-14	1,697.3	209.4	116.2	1,260,444	97,805	1.3	5.1
Jan-15	1,675.4	205.6	114.6	1,242,190	97,954	1.7	6.9
Feb-15	1,684.0	206.9	115.1	1,248,883	98,323	1.7	6.9
Mar-15	1,693.4	208.2	115.5	1,256,302	98,699	1.7	6.9
Apr-15	1,698.6	209.0	115.6	1,260,417	98,835	1.7	6.9
May-15	1,712.0	211.0	115.1	1,271,759	98,553	1.7	6.9
Jun-15	1,719.6	212.1	115.7	1,277,644	98,989	1.7	6.9
Jul-15	1,705.3	210.0	115.6	1,265,865	98,991	1.7	6.9
Aug-15	1,706.2	210.1	115.5	1,266,588	98,932	1.7	6.9
Sep-15	1,701.4	209.4	115.3	1,262,741	98,871	1.7	6.9
Oct-15	1,715.6	211.5	115.5	1,274,252	99,042	1.7	6.9
Nov-15	1,727.0	213.2	115.1	1,283,951	98,747	1.7	6.9
Dec-15	1,732.4	214.0	115.2	1,288,265	98,880	1.7	6.9
Jan-16	1,709.7	210.2	113.6	1,269,523	98,964	2.1	8.6
Feb-16	1,718.3	211.4	114.0	1,276,233	99,272	2.1	8.6
Mar-16	1,727.9	212.8	114.4	1,283,840	99,587	2.1	8.6
Apr-16	1,733.1	213.6	114.4	1,288,191	99,572	2.1	8.6
May-16	1,746.4	215.6	114.0	1,299,446	99,310	2.1	8.6
Jun-16	1,754.0	216.7	114.6	1,305,181	99,772	2.1	8.6
Jul-16	1,739.4	214.5	114.7	1,293,107	99,824	2.1	8.6
Aug-16	1,739.6	214.5	114.6	1,293,386	99,759	2.1	8.6
Sep-16	1,734.2	213.7	114.4	1,288,998	99,693	2.1	8.6
Oct-16	1,748.5	215.9	114.6	1,300,644	99,835	2.1	8.6
Nov-16	1,759.5	217.6	114.2	1,310,003	99,558	2.1	8.6
Dec-16	1,764.4	218.3	114.4	1,313,850	99,712	2.1	8.6
Jan-17	1,740.7	214.2	112.9	1,294,160	99,857	2.6	10.3
Feb-17	1,748.7	215.4	113.3	1,300,503	100,145	2.6	10.3
Mar-17	1,757.9	216.7	113.8	1,307,735	100,441	2.6	10.3
Apr-17	1,762.5	217.4	113.7	1,311,574	100,440	2.6	10.3
May-17	1,775.3	219.4	113.2	1,322,455	100,117	2.6	10.3
Jun-17	1,782.1	220.3	113.8	1,327,630	100,524	2.6	10.3
Jul-17	1,766.2	218.0	113.8	1,314,538	100,485	2.6	10.3
Aug-17	1,765.8	217.9	113.6	1,314,333	100,394	2.6	10.3
Sep-17	1,759.7	217.0	113.5	1,309,395	100,302	2.6	10.3
Oct-17	1,773.7	219.1	113.7	1,320,780	100,464	2.6	10.3
Nov-17	1,784.3	220.8	113.2	1,329,879	100,115	2.6	10.3
Dec-17	1,788.7	221.4	113.3	1,333,428	100,201	2.6	10.3
Jan-18	1,764.3	217.3	111.6	1,313,266	100,202	3.0	12.0
Feb-18	1,771.9	218.4	112.0	1,319,236	100,498	3.0	12.0
Mar-18	1,780.6	219.6	112.5	1,326,139	100,801	3.0	12.0
Apr-18	1,784.5	220.2	112.5	1,329,327	100,800	3.0	12.0
May-18	1,797.1	222.2	112.0	1,340,061	100,489	3.0	12.0
Jun-18	1,803.6	223.1	112.6	1,345,002	100,910	3.0	12.0
Jul-18	1,787.2	220.6	112.6	1,331,505	100,873	3.0	12.0

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Aug-18	1,786.4	220.5	112.5	1,330,870	100,806	3.0	12.0
Sep-18	1,779.8	219.5	112.4	1,325,550	100,738	3.0	12.0
Oct-18	1,793.3	221.5	112.7	1,336,440	100,965	3.0	12.0
Nov-18	1,804.1	223.2	112.2	1,345,723	100,599	3.0	12.0
Dec-18	1,808.6	223.9	112.3	1,349,381	100,670	3.0	12.0
Jan-19	1,784.1	219.8	110.5	1,329,114	100,667	3.4	13.7
Feb-19	1,791.8	220.9	110.9	1,335,225	100,938	3.4	13.7
Mar-19	1,800.6	222.1	111.4	1,342,221	101,215	3.4	13.7
Apr-19	1,804.5	222.7	111.3	1,345,411	101,194	3.4	13.7
May-19	1,817.2	224.7	110.8	1,356,253	100,847	3.4	13.7
Jun-19	1,823.7	225.6	111.4	1,361,226	101,235	3.4	13.7
Jul-19	1,806.8	223.1	111.3	1,347,415	101,166	3.4	13.7
Aug-19	1,806.1	223.0	111.1	1,346,912	101,061	3.4	13.7
Sep-19	1,799.7	222.1	111.0	1,341,715	100,955	3.4	13.7
Oct-19	1,813.5	224.1	111.2	1,352,992	101,106	3.4	13.7
Nov-19	1,824.8	225.9	110.6	1,362,615	100,740	3.4	13.7
Dec-19	1,829.6	226.6	110.7	1,366,519	100,812	3.4	13.7
Jan-20	1,803.8	222.3	109.0	1,345,227	100,810	3.8	15.4
Feb-20	1,813.2	223.6	109.4	1,352,707	101,082	3.8	15.4
Mar-20	1,823.6	225.1	109.9	1,361,003	101,362	3.8	15.4
Apr-20	1,831.1	226.3	109.8	1,367,252	101,349	3.8	15.4
May-20	1,843.3	228.2	109.3	1,377,623	100,998	3.8	15.4
Jun-20	1,849.2	229.0	109.9	1,382,095	101,382	3.8	15.4
Jul-20	1,831.5	226.3	109.8	1,367,567	101,314	3.8	15.4
Aug-20	1,829.9	226.1	109.6	1,366,377	101,199	3.8	15.4
Sep-20	1,822.7	225.1	109.4	1,360,571	101,083	3.8	15.4
Oct-20	1,835.8	227.0	109.6	1,371,262	101,181	3.8	15.4
Nov-20	1,847.0	228.8	109.1	1,380,823	100,847	3.8	15.4
Dec-20	1,851.7	229.4	109.2	1,384,601	100,951	3.8	15.4
Jan-21	1,826.9	225.3	107.6	1,364,147	101,005	4.3	17.2
Feb-21	1,834.8	226.4	108.0	1,370,334	101,285	4.3	17.2
Mar-21	1,843.6	227.7	108.5	1,377,322	101,572	4.3	17.2
Apr-21	1,847.3	228.3	108.4	1,380,435	101,541	4.3	17.2
May-21	1,860.1	230.2	107.9	1,391,265	101,220	4.3	17.2
Jun-21	1,866.4	231.1	108.6	1,396,096	101,637	4.3	17.2
Jul-21	1,849.6	228.6	108.5	1,382,240	101,592	4.3	17.2
Aug-21	1,848.0	228.4	108.4	1,380,999	101,516	4.3	17.2
Sep-21	1,840.8	227.3	108.3	1,375,141	101,439	4.3	17.2
Oct-21	1,854.5	229.3	108.5	1,386,284	101,634	4.3	17.2
Nov-21	1,865.6	231.0	108.0	1,395,735	101,282	4.3	17.2
Dec-21	1,870.1	231.7	108.1	1,399,352	101,369	4.3	17.2
Jan-22	1,844.8	227.9	108.2	1,378,496	101,417	4.3	17.2
Feb-22	1,852.6	229.0	108.6	1,384,622	101,671	4.3	17.2
Mar-22	1,861.2	230.3	109.0	1,391,501	101,931	4.3	17.2
Apr-22	1,864.6	230.8	108.9	1,394,334	101,878	4.3	17.2
May-22	1,877.3	232.8	108.4	1,405,207	101,523	4.3	17.2
Jun-22	1,883.6	233.6	109.0	1,410,019	101,908	4.3	17.2
Jul-22	1,866.4	231.1	108.8	1,395,894	101,831	4.3	17.2
Aug-22	1,864.9	230.9	108.7	1,394,715	101,721	4.3	17.2
Sep-22	1,857.7	229.8	108.5	1,388,900	101,610	4.3	17.2
Oct-22	1,871.6	231.9	108.8	1,400,222	101,789	4.3	17.2
Nov-22	1,883.0	233.6	108.2	1,409,987	101,386	4.3	17.2
Dec-22	1,887.8	234.3	108.2	1,413,897	101,422	4.3	17.2
Jan-23	1,862.6	230.6	108.2	1,393,111	101,423	4.3	17.2
Feb-23	1,870.7	231.7	108.5	1,399,618	101,622	4.3	17.2
Mar-23	1,879.7	233.1	108.8	1,406,813	101,829	4.3	17.2
Apr-23	1,883.1	233.6	108.7	1,409,787	101,729	4.3	17.2
May-23	1,896.4	235.7	108.1	1,421,178	101,314	4.3	17.2
Jun-23	1,903.2	236.6	108.6	1,426,454	101,638	4.3	17.2
Jul-23	1,886.5	234.1	108.4	1,412,761	101,510	4.3	17.2
Aug-23	1,885.2	234.0	108.1	1,411,892	101,332	4.3	17.2

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Sep-23	1,878.3	233.0	107.8	1,406,360	101,154	4.3	17.2
Oct-23	1,893.0	235.2	107.9	1,418,491	101,196	4.3	17.2
Nov-23	1,904.7	237.0	107.3	1,428,494	100,793	4.3	17.2
Dec-23	1,909.8	237.8	107.3	1,432,658	100,828	4.3	17.2
Jan-24	1,884.7	234.0	107.3	1,411,975	100,833	4.3	17.2
Feb-24	1,893.1	235.2	107.6	1,418,681	101,025	4.3	17.2
Mar-24	1,902.2	236.6	107.9	1,426,009	101,224	4.3	17.2
Apr-24	1,905.9	237.1	107.8	1,429,139	101,114	4.3	17.2
May-24	1,919.3	239.2	107.1	1,440,648	100,699	4.3	17.2
Jun-24	1,926.1	240.2	107.6	1,445,949	101,017	4.3	17.2
Jul-24	1,909.2	237.7	107.4	1,432,134	100,900	4.3	17.2
Aug-24	1,907.9	237.5	107.1	1,431,240	100,705	4.3	17.2
Sep-24	1,900.8	236.5	106.9	1,425,594	100,509	4.3	17.2
Oct-24	1,915.6	238.7	106.9	1,437,770	100,543	4.3	17.2
Nov-24	1,927.6	240.6	106.3	1,448,050	100,114	4.3	17.2
Dec-24	1,932.9	241.4	106.3	1,452,463	100,119	4.3	17.2
Jan-25	1,907.8	237.6	106.2	1,431,751	100,072	4.3	17.2
Feb-25	1,916.4	238.9	106.5	1,438,704	100,255	4.3	17.2
Mar-25	1,925.8	240.2	106.8	1,446,272	100,444	4.3	17.2
Apr-25	1,929.7	240.8	106.6	1,449,547	100,352	4.3	17.2
May-25	1,943.5	243.0	105.9	1,461,381	99,907	4.3	17.2
Jun-25	1,950.5	244.0	106.4	1,466,888	100,191	4.3	17.2
Jul-25	1,933.6	241.5	106.1	1,453,076	100,028	4.3	17.2
Aug-25	1,932.4	241.3	105.8	1,452,303	99,818	4.3	17.2
Sep-25	1,925.3	240.3	105.5	1,446,708	99,607	4.3	17.2
Oct-25	1,940.7	242.6	105.5	1,459,391	99,613	4.3	17.2
Nov-25	1,952.9	244.5	104.9	1,469,890	99,182	4.3	17.2
Dec-25	1,958.4	245.4	104.9	1,474,451	99,182	4.3	17.2
Jan-26	1,933.0	241.6	104.8	1,453,466	99,139	4.3	17.2
Feb-26	1,941.9	242.9	105.0	1,460,692	99,306	4.3	17.2
Mar-26	1,951.6	244.3	105.3	1,468,489	99,480	4.3	17.2
Apr-26	1,955.7	244.9	105.1	1,471,996	99,351	4.3	17.2
May-26	1,969.7	247.1	104.5	1,484,011	98,921	4.3	17.2
Jun-26	1,976.9	248.1	104.9	1,489,605	99,212	4.3	17.2
Jul-26	1,959.6	245.6	104.7	1,475,559	99,063	4.3	17.2
Aug-26	1,958.6	245.5	104.4	1,474,894	98,862	4.3	17.2
Sep-26	1,951.6	244.4	104.1	1,469,310	98,661	4.3	17.2
Oct-26	1,967.6	246.8	104.1	1,482,468	98,698	4.3	17.2
Nov-26	1,980.0	248.8	103.5	1,493,122	98,255	4.3	17.2
Dec-26	1,985.6	249.6	103.4	1,497,783	98,238	4.3	17.2
Jan-27	1,959.8	245.8	103.3	1,476,594	98,178	4.3	17.2
Feb-27	1,968.9	247.1	103.6	1,483,901	98,328	4.3	17.2
Mar-27	1,978.6	248.5	103.8	1,491,773	98,484	4.3	17.2
Apr-27	1,982.7	249.2	103.6	1,495,316	98,346	4.3	17.2
May-27	1,996.8	251.4	102.9	1,507,411	97,898	4.3	17.2
Jun-27	2,003.9	252.4	103.3	1,512,959	98,164	4.3	17.2
Jul-27	1,986.3	249.8	103.1	1,498,653	97,995	4.3	17.2
Aug-27	1,985.1	249.6	102.7	1,497,819	97,773	4.3	17.2
Sep-27	1,977.7	248.6	102.4	1,492,005	97,551	4.3	17.2
Oct-27	1,993.9	251.0	102.4	1,505,308	97,545	4.3	17.2
Nov-27	2,006.3	252.9	101.7	1,515,981	97,104	4.3	17.2
Dec-27	2,011.8	253.8	101.7	1,520,580	97,085	4.3	17.2
Jan-28	1,985.4	249.8	101.6	1,498,881	97,018	4.3	17.2
Feb-28	1,994.6	251.2	101.8	1,506,267	97,167	4.3	17.2
Mar-28	2,004.4	252.6	102.0	1,514,199	97,322	4.3	17.2
Apr-28	2,008.5	253.3	101.8	1,517,769	97,188	4.3	17.2
May-28	2,022.7	255.5	101.2	1,529,922	96,745	4.3	17.2
Jun-28	2,029.7	256.5	101.6	1,535,392	97,007	4.3	17.2
Jul-28	2,011.6	253.8	101.3	1,520,629	96,836	4.3	17.2
Aug-28	2,010.3	253.6	101.0	1,519,794	96,620	4.3	17.2
Sep-28	2,002.9	252.6	100.7	1,513,880	96,403	4.3	17.2

SDG&E Noncore Commercial & Industrial Demand (MDth)				San Diego County	San Diego County	Cumulative	Cumulative
	Cogeneration	Commercial	Industrial	Comcl Employment	Indstl Employment	DSM Cmcl	DSM Indl.
	MDTH_CGNNC_SD	MDTH_COMNC_SD	MDTH_INDNC_SD	ECSD	EISD	(MDth)	(MDth)
Oct-28	2,019.3	255.0	100.7	1,527,431	96,398	4.3	17.2
Nov-28	2,031.9	257.0	100.0	1,538,223	95,967	4.3	17.2
Dec-28	2,037.5	257.8	100.0	1,542,888	95,953	4.3	17.2
Jan-29	2,010.9	253.9	99.9	1,520,988	95,891	4.3	17.2
Feb-29	2,020.1	255.2	100.1	1,528,407	96,045	4.3	17.2
Mar-29	2,029.9	256.7	100.4	1,536,364	96,206	4.3	17.2
Apr-29	2,033.9	257.3	100.2	1,539,772	96,084	4.3	17.2
May-29	2,048.3	259.5	99.5	1,552,115	95,652	4.3	17.2
Jun-29	2,055.3	260.5	99.9	1,557,651	95,916	4.3	17.2
Jul-29	2,037.3	257.8	99.7	1,542,923	95,750	4.3	17.2
Aug-29	2,035.8	257.7	99.4	1,541,890	95,545	4.3	17.2
Sep-29	2,028.0	256.5	99.1	1,535,689	95,340	4.3	17.2
Oct-29	2,044.3	259.0	99.1	1,549,127	95,335	4.3	17.2
Nov-29	2,057.0	261.0	98.4	1,560,012	94,927	4.3	17.2
Dec-29	2,062.7	261.8	98.4	1,564,722	94,930	4.3	17.2
Jan-30	2,034.7	257.6	98.4	1,541,645	94,912	4.3	17.2
Feb-30	2,045.1	259.1	98.6	1,550,055	95,056	4.3	17.2
Mar-30	2,056.1	260.8	98.9	1,558,986	95,207	4.3	17.2
Apr-30	2,063.2	261.9	98.6	1,565,022	95,035	4.3	17.2
May-30	2,076.9	264.0	98.0	1,576,731	94,640	4.3	17.2
Jun-30	2,083.1	264.9	98.4	1,581,495	94,934	4.3	17.2
Jul-30	2,063.5	261.9	98.3	1,565,444	94,807	4.3	17.2
Aug-30	2,061.2	261.6	98.0	1,563,781	94,632	4.3	17.2
Sep-30	2,052.7	260.4	97.7	1,556,938	94,456	4.3	17.2
Oct-30	2,068.2	262.7	97.8	1,569,646	94,493	4.3	17.2
Nov-30	2,080.9	264.7	97.2	1,580,574	94,102	4.3	17.2
Dec-30	2,086.6	265.6	97.2	1,585,228	94,120	4.3	17.2

2012 CALIFORNIA GAS REPORT

NATURAL GAS VEHICLES
JULY 2012

Table of Content

SDG&E NGV 2012 CGR Workpapers

A:SDG&E compressed and uncompressed throughput forecast 2012 through 2030

YEAR MDTH1 MDTH2 MDTH3 MDTH4 MDTH5 MDTH6 MDTH7 MDTH8 MDTH9 MDTH10 MDTH11 MDTH12 TOTAL RATE NGVTYP
0.0128

The numbers in the first row of each section are in therms (th), all other numbers are in MDTH.

2011(th)	12454	14034	13097	14832	15969	18874	20543	22958	23435	24754	25973	24524	231447	GNV	C
2011	1	1	1	1	2	2	2	2	2	2	3	2	23	GNV	C
2012	1	1	1	2	2	2	2	2	2	3	3	2	23	GNV	C
2013	1	1	1	2	2	2	2	2	2	3	3	3	24	GNV	C
2014	1	1	1	2	2	2	2	2	2	3	3	3	24	GNV	C
2015	1	1	1	2	2	2	2	2	2	3	3	3	24	GNV	C
2016	1	1	1	2	2	2	2	2	2	3	3	3	25	GNV	C
2017	1	2	1	2	2	2	2	2	3	3	3	3	25	GNV	C
2018	1	2	1	2	2	2	2	3	3	3	3	3	25	GNV	C
2019	1	2	1	2	2	2	2	3	3	3	3	3	26	GNV	C
2020	1	2	1	2	2	2	2	3	3	3	3	3	26	GNV	C
2021	1	2	1	2	2	2	2	3	3	3	3	3	26	GNV	C
2022	1	2	2	2	2	2	2	3	3	3	3	3	27	GNV	C
2023	1	2	2	2	2	2	2	3	3	3	3	3	27	GNV	C
2024	1	2	2	2	2	2	2	3	3	3	3	3	27	GNV	C
2025	1	2	2	2	2	2	2	3	3	3	3	3	28	GNV	C
2026	2	2	2	2	2	2	2	3	3	3	3	3	28	GNV	C
2027	2	2	2	2	2	2	3	3	3	3	3	3	28	GNV	C
2028	2	2	2	2	2	2	3	3	3	3	3	3	29	GNV	C
2029	2	2	2	2	2	2	3	3	3	3	3	3	29	GNV	C
2030	2	2	2	2	2	2	3	3	3	3	3	3	29	GNV	C

2011(th)	237861	260226	268140	271789	267930	275685	255521	257397	300548	288415	305792	303550	3292854	GNV	U
2011	24	26	27	27	27	28	26	26	30	29	31	30	329	GNV	U
2012	24	26	27	28	27	28	26	26	30	29	31	31	334	GNV	U
2013	24	27	28	28	27	28	26	26	31	30	31	31	338	GNV	U
2014	25	27	28	28	28	29	27	27	31	30	32	32	342	GNV	U
2015	25	27	28	29	28	29	27	27	32	30	32	32	347	GNV	U
2016	25	28	29	29	29	29	27	27	32	31	33	32	351	GNV	U
2017	26	28	29	29	29	30	28	28	32	31	33	33	355	GNV	U
2018	26	28	29	30	29	30	28	28	33	32	33	33	360	GNV	U
2019	26	29	30	30	30	31	28	29	33	32	34	34	365	GNV	U
2020	27	29	30	30	30	31	29	29	34	32	34	34	369	GNV	U
2021	27	30	30	31	30	31	29	29	34	33	35	34	374	GNV	U
2022	27	30	31	31	31	32	29	30	35	33	35	35	379	GNV	U
2023	28	30	31	32	31	32	30	30	35	34	36	35	384	GNV	U
2024	28	31	32	32	32	33	30	30	35	34	36	36	389	GNV	U
2025	28	31	32	32	32	33	31	31	36	34	37	36	394	GNV	U
2026	29	32	32	33	32	33	31	31	36	35	37	37	399	GNV	U
2027	29	32	33	33	33	34	31	32	37	35	38	37	404	GNV	U
2028	30	32	33	34	33	34	32	32	37	36	38	38	409	GNV	U
2029	30	33	34	34	34	35	32	32	38	36	38	38	414	GNV	U
2030	30	33	34	35	34	35	33	33	38	37	39	39	420	GNV	U
2011(th)	557000	630720	560952	615004	587995	636316	625411	657366	675405	625385	682143	609274	7462971	GNV	UT
2011	56	63	56	62	59	64	63	66	68	63	68	61	746	GNV	UT
2012	56	64	57	62	60	64	63	67	68	63	69	62	756	GNV	UT
2013	57	65	58	63	60	65	64	67	69	64	70	63	766	GNV	UT
2014	58	66	58	64	61	66	65	68	70	65	71	63	775	GNV	UT
2015	59	66	59	65	62	67	66	69	71	66	72	64	785	GNV	UT
2016	59	67	60	66	63	68	67	70	72	67	73	65	795	GNV	UT
2017	60	68	61	66	63	69	68	71	73	68	74	66	806	GNV	UT
2018	61	69	61	67	64	70	68	72	74	68	75	67	816	GNV	UT
2019	62	70	62	68	65	70	69	73	75	69	76	67	827	GNV	UT
2020	62	71	63	69	66	71	70	74	76	70	77	68	837	GNV	UT
2021	63	72	64	70	67	72	71	75	77	71	78	69	848	GNV	UT
2022	64	73	65	71	68	73	72	76	78	72	78	70	859	GNV	UT
2023	65	74	65	72	69	74	73	77	79	73	80	71	870	GNV	UT
2024	66	74	66	73	69	75	74	78	80	74	81	72	881	GNV	UT
2025	67	75	67	74	70	76	75	79	81	75	82	73	892	GNV	UT
2026	67	76	68	74	71	77	76	80	82	76	83	74	904	GNV	UT

2027	68	77	69	75	72	78	77	81	83	77	84	75	915	GNV	UT
2028	69	78	70	76	73	79	78	82	84	78	85	76	927	GNV	UT
2029	70	79	71	77	74	80	79	83	85	79	86	77	939	GNV	UT
2030	71	80	71	78	75	81	80	84	86	80	87	78	951	GNV	UT

B:SDG&E station growth 2012 through 2030

Station	No. of St	Stations	Station growth Rate
2011	31	1	3.49%
2012	32	1	3.49%
2013	33	1	3.49%
2014	34	1	3.49%
2015	36	1	3.49%
2016	37	1	3.49%
2017	38	1	3.49%
2018	39	1	3.49%
2019	41	1	3.49%
2020	42	1	3.49%
2021	44	2	3.49%
2022	45	2	3.49%
2023	47	2	3.49%
2024	48	2	3.49%
2025	50	2	3.49%
2026	52	2	3.49%
2027	54	2	3.49%
2028	56	2	3.49%
2029	58	2	3.49%
2030	60	n/a	3.49%

A: SDG&E Throughput Forecast Growth Methodology

Years	Total Volume	Transit Customer Volume	Total Volume Less Transit Customer Volume		Yearly growth	Average growth 2008 through 2011
			Total	Volume Increase		
	MM CCF	MM CCF	MM CCF	MM CCF	%	%
2011	11.134	9.743	1.391	0.483	4.71	1.28%
2010	10.265	9.357	0.908	0.188	1.59	
2009	11.797	11.077	0.72	-0.258	-2.45	
2008	10.552	9.574	0.978	n/a		

B:SDG&E NGV Station Growth Methodology

Year	Station cou	Private stat	yearly char	% change	Average % change	
2011	31	24	1	3.33		
2010	30	23	2	7.14	3.49%	
2009	28	21	0	0		
2008	28	21	n/a			
SDG&E NGV Station Count Forecast						
2011	31		1		3.49%	
2012	32		1		3.49%	
2013	33		1		3.49%	
2014	34		1		3.49%	
2015	36		1		3.49%	
2016	37		1		3.49%	
2017	38		1		3.49%	
2018	39		1		3.49%	
2019	41		1		3.49%	
2020	42		1		3.49%	
2021	44		2		3.49%	
2022	45		2		3.49%	
2023	47		2		3.49%	
2024	48		2		3.49%	
2025	50		2		3.49%	
2026	52		2		3.49%	
2027	54		2		3.49%	
2028	56		2		3.49%	
2029	58		2		3.49%	
2030	60		n/a	2	3.49%	

2012 CALIFORNIA GAS REPORT

ENERGY EFFICIENCY
JULY 2012

SAN DIEGO GAS AND ELECTRIC
2012 CALIFORNIA GAS REPORT
ENERGY EFFICIENCY SAVINGS

	Reported 2011 Therms	Forecast 2012 Therms	Forecast 2013	Forecast 2014	Forecast 2015	Forecast 2016	Forecast 2017	Forecast 2018	Forecast 2019	Forecast 2020
SDG&E EE Programs TOTAL	**1,689,437**	**3,727,488**								
PUC Goal	**3,800,000**	**4,100,000**	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000
Difference	**(2,110,563)**	**(372,512)**								

SDGE	2011 therms	2012 therms
Core Residential	758,638	966,779
Core Commercial	820,361	2,471,796
Core Industrial	16,803	52,644
NonCore Commercial	9,363	47,160
NonCore Industrial retail	84,271	189,110
Total	**1,689,437**	**3,727,488**

Proportionally scale it down or up to match PUC Goals for 2010 - 2012

ANNUAL NET SAVINGS	2011 mdth	2012 mdth	2013 mdth	2014 mdth	2015 mdth	2016 mdth	2017 mdth	2018 mdth	2019 mdth	2020 mdth
Residential	171	106	106	106	106	106	106	106	106	106
Core Commercial	185	272	272	272	272	272	272	272	272	272
Core Industrial	4	6	6	6	6	6	6	6	6	6
Noncore Commercial	2	5	5	5	5	5	5	5	5	5
Noncore Industrial	19	21	21	21	21	21	21	21	21	21
Total	**380**	**410**	**410**	**410**	**410**	**410**	**410**	**410**	**410**	**410**

Cumulative Savings mdth SDGE	2012 mdth	2013 mdth	2014 mdth	2015 mdth	2016 mdth	2017 mdth	2018 mdth	2019 mdth	2020 mdth
Residential	106	213	319	425	532	638	744	851	957
Core Commercial	272	544	816	1,088	1,359	1,631	1,903	2,175	2,447
Core Industrial	6	12	17	23	29	35	41	46	52
Noncore Commercial	5	10	16	21	26	31	36	41	47
Noncore Industrial	21	42	62	83	104	125	146	166	187
Total Load Impacts	**410**	**820**	**1,230**	**1,640**	**2,050**	**2,460**	**2,870**	**3,280**	**3,690**

MMCF factor: **1.010513**

Cumulative Savings MMCF SDGE	2012 mmcf	2013 mmcf	2014 mmcf	2015 mmcf	2016 mmcf	2017 mmcf	2018 mmcf	2019 mmcf	2020 mmcf
Residential	105	210	316	421	526	631	737	842	947
Core Commercial	269	538	807	1,076	1,345	1,614	1,883	2,152	2,421
Core Industrial	6	11	17	23	29	34	40	46	52
Noncore Commercial	5	10	15	21	26	31	36	41	46
Noncore Industrial	21	41	62	82	103	124	144	165	185
	26	51	77	103	129	154	180	206	231
Total Cumulative Load	**406**	**811**	**1,217**	**1,623**	**2,029**	**2,434**	**2,840**	**3,246**	**3,652**

NOTES:
2011 Reported data is preliminary pending CPUC review.
Life Cycle is 10 years

SAN DIEGO GAS AND ELECTRIC
2012 CALIFORNIA GAS REPORT
ENERGY EFFICIENCY SAVINGS

	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030
SDG&E EE Programs TOTAL										
PUC Goal	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000	4,100,000
Difference										

SDGE
Core Residential
Core Commercial
Core Industrial
NonCore Commercial
NonCore Industrial retail
Total

Proportionally scale it down or up to match PUC Goals for 2010 - 2012

ANNUAL NET SAVINGS	**2021 mdth**	**2022 mdth**	**2023 mdth**	**2024 mdth**	**2025 mdth**	**2026 mdth**	**2027 mdth**	**2028 mdth**	**2029 mdth**	**2030 mdth**
Residential	106	106	106	106	106	106	106	106	106	106
Core Commercial	272	272	272	272	272	272	272	272	272	272
Core Industrial	6	6	6	6	6	6	6	6	6	6
Noncore Commercial	5	5	5	5	5	5	5	5	5	5
Noncore Industrial	21	21	21	21	21	21	21	21	21	21
Total	**410**	**410**	**410**	**410**	**410**	**410**	**410**	**410**	**410**	**410**

Cumulative Savings mdth **SDGE**	**2021 mdth**	**2022 mdth**	**2023 mdth**	**2024 mdth**	**2025 mdth**	**2026 mdth**	**2027 mdth**	**2028 mdth**	**2029 mdth**	**2030 mdth**
Residential	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063
Core Commercial	2,719	2,719	2,719	2,719	2,719	2,719	2,719	2,719	2,719	2,719
Core Industrial	58	58	58	58	58	58	58	58	58	58
Noncore Commercial	52	52	52	52	52	52	52	52	52	52
Noncore Industrial	208	208	208	208	208	208	208	208	208	208
Total Load Impacts	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**	**4,100**

Cumulative Savings MMCF **SDGE**	**2021 mmcf**	**2022 mmcf**	**2023 mmcf**	**2024 mmcf**	**2025 mmcf**	**2026 mmcf**	**2027 mmcf**	**2028 mmcf**	**2029 mmcf**	**2030 mmcf**
Residential	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052
Core Commercial	2,691	2,691	2,691	2,691	2,691	2,691	2,691	2,691	2,691	2,691
Core Industrial	57	57	57	57	57	57	57	57	57	57
Noncore Commercial	51	51	51	51	51	51	51	51	51	51
Noncore Industrial	206	206	206	206	206	206	206	206	206	206
Total Cumulative Load	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**	**6,809**

NOTES:
2011 Reported data is preliminary pending CPUC review.
Life Cycle is 10 years

2012 CALIFORNIA GAS REPORT

Electric Generation
JULY 2012

Please refer to SoCalGas' 2012 California Gas Report workpapers for detail on the documentation regarding non-cogen EG forecasting.

2012 CALIFORNIA GAS REPORT

CORE PEAKDAY FORECAST
JULY 2012

SDGE
A Sempra Energy utility™

SDG&E Heating Degree Day (HDD) Weather Designs

(Calendar Based)

	Cold		Average	Hot	
	1-in-35 exceedance	1-in-10 exceedance		1-in-10 exceedance	1-in-35 exceedance
January	332.8	308.3	261.6	214.8	190.4
February	278.1	257.6	218.6	179.5	159.1
March	244.8	226.8	192.4	158.0	140.0
April	165.2	153.0	129.8	106.6	94.5
May	72.4	67.1	56.9	46.7	41.4
June	17.3	16.1	13.6	11.2	9.9
July	1.0	0.9	0.8	0.7	0.6
August	0.1	0.1	0.1	0.0	0.0
September	1.6	1.5	1.3	1.0	0.9
October	35.5	32.9	27.9	22.9	20.3
November	170.9	158.4	134.4	110.3	97.8
December	353.3	327.3	277.7	228.1	202.1
	1673.0	1550.0	**1315.0**	1080.0	957.0

Notes:

1/ 20-Yr-Avg (Jan1991-Dec2010)

2/ Daily system wide temperature based on simple average of three locations: Lindberg Field, Mirimar NAS and El Cajon.

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-2" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
			----	----	----	----	----	----	----	----	----	----
1		RESIDEN	234.9	237.1	236.6	236.6	236.8	237.4	238.1	238.7	239.3	239.9
2		Com GN3	72.8	72.7	71.7	70.4	69.1	67.8	66.5	65.1	63.7	62.5
2		GAC 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		GEN 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		Ind GN3	5.9	6.1	6.0	6.0	5.9	5.9	5.9	5.9	5.8	5.8
4		NGV 2/	3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.4
			======	======	======	======	======	======	======	======	======	======
	Total:	MDth/day	316.7	318.9	317.4	316.1	315.0	314.4	313.7	313.0	312.2	311.5
		MMcf/day 4/	313.4	315.6	314.1	312.9	311.8	311.1	310.5	309.7	309.0	308.2
		Days per Mo	31	31	31	31	31	31	31	31	31	31
	Pk-Day Temp. (deg-F) =		47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
	Hdd: December--ColdYr =		353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
	"Wkday/Wkend" Factor-Res:		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	"Wkday/Wkend" Factor-NonRes:		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 47.7 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-2" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1		RESIDEN	240.4	241.7	243.0	244.3	245.5	246.7	248.0	249.2	250.4	251.5
2		Com GN3	61.1	60.9	60.9	60.9	61.0	61.2	61.4	61.6	61.9	62.1
2		GAC 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		GEN 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		Ind GN3	5.7	5.7	5.7	5.6	5.5	5.5	5.4	5.3	5.3	5.2
4		NGV 2/	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.9
	Total:	MDth/day	310.7	311.8	313.1	314.4	315.6	317.0	318.4	319.9	321.3	322.8
		MMcf/day 4/	307.5	308.6	309.8	311.1	312.4	313.7	315.1	316.6	318.0	319.4
		Days per Mo	31	31	31	31	31	31	31	31	31	31
		Pk-Day Temp. (deg-F) =	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
		Hdd: December--ColdYr =	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
		"Wkday/Wkend" Factor-Res:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		"Wkday/Wkend" Factor-NonRes:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 47.7 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-10" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1		RESIDEN	277.2	279.7	279.2	279.2	279.5	280.2	280.9	281.6	282.4	283.0
2		Com GN3	80.3	80.1	79.0	77.6	76.1	74.7	73.3	71.7	70.2	68.8
2		GAC 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		GEN 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		Ind GN3	6.5	6.7	6.6	6.6	6.6	6.6	6.5	6.5	6.4	6.4
4		NGV 2/	3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.4
Total:		MDth/day	367.1	369.6	367.9	366.5	365.3	364.7	364.0	363.2	362.4	361.6
		MMcf/day 4/	363.2	365.8	364.1	362.7	361.5	360.9	360.2	359.4	358.6	357.9
		Days per Mo	31	31	31	31	31	31	31	31	31	31
		Pk-Day Temp. (deg-F) =	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8
		Hdd: December--ColdYr =	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
		"Wkday/Wkend" Factor-Res:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		"Wkday/Wkend" Factor-NonRes:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 43.8 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-10" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1		RESIDEN	283.7	285.2	286.7	288.2	289.7	291.1	292.6	294.0	295.4	296.8
2		Com GN3	67.3	67.2	67.1	67.1	67.2	67.4	67.6	67.9	68.2	68.5
2		GAC 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		GEN 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		Ind GN3	6.3	6.3	6.2	6.2	6.1	6.0	6.0	5.9	5.8	5.8
4		NGV 2/	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.9
	Total:	MDth/day	360.8	362.1	363.6	365.1	366.6	368.2	369.9	371.6	373.3	374.9
		MMcf/day 4/	357.0	358.4	359.8	361.3	362.8	364.4	366.0	367.7	369.4	371.0
		Days per Mo	31	31	31	31	31	31	31	31	31	31
		Pk-Day Temp. (deg-F) =	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8
		Hdd: December--ColdYr =	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
		"Wkday/Wkend" Factor-Res:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		"Wkday/Wkend" Factor-NonRes:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 43.8 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-35" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	RESIDEN		303.4	306.2	305.6	305.6	305.9	306.7	307.5	308.3	309.0	309.8
2	Com GN3		84.9	84.7	83.5	82.0	80.5	79.0	77.5	75.9	74.3	72.8
2	GAC 2/		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	GEN 2/		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Ind GN3		6.9	7.1	7.0	7.0	6.9	6.9	6.9	6.9	6.8	6.7
4	NGV 2/		3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.4
Total:		MDth/day	398.2	401.0	399.2	397.7	396.5	395.8	395.1	394.3	393.5	392.7
		MMcf/day 4/	394.1	396.9	395.1	393.6	392.4	391.7	391.0	390.2	389.4	388.6
		Days per Mo	31	31	31	31	31	31	31	31	31	31
		Pk-Day Temp. (deg-F) =	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3
		Hdd: December--ColdYr =	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
		"Wkday/Wkend" Factor-Res:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		"Wkday/Wkend" Factor-NonRes:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 41.3 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

2012-CGR Sales + Transport + Exchange for Month of DECEMBER
(units=Mdth/Day)
"1-in-35" Likelihood Cold Day Temperature

No.	"CGR_B"	CLASS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1		RESIDEN	310.5	312.2	313.8	315.5	317.1	318.6	320.2	321.8	323.4	324.9
2		Com GN3	71.2	71.0	71.0	71.0	71.1	71.3	71.5	71.8	72.1	72.4
2		GAC 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2		GEN 2/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3		Ind GN3	6.7	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.2	6.1
4		NGV 2/	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.9
	Total:	MDth/day	391.8	393.3	394.9	396.6	398.2	399.9	401.8	403.6	405.4	407.2
		MMcf/day 4/	387.7	389.2	390.8	392.4	394.1	395.8	397.6	399.4	401.2	403.0
		Days per Mo	31	31	31	31	31	31	31	31	31	31
		Pk-Day Temp. (deg-F) =	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3	41.3
		Hdd: December--ColdYr =	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
		"Wkday/Wkend" Factor-Res:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		"Wkday/Wkend" Factor-NonRes:	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Use this Methodology for the 2012-CGR Res and C&I Calculations

Notes:

1/ =("Cold-Dec" / 31 days)+[("Cold-Dec" - "Base-Dec")
/ "Cold-Dec_Hdd"]*(65 degF - 41.3 degF)

2/ "Non-temperature" sensitive market segment.

3/ "Weekday/Weekend" Factor applies to the "raw" estimate.

4/ Dth/Mcf= 1.0105

Friday, May 22, 2012 2012-CGR Sales + Transport + Exchange for Month of Temp=December, Cold Year

No.	"CGR_ CLASS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Residen	5289.4	5337.2	5327.7	5326.9	5332.1	5345.5	5359.7	5373.8	5387.3	5400.2
2	Com GN3	1907.4	1904.8	1876.6	1844.2	1808.8	1775.6	1740.9	1704.9	1669.3	1635.6
2	GAC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	GEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Ind GN3	155.2	158.3	157.2	156.0	155.5	155.5	154.8	153.5	152.2	150.8
4	NGV	93.7	94.9	96.2	97.4	98.6	99.9	101.2	102.5	103.8	105.1
		7446	7495	7458	7424	7395	7377	7357	7335	7313	7292
	2012 CGR: Mdth/Hdd	13	13	13	13	13	13	13	13	13	13

Friday, May 22, 2012 2012-CGR Sales + Transport + Exchange for Month of Temp=December, Cold Year

No.	"CGR_CLASS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Residen	5412.4	5441.8	5470.8	5499.2	5527.0	5554.5	5582.2	5609.7	5636.6	5662.9
2	Com GN3	1600.5	1596.1	1594.8	1595.4	1597.2	1601.7	1607.3	1613.7	1620.8	1627.3
2	GAC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	GEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Ind GN3	149.6	149.1	147.9	146.3	144.6	143.0	141.3	139.5	138.0	136.6
4	NGV	106.5	107.9	109.3	110.7	112.1	113.5	115.0	116.5	117.9	119.5
		7269	7295	7323	7352	7381	7413	7446	7479	7513	7546
	2012 CGR: Mdth/Hdd	13	13	13	13	13	13	13	13	13	13

Friday, May 22, 2012 2012-CGR Sales + Transport + Exchange for Month of Temp=December, "Base/Zero-Hdd" Year

No.	"CGR_CLASS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Residen	1463.4	1476.6	1474.0	1473.8	1475.2	1478.9	1482.9	1486.8	1490.5	1494.1
2	Com GN3	1235.2	1233.5	1215.3	1194.3	1171.3	1149.9	1127.4	1104.0	1081.0	1059.2
2	GAC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	GEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Ind GN3	99.8	101.8	101.1	100.4	100.0	100.0	99.6	98.8	97.9	97.0
4	NGV	93.7	94.9	96.2	97.4	98.6	99.9	101.2	102.5	103.8	105.1
		2892	2907	2887	2866	2845	2829	2811	2792	2773	2755
	2012 CGR: Mdth	2892	2907	2887	2866	2845	2829	2811	2792	2773	2755

Friday, May 22, 2012 2012-CGR Sales + Transport + Exchange for Month of Temp=December, "Base/Zero-Hdd" Year

No.	"CGR_CLASS	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Residen	1497.4	1505.6	1513.6	1521.5	1529.1	1536.8	1544.4	1552.0	1559.5	1566.7
2	Com GN3	1036.5	1033.6	1032.7	1033.2	1034.3	1037.2	1040.9	1045.0	1049.6	1053.8
2	GAC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	GEN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Ind GN3	96.2	95.9	95.1	94.1	93.0	91.9	90.8	89.7	88.7	87.9
4	NGV	106.5	107.9	109.3	110.7	112.1	113.5	115.0	116.5	117.9	119.5
		2737	2743	2751	2759	2769	2779	2791	2803	2816	2828
	2012 CGR: Mdth	2737	2743	2751	2759	2769	2779	2791	2803	2816	2828

2012 CALIFORNIA GAS REPORT

SUPPORTING DATA
JULY 2012

2012 CALIFORNIA GAS REPORT

WEATHER: HEATING DEGREE DAYS – AVERAGE AND "COLD" YEAR DESIGNS; AND WINTER PEAK DAY DESIGN TEMPERATURES

JULY 2012

SDGE
A Sempra Energy utility™

I. Overview

San Diego Gas and Electric Company's service area for natural gas extends from southern Orange County throughout San Diego County to the Mexican border. To quantify the overall temperature experienced within this region, SDGandE aggregates daily temperature recordings from three U.S. Weather Bureau weather stations into one system average heating degree-day ("HDD") figure. The table below lists weather station locations along with its associated temperature zone(s).

Table 1

Representative Weather Stations with Temperature Zones

Station Location	Weight	Temperature Zone
1. El Cajon[1]	1/3	Coastal and Inland
2. San Diego's Lindberg Field	(1/3) x (#Coastal/(#Coastal + #Inland))	Coastal
3. Miramar Naval Air Station	1/3 x (#Inland/(#Coastal + #Inland))	Inland

SDGandE uses 65° Fahrenheit to calculate the number of HDDs. One heating degree-day is accumulated for each degree that the daily average is *below* 65° Fahrenheit. To arrive at the system average HDDs figure for its entire service area, SDGandE weights the HDD figure for each zone using the weights[2] shown in Table 1. These weights are used in calculating the data shown from January 1991 to December 2010.

[1] It turns out that the location of the station for El Cajon is at the boundary of the Coastal and Inland zones. Therefore, El Cajon is use to represent the entire combined Coastal and Inland zones.

[2] As of December 2010, there were 466,297 gas customers associated with the Coastal temperature zone and 392,527 gas customers associated with the Inland temperature zone. The following URL shows a map of the SDG&E service area and temperature zones: http://www.sdge.com/tm2/pdf/ELEC_MAPS_Maps_-_Elec.pdf ; less than 0.04% of SDG&E's gas customers were in the mountain and desert zones.

Daily maximum and minimum temperatures, for each individual weather station in the table above, are compiled from National Weather Service data. The web-site:

http://newweb.wrh.noaa.gov/sgx/obs/rtp/rtpmap.php?wfo=sgx

provides easy access to temperature data for San Diego and parts of surrounding counties. For each station, the average temperature is computed as the (maximum + minimum)/2 and this value is used to compute the heating degrees (i.e., the *daily* HDD) for each station as well. System average values of HDD are then computed using the weights for each respective station. Annual and monthly HDDs for the entire SDGandE service area from 1991 to 2010 are listed in Table 2, below.

Table 2

Calendar Month Heating Degree-Days (Jan. 1991 through Dec. 2010)

	Month												Total
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	"Cal-Year"
1991	256	148	281	121	97	27	0	0	1	32	107	245	1315
1992	241	117	159	13	1	0	0	0	0	3	112	346	993
1993	268	225	132	65	16	9	0	0	2	7	122	262	1106
1994	227	232	160	126	93	2	0	0	0	30	288	306	1463
1995	264	117	163	127	107	23	0	0	0	7	44	221	1073
1996	235	189	175	73	18	3	0	0	1	73	142	243	1152
1997	255	249	145	102	2	2	0	0	0	16	94	287	1152
1998	252	256	205	195	94	22	1	0	5	31	172	338	1571
1999	276	266	279	223	116	51	4	0	4	4	146	243	1610
2000	247	216	224	95	28	3	0	0	0	50	237	227	1327
2001	351	298	199	198	30	5	0	0	0	9	127	325	1543
2002	315	225	247	158	91	13	0	0	2	54	81	294	1479
2003	141	201	179	184	95	32	0	0	0	7	157	275	1270
2004	273	269	98	65	14	4	1	0	0	52	200	265	1240
2005	243	196	159	118	33	5	0	0	4	38	95	231	1121
2006	275	204	305	144	33	0	0	0	1	35	88	287	1372
2007	365	225	155	139	64	20	0	0	4	28	112	340	1451
2008	331	278	187	131	89	16	0	0	0	13	59	287	1391
2009	177	247	201	141	30	11	0	0	0	40	124	291	1262
2010	238	212	195	178	88	24	10	1	2	31	181	238	1399
20-Yr-Avg (Jan1991-Dec2010)													
Avg.	261.5	218.5	192.3	129.8	56.9	13.6	0.8	0.1	1.3	27.9	134.3	277.6	1314.6
St.Dev.	52.3	49.0	53.0	52.1	39.3	13.3	2.4	0.2	1.6	19.7	59.2	39.3	176.944
Min.	141.3	116.6	97.6	13.3	1.3	0.0	0.0	0.0	0.0	2.6	44.5	221.3	992.7
Max.	364.5	298.2	304.8	222.7	115.5	51.1	10.3	1.1	4.7	73.0	287.6	346.5	1610.1

II. Calculations to Define Our Average-Temperature Year

The simple average of the 20-year period (January 1991 through December 2010) was used to represent the Average Year total and the individual monthly values for HDD. The standard deviation of these 20 years of annual HDDs was used to design the two Cold Years based on a "1-in-10" and "1-in-35" chance, ***c***, that the respective annual "Cold Year" $\boldsymbol{hdd_c}$ value would be exceeded.

Our model for the annual HDD data is essentially a regression model where the only "explanatory" variable is the constant term. For example, the annual HDDs are modeled by the equation below:

$HDD_y = \beta_0 + e_y$; where β_0 represents the mean and the e_y is an error term.

It turns out (e.g., see *Econometrics*, Wonnacott and Wonnacott, 1970, Wiley & Sons, Inc., 1970, p. 254) that the average of the annual HDD_y estimates β_0 and that the standard deviation of these HDDs about the mean, β_0, estimates the standard deviation, s_e, of the error term, e_y. Further, a probability model for the annual HDD is based on a T-Distribution with N-1 degrees of freedom, where, N is the number of years of HDD data we use:

$U = (HDD_y - \beta_0)/s_e$, has a T-Distribution with N-1 degrees of freedom.

III. Calculating the Cold-Temperature Year Weather Designs

Cold Year HDD Weather Designs

For SDGandE, cold-temperature-year HDD weather designs are developed with a 1-in-35 year chance of occurrence. In terms of probabilities this can be expressed as the following for a "1-in-35" cold-year HDD value in equation 1 and a "1-in-10" cold-year HDD value in equation 2, with Annual HDD as the random variable:

(1) Prob { Annual HDD > "1-in-35" Cold-Yr HDD } = 1/35 = 0.0286

(2) Prob { Annual HDD > "1-in-10" Cold-Yr HDD } = 1/10 = 0.1000

An area of 0.0286 under one tail of the T-Distribution translates to 2.025 standard deviations *above* an average-year based on a t-statistic with 19

degrees of freedom. Using the standard deviation of 176.94 HDD from the last 20 years of data, these equations yield values of about 1,673 HDD for a "1-in-35" cold year and 1,550 as the number of HDDs for a "1-in-10" cold year (an area of 0.1000 under one tail of the T-Distribution translates to 1.328 standard deviations *above* an average-year based on a t-statistic with 19 degrees of freedom). For example, the "1-in-35" cold-year HDD is calculated as follows:

(3) Cold-year HDD = 1,673 which equals approximately
1,306 average-year HDDs + 2.025 * 176.94

Table 3 shows monthly HDD figures for "1-in-35" cold year, "1-in-10" cold year and, average year temperature designs. The monthly average-temperature-year HDDs are calculated from weighted monthly HDDs from 1991 to 2010, as shown as the bottom of Table 2, above. For example, the average-year December value of 277.7 HDD equals the simple average of the 20 December HDD figures from 1991 to 2010, and represents 21.1 percent of the HDDs in an average-year. SDGandE calculates the cold--temperature-year monthly HDD values using the same shape of the average-year HDDs. For example, since 21.1 percent of average-temperature-year HDDs occurred in December, the estimated number of HDDs during December for a cold-year is equal to 1,673 HDDs multiplied by 21.1 percent, or 353.3 HDDs.

Table 3

Calendar Month Heating Degree-Day Designs

	Cold		Average	Hot	
	1-in-35 Design	1-in-10 Design		1-in-10 Design	1-in-35 Design
January	332.8	308.3	261.6	214.8	190.4
February	278.1	257.6	218.6	179.5	159.1
March	244.8	226.8	192.4	158.0	140.0
April	165.2	153.0	129.8	106.6	94.5
May	72.4	67.1	56.9	46.7	41.4
June	17.3	16.1	13.6	11.2	9.9
July	1.0	0.9	0.8	0.7	0.6
August	0.1	0.1	0.1	0.0	0.0
September	1.6	1.5	1.3	1.0	0.9
October	35.5	32.9	27.9	22.9	20.3
November	170.9	158.4	134.4	110.3	97.8
December	353.3	327.3	277.7	228.1	202.1
	1673	1550	1315	1080	957

IV. Calculating the Peak-Day Design Temperature

For the 2012 CGR, the peak day temperature design values were developed from the same underlying observed historical data as used in the 2013 TCAP; however, we employed the same generic probability model (the 3-parameter GEV probability distribution) that we used in the 2010 CGR. These values are 41.3°F and 43.8°F, for "1-in-35" and "1-in-10" likelihood exceedances, respectively. The subsequent discussion is modified from our 2013 TCAP work papers.

SDG&E's Peak-Day design temperature of 41.3 degrees Fahrenheit, denoted "Deg-F," is determined from a statistical analysis of observed annual minimum daily system average temperatures constructed from daily temperature recordings from the three U.S. Weather Bureau weather stations discussed above. Since we have a time series of daily data by year, the following notation will be used for the remainder of this discussion:

(1) $AVG_{y,d}$ = system average value of Temperature

for calendar year "y" and day "d".

The calendar year, y, can range from 1972 through 2010, while the day, d, can range from 1 to 365, for non leap years, or from 1 to 366 for leap years. The "upper" value for the day, d, thus depends on the calendar year, y, and will be denoted by n(y)=365, or 366, respectively, when y is a non-leap year or a leap year.

For each calendar year, we calculate the following statistic from our series of daily system average temperatures defined in equation (1) above:

(2) $$MinAVG_y = \min_{d=1}^{n(y)} \{ AVG_{y,d} \}, \text{ for } y=1972, 1973, \ldots, 2010.$$

(The notation used in equation 2 means "For a particular year, y, list all the daily values of system average temperature for that year, then pick the smallest one.")

The resulting minimum annual temperatures are shown in Table 4, below. Note that most of the minimum temperatures occur in the months of December or January; however, for some calendar years the minimums occurred in other months (the observed minimum for 1991 was in March, and for 2004 it was in November).

The statistical methods we use to analyze this data employ software developed to fit three generic probability models: the Generalized Extreme Value (GEV) model, the Double-Exponential or GUMBEL (EV1) model and a 2-Parameter Students' T-Distribution (T-Dist) model. [The GEV and EV1 models have the same mathematical specification as those implemented in a DOS-based executable-only computer code that was developed by Richard L. Lehman and described in a paper published in the Proceedings of the Eighth Conference on Applied Climatology, January 17-22, 1993, Anaheim, California, pp. 270-273, by the American Meteorological Society, Boston, MA., with the title "Two Software Products for Extreme Value Analysis: System Overviews of ANYEX and DDEX." At the time he wrote the paper, Dr. Lehman was with the Climate Analysis Center, National Weather Service/NOAA in Washington, D.C., zip code 20233.] The Statistical Analysis Software (SAS) procedure for nonlinear statistical model estimation (PROC MODEL, from SAS V6.12) was used to do the calculations. Further, the calculation procedures were implemented to fit the probability models to observed *maximums* of data, like heating degrees. By recognizing that:

$$- \text{MinAVG}_y = - \min_{d=1}^{n(y)}\{\text{AVG}_{y,d}\} = \max_{d=1}^{n(y)}\{ -\text{AVG}_{y,d}\}, \text{ for y=1972, …, 2010;}$$

this same software, when applied to the *negative* of the minimum temperature data, yields appropriate probability model estimation results.

Calculations were done to fit the calculated cumulative distribution function (CDF) to the empirical cumulative distribution function (ECDF) by varying the parameters of the 3-parameter GEV model. Note that the ECDF is constructed based on the variable "-MinAVG$_y$" (which is a *maximum* over a set of *negative* temperatures) with values of the variable MinAVG$_y$ that are the same as shown in Table 4.

In Table 5, the data for -MinAVG$_y$ are shown after they have been sorted from "lowest" to "highest" value. The ascending *ordinal* value is shown in the column labeled "RANK" and the empirical cumulative distribution function is calculated and shown in the next column. The formula used to calculate this function is:

$$\text{ECDF} = (\text{RANK} - \alpha)/[\text{MaxRANK} + (1 - 2\,\alpha)],$$

where the parameter "α" (shown as *alpha* in Table 5) is a "small" positive value (usually less than ½) that is used to bound the ECDF away from 0 and 1.

Parameter estimates that fit the ECDF for the GEV model were selected. (Convergence to stable parameter estimates was occasionally a problem with fitting a GEV model to the ECDF; however, convergence was obtained in this case.)

The following mathematical expression specifies the GEV model we fit to the data for "-MinAVG$_y$ " shown in Table 5.

(3) $ECDF(-MinAVG_y) = Prob\{ -T < -MinAVG_y \} = \exp[-((1- k \bullet z)\ (1/k))]$,

where "exp[.]" is the exponential function, and

(4) $z = (-MinAVG_y - \gamma) / \theta$, for each year, y, and

the parameters "k", "γ" and "θ" are estimated for the GEV model. The estimated values for k, γ and θ are shown in Table 5 along with the fitted values of the model CDF (the column: "Fitted" Model CDF).

Now, to calculate a *peak-day design temperature*, $TPDD_\delta$, with a specified likelihood, δ, that a value less than $TPDD_\delta$ would be observed, we use the equation below:

(5) $\delta = Prob\{ T \leq TPDD_\delta \}$, which is equivalent to

(6) $\delta = Prob\{ [(-T - \gamma) / \theta] \geq [(-TPDD_\delta - \gamma) / \theta] \}$, $= Prob\{ [(-T - \gamma) / \theta] \geq [z_\delta] \}$,

where $z_\delta = [(-TPDD_\delta - \gamma) / \theta]$. In terms of our probability model,

(7) $\delta = 1 - \exp[-((1- k \bullet z_\delta)\ (1/k))]$, or $(1- \delta) = \exp[-((1- k \bullet z_\delta)\ (1/k))]$,

which yields the following equation for z_δ,

(7') $z_\delta = \{1 - [\ (-\ln(1- \delta))^{(k)}\}\ (1/k)$, where "ln[.]" is the natural

logarithm function. The implied equation for $TPDD_\delta$ is:

(8) $TPDD_\delta = - [\gamma + (z_\delta \cdot \theta)]$.

To calculate the minimum daily (system average) temperature to define our extreme weather event, we specify that this COLDEST-Day be one where the temperature would be lower with a "1-in-35" likelihood. This criterion translates into two equations to be solved based on equations (7) and (8) above:

(9) solve for "z_δ" from equation (7') above with $(1-\delta) = (1 - 1/35) = 1 - 0.0286$,

(10) solve for "$TPDD_\delta$" from $TPDD_\delta = - [\gamma + (z_\delta \cdot \theta)]$.

The value of $z_\delta = 3.1744$ and $TPDD_\delta = - [\gamma + (z_\delta \cdot \theta)] = 41.3$ degrees Fahrenheit, with values for "k", "γ" and "θ" in Table 5, below.

SDG&E's Peak-Day design temperature of 43.8 degrees Fahrenheit, is calculated in a methodologically similar way as for the 41.3 degree peak day temperature. The criteria specified in equation (9) above for a "1-in-35" likelihood would be replaced by a "1-in-10" likelihood.

(9') solve for "z_δ" from equation (7') above with $(1-\delta) = (1 - 1/10) = 1 - 0.1000$,

which yields a "z_δ" value of $z_\delta = 2.0984$ $TPDD_\delta = - [\gamma + (z_\delta \cdot \theta)] = 43.8$, with values for "k", "γ" and "θ" in Table 5, below.

A plot of the cumulative distribution function for $MinAVG_y$ based on the fitted model parameters “k”, “γ” and “θ” in Table 5, below, is shown in Figure 1.

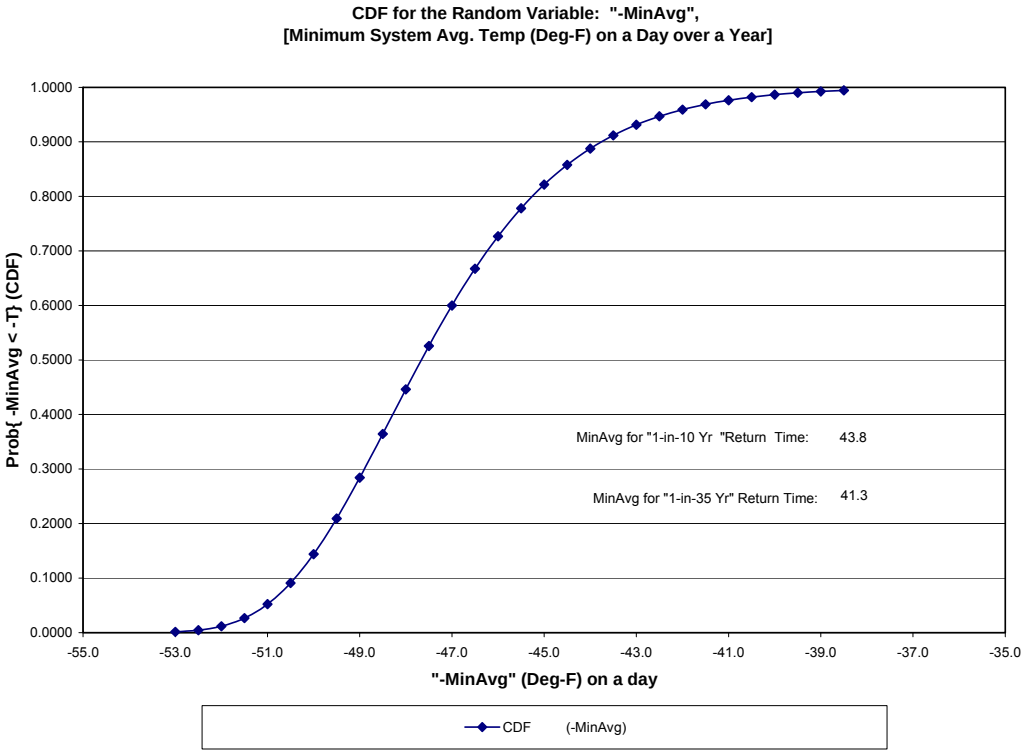
Table 4

YEAR	MINAVG	Month (MinAvg)
1972	46.7838	Dec
1973	46.1979	Jan
1974	44.2291	Dec
1975	44.1979	Jan
1976	45.0885	Jan
1977	50.6692	Mar
1978	42.7265	Dec
1979	45.1718	Jan
1980	53.8098	Jan
1981	49.8671	Jan
1982	48.8385	Dec
1983	51.5051	Jan
1984	48.4765	Dec
1985	46.1145	Dec
1986	50.1145	Feb
1987	41.5051	Dec
1988	45.4479	Dec
1989	45.1718	Jan
1990	43.7812	Feb
1991	48.7812	Mar
1992	47.1718	Dec
1993	46.7812	Jan
1994	48.0573	Nov
1995	51.1718	Dec
1996	48.7812	Feb
1997	49.0859	Dec
1998	46.7812	Dec
1999	48.8098	Jan
2000	50.3620	Jan
2001	47.6953	Jan
2002	45.7526	Jan
2003	49.0573	Dec
2004	47.7526	Nov
2005	47.8098	Jan
2006	48.3620	Dec
2007	43.3620	Jan
2008	48.7239	Dec
2009	48.4192	Feb
2010	48.2004	Dec

Table 5

				alpha=	0.375	
YEAR	Days/Yr	Month (-MinAvg)	-MinAvg	Rank	Empirical CDF	Fitted Model CDF
1980	366	Jan	-53.8098	1	0.0159	-1.421
1983	365	Jan	-51.5051	2	0.0414	-1.158
1995	365	Dec	-51.1718	3	0.0669	-0.995
1977	365	Mar	-50.6692	4	0.0924	-0.868
2000	366	Jan	-50.3620	5	0.1178	-0.760
1986	365	Feb	-50.1145	6	0.1433	-0.664
1981	365	Jan	-49.8671	7	0.1688	-0.576
1997	365	Dec	-49.0859	8	0.1943	-0.494
2003	365	Dec	-49.0573	9	0.2197	-0.416
1982	365	Dec	-48.8385	10	0.2452	-0.340
1999	365	Jan	-48.8098	11	0.2707	-0.268
1991	365	Mar	-48.7812	12	0.2962	-0.196
1996	366	Feb	-48.7812	13	0.3217	-0.126
2008	366	Dec	-48.7239	14	0.3471	-0.056
1984	366	Dec	-48.4765	15	0.3726	0.013
2009	365	Feb	-48.4192	16	0.3981	0.082
2006	365	Dec	-48.3620	17	0.4236	0.152
2010	365	Dec	-48.2004	18	0.4490	0.222
1994	365	Nov	-48.0573	19	0.4745	0.294
2005	365	Jan	-47.8098	20	0.5000	0.367
2004	366	Nov	-47.7526	21	0.5255	0.441
2001	365	Jan	-47.6953	22	0.5510	0.517
1992	366	Dec	-47.1718	23	0.5764	0.596
1972	366	Dec	-46.7838	24	0.6019	0.678
1993	365	Jan	-46.7812	25	0.6274	0.763
1998	365	Dec	-46.7812	26	0.6529	0.852
1973	365	Jan	-46.1979	27	0.6783	0.946
1985	365	Dec	-46.1145	28	0.7038	1.046
2002	365	Jan	-45.7526	29	0.7293	1.153
1988	366	Dec	-45.4479	30	0.7548	1.268
1979	365	Jan	-45.1718	31	0.7803	1.394
1989	365	Jan	-45.1718	32	0.8057	1.532
1976	366	Jan	-45.0885	33	0.8312	1.688
1974	365	Dec	-44.2291	34	0.8567	1.866
1975	365	Jan	-44.1979	35	0.8822	2.076
1990	365	Feb	-43.7812	36	0.9076	2.334
2007	365	Jan	-43.3620	37	0.9331	2.670
1978	365	Dec	-42.7265	38	0.9586	3.163
1987	365	Dec	-41.5051	39	0.9841	4.132
		Mean{-MinAvg}=	-47.4517			
		St.Dev{-MinAvg}=	2.6014			
		"Gamma" (Fitted) =	**-48.479**			
		"Theta" (Fitted) =	**2.249**			
		Deg. Freedom=	**0.06287**			

Figure 1


CDF for the Random Variable: "-MinAvg",
[Minimum System Avg. Temp (Deg-F) on a Day over a Year]
Prob{ -MinAvg < -T} (CDF)
1.0000
0.9000
0.8000
0.7000
0.6000
0.5000
0.4000
0.3000
0.2000
0.1000
0.0000
-55.0
-53.0
-51.0
-49.0
-47.0
-45.0
-43.0
-41.0
-39.0
-37.0
-35.0
"-MinAvg" (Deg-F) on a day
MinAvg for "1-in-10 Yr "Return Time: 43.8
MinAvg for "1-in-35 Yr" Return Time: 41.3
CDF (-MinAvg)

V. Estimating the Uncertainty in the Peak-Day Design Temperature

The calculated peak-day design temperatures in section IV above also have a statistical uncertainty associated with them. The estimated measures of uncertainty recommended for our use are calculated from the fitted model for the probability distribution and are believed to be reasonable, although rough, approximations.

The basic approach used the estimated parameters for the probability distribution (see the results provided in Table 5, above) to calculate the fitted temperatures as a function of the empirical CDF listed in Table 5. These fitted temperatures are then "compared" with the observed temperatures by calculating the difference = "observed" – "fitted" values. The full set of differences are then separated into the lower third (L), the middle third (M) and the upper third (U) of the distribution. Finally, calculate values of the root-mean-square error (RMSE) of the differences in each third of the distribution, along with the entire set of differences overall. The data in Table 6, below, show the temperature data and the resulting RMSE values.

The formula below is used to calculate the RMSE for a specified set of "N" data differences:

$$\text{RMSE} = \text{SQRT}\left\{ \left(\sum_{i=1, \ldots, N} e[\,i\,]^{2} \right) / (N-3) \right\},$$

where e[i] = *observed* less *fitted* value of temperature, T[i]. The number of estimated paramters (3 for the GEV model, 2 for the T-Dist and EV1 models) is subtracted from the respective number of data differences, N, in the denominator of the RMSE expression.

Since both the "1-in-35" and "1-in-10" peak-day temperature values are in the lower third quantile of the fitted distribution, the calculated standard error for these estimates is 0.5 Deg-F.

Table 6

Quantile: (Lower, Middle, Upper 3rd's)	Observed "$T_{[i]}$" Temp. Ranked	"Fitted Value" of "$T_{[i]}$"	Residual "$e_{[i]}$": Obs'd. less Fitted Value of "$T_{[i]}$"	Square of "$e_{[i]}$":
U	53.8098	51.8208	1.9890	3.9563
U	51.5051	51.1808	0.3243	0.1052
U	51.1718	50.7881	0.3837	0.1472
U	50.6692	50.4851	0.1841	0.0339
U	50.3620	50.2297	0.1322	0.0175
U	50.1145	50.0040	0.1106	0.0122
U	49.8671	49.7982	0.0689	0.0047
U	49.0859	49.6068	-0.5209	0.2713
U	49.0573	49.4259	-0.3686	0.1359
U	48.8385	49.2528	-0.4143	0.1717
U	48.8098	49.0857	-0.2758	0.0761
U	48.7812	48.9229	-0.1417	0.0201
U	48.7812	48.7634	0.0178	0.0003
M	48.7239	48.6060	0.1179	0.0139
M	48.4765	48.4500	0.0265	0.0007
M	48.4192	48.2945	0.1247	0.0155
M	48.3620	48.1389	0.2231	0.0498
M	48.2004	47.9824	0.2180	0.0475
M	48.0573	47.8244	0.2329	0.0542
M	47.8098	47.6641	0.1457	0.0212
M	47.7526	47.5010	0.2515	0.0633
M	47.6953	47.3342	0.3610	0.1304
M	47.1718	47.1630	0.0088	0.0001
M	46.7838	46.9864	-0.2026	0.0410
M	46.7812	46.8033	-0.0221	0.0005
M	46.7812	46.6125	0.1687	0.0285
L	46.1979	46.4126	-0.2147	0.0461
L	46.1145	46.2017	-0.0872	0.0076
L	45.7526	45.9777	-0.2251	0.0507
L	45.4479	45.7377	-0.2899	0.0840
L	45.1718	45.4780	-0.3062	0.0938
L	45.1718	45.1936	-0.0218	0.0005
L	45.0885	44.8773	0.2112	0.0446
L	44.2291	44.5187	-0.2897	0.0839
L	44.1979	44.1014	0.0965	0.0093
L	43.7812	43.5971	0.1841	0.0339
L	43.3620	42.9507	0.4113	0.1692
L	42.7265	42.0279	0.6986	0.4880
L	41.5051	40.2959	1.2092	1.4622

Overall RMSE ($e_{[i]}$):	0.5	°F
Upper 3rd RMSE ($e_{[i]}$):	0.7	°F
Middle 3rd RMSE ($e_{[i]}$):	0.2	°F
Lower 3rd RMSE ($e_{[i]}$):	0.5	°F

VI. The Relationship between Annual Likelihoods for Peak-Day Temperatures and "Expected Return Time"

The event whose probability distribution we've modeled is the likelihood that the minimum daily temperature over a calendar year is less than a specified value. And, in particular, we've used this probability model to infer the value of a temperature, our *peak-day design temperature* ($TPDD_{\delta}$), that corresponds to a pre-defined likelihood, δ, that the observed minimum temperature is less than or equal to this design temperature.

(1) δ = Prob{ Minimum Daily Temperature over the Year < $TPDD_{\delta}$ }.

For some applications, it is useful to think of how this specified likelihood (or "risk level" δ) relates to the expected number of years until this Peak-Day event would first occur. This expected number of years is what is meant by the *return period*. The results stated below are found in the book: ***Statistics of Extremes***, E.J. Gumbel, Columbia University Press, 1958, on pages 21-25.

(2) E[#Yrs for Peak-Day Event to Occur] = 1 / δ,

1 / Prob{ Minimum Daily Temperature over the Year < $TPDD_{\delta}$ }.

For our peak-day design temperature (41.8°F) associated with a 1-in-35 annual likelihood, the return period is 35 years (δ=1/35). For the 43.7°F peak-day design temperature, the return period is 10 years (δ=1/10). Occasionally, a less precise terminology is used. For example, the 41.8°F peak-day design temperature may be referred to as a "1-in-35 year cold day"; and the 43.7°F peak-day design temperature may be referred to as a "1-in-10 year cold day."

The probability model for the *return period*, as a random variable, is a geometric (discrete) distribution with positive integer values for the *return period*. The parameter δ = Prob{ Minimum Daily Temperature over the Year < $TPDD_{\delta}$ }.

(3) Prob{ *return period* = r } = $(1 - \delta)^{(r-1)}\ \delta$, for r = 1, 2, 3, . . .

The expected value of the *return period* is already given in (2) above; the variance of the *return period* is:

(4) Var[*return period*] = $\left(E[\text{ return period }]\right)^2 \times \left(1 - (1 / E[\text{ return period }])\right)$,

(4') Var[*return period*] = $\left(E[\text{ return period }]\right) \times \left(E[\text{ return period }] - 1\right)$.

Equations (4) and (4') indicate that the standard deviation (square root of the variance) of the *return period* is nearly equal to its expected value. Thus, there is substantial variability about the expected value—a *return period* is not very precise.

VII. Calculation of Likelihoods for Peak-Day Temperature Events Over a Specified Number of Years

With a specified annual likelihood (i.e., a level of risk) for a peak-day temperature event, several forward-looking questions can be posed:

1). What is the probability that we observe *no* peak-day event over the next N years?

2). What is the probability that we observe *at least one* specified peak-day event over the next N years?"

3). What is the probability that we observe exactly one peak-day event over the next N years?

4). What is the underlying peak-day temperature associated with the annual likelihood computed from setting the probability in question 3 above to a specified value?

To calculate the probabilities to answer questions 1-3, we use a binomial probability model:

(1) $BiNomial(s, N, \delta) = \{ N! / [(s!) (N-s)!]\} [\delta]^{(s)} [1 - \delta]^{(N-s)}$, where

N = # of years, s = # of peak-day events and δ = Annual Likelihood of a peak-day event.; the notation "N!" means the product "N(N-1)(N-2) ... (2)(1)" in the formula.

The binomial probability model is the one that applies here since for a specified number of years in the future, N, and a specified annual likelihood, δ, for the peak-day event, there are typically a number of ways that a specified number of annual peak-day events can occur out of the total, N, regardless of the order in which the outcomes might occur.

For δ=0.1, N=10 years the answer to question 1) is calculated from:

(2) Prob{ *No* peak-day event over 10 years } = BiNomial(0, 10, 0.1) = 0.3487

The answer to question 2) is simply:

(3) Prob{ *At Least* One peak-day event over 10 years } =

1 - Prob{ No peak-day event over 10 years } = 1 – 0.3487 = 0.6513

The answer to question 3) is calculated from:

(4) Prob{ *Exactly One* peak-day event over 10 years } = BiNomial(1, 10, 0.1)

(4') Prob{ *Exactly One* peak-day event over 10 years } = 0.3874

Finally, to find an answer to question 4) where there's a 1/10 chance that only one peak-day event occurs over a ten-year period, we solve for δ in the equation:

(5) 0.1000 = BiNomial(1, 10, δ).

A numerical solution to this equation yields δ = 0.0011, approximately, for the annual likelihood of a peak-day event. Our estimation results of Section IV, above, allow us to calculate the peak-day design temperature for this value of δ. The resulting calculations yield $TPDD_{\delta}$ = 40.5°F. A similar set of calculations for the case where we want to find the annual likelihood of a peak-day where only one peak-day event occurs over a thirty-five year period with a chance of 1/35=0.0286. The resulting value of δ = 0.000841 with $TPDD_{\delta}$ = 38.1°F for this value of δ.

VIII. Attachment 1: SAS Program Execution Log

```
NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.12  TS020
      Licensed to SAN DIEGO GAS & ELECTRIC CO, Site 0009311007.


1    Title1 "Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded)." ;
2    Title2 "Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods." ;
3
4    /*************************************************************************************************************/
5    /*                                                                                                           */
6    /*                                                                                                           */
7    /*                                                                                                           */
8    /* FILE SAVED: "S:\Weather\2012Cgr\SDGandE-Alt2Wgt\GEV4DlyTemp(NLReg2)_Sdge4WP.sas"                          */
9    /*                                                                                                           */
10   /*             Aug. 11th, 2011 for Annual Max of Negative of Min. Temp.                                      */
11   /*             Also, separately for and each of twelve(12) calendar months Jan-Dec.                          */
12   /*             Fit GEV models (3-parameter and 2-parameter), plus a simple T-Dist. model.                    */
13   /*                                                                                                           */
14   /*                                                                                                           */
15   /*                                                                                                           */
16   /*     2012 California Gas Report Work Paper:  Model Estimation for the G.E.V. distribution                  */
17   /*             rather than the T-Dist, used for the 2013 TCAP.                                               */
18   /*                                                                                                           */
19   /*                                                                                                           */
20   /*                                                                                                           */
21   /*************************************************************************************************************/
22
23
24
25
26
27
28   options mprint ;
29   /* %cour8p
30      %cour8l ; */
31
32
33    options ls=211 ps=69 ; **<<LANDSCAPE:  SAS-Monospace w/Roman 6pt. Font >>**;
34   *options ls=160 ps=90 ; **<<PORTRAIT:   SAS-Monospace w/Roman 6pt. Font >>**;
35
36   options date number notes ;
37
38
39
40   libname out2 'S:\Weather\2013Tcap\SDGandE-Alt2Wgt\' ;
NOTE: Libref OUT2 was successfully assigned as follows:
      Engine:        V612
      Physical Name: S:\Weather\2013Tcap\SDGandE-Alt2Wgt
41    **<< Change library reference to use applicable daily data. >>**
42
43   libname estout2 'S:\Weather\2012Cgr\SDGandE-Alt2Wgt\MinTemp\' ;
44    **<< Change library reference to use estimation results directory. >>**;
45
46
47   proc contents data=out2.SAvgSDGE ;
48   run ;

NOTE: The PROCEDURE CONTENTS used 0.18 seconds.


49
50   data seriesD ;
51     set out2.SAvgSDGE ;
52     year = year(date) ;
53     month = month(date) ;
54     posAvg = avg ;
55     negAvg = -avg ;
56   run ;

NOTE: The data set WORK.SERIESD has 14335 observations and 10 variables.
NOTE: The DATA statement used 0.82 seconds.


57
58
59   proc means data=seriesD noprint nway ;
```

```
60    class year month ;
61     var posAvg negAvg ;
62    output out=mostat
63                      mean=posAvg  negAvg
64                       max=MxPosAvg MxNegAvg
65                       min=MnPosAvg MnNegAvg    ;
66   run;

NOTE: The data set WORK.MOSTAT has 471 observations and 10 variables.
NOTE: The PROCEDURE MEANS used 0.18 seconds.


67
68
69   proc sort data=mostat ;
70      by year month ;
71   run ;

NOTE: The data set WORK.MOSTAT has 471 observations and 10 variables.
NOTE: The PROCEDURE SORT used 0.17 seconds.


72
73
74   data mostat ;
75      set mostat ;
76      MxPRatio = MxPosAvg/ PosAvg  ;
77      MnPRatio = MnPosAvg/ PosAvg  ;
78      MxNRatio = MxNegAvg/ NegAvg  ;
79      MnNRatio = MnNegAvg/ NegAvg  ;
80   run ;

NOTE: The data set WORK.MOSTAT has 471 observations and 14 variables.
NOTE: The DATA statement used 0.2 seconds.


81
82
83
84
85
86
87
88   /****************
89   ***<< Print Summary Tables of Means/Minimums/Maximums of daily NEGATIVE-Temperatures (degrees-F). >>*** ;
90
91   proc transpose data=mostat out=AvTData prefix=AvT_ ;   **<< Update "year" value as necessary! >>** ;
92      where (year < 2011) ;
93      by year;
94      id month ;
95      var NegAvg  ;
96   run ;
97
98   data AvTData ;
99      set AvTData ;
100
101   if (mod(year,4)=0) then do ;
102           AvTyr = (AvT_1 + AvT_3 + AvT_5 + AvT_7 + AvT_8 + AvT_10 + AvT_12)*31
103                  + (AvT_4 + AvT_6 + AvT_9 + AvT_11)*30
104                  + (AvT_2)*29 ;
105           AvTyr = AvTyr / 366 ;
106           end ;
107    else do ;
108           AvTyr = (AvT_1 + AvT_3 + AvT_5 + AvT_7 + AvT_8 + AvT_10 + AvT_12)*31
109                  + (AvT_4 + AvT_6 + AvT_9 + AvT_11)*30
110                  + (AvT_2)*28 ;
111           AvTyr = AvTyr / 365 ;
112           end ;
113
114  run ;
115
116  proc print data=AvTData ;
117   id year ;
118   var AvTyr AvT_1-AvT_12 ;
119  title3 'Monthly Mean NEGATIVE Temperature (Deg-F) from 1972 thru 2010.';
120  run ;
121
```

```
122
123
124
125
126  proc transpose data=mostat out=MnTData prefix=MnT_ ;
127     where (year < 2011) ;    **<< Update "year" value as necessary! >>** ;
128     by year;
129     id month ;
130     var MnNegAvg ;
131  run ;
132
133  data MnTData ;
134     set MnTData ;
135   MnTyr = min(of MnT_1-MnT_12) ;
136  run ;
137
138  proc print data=MnTData ;
139   id year ;
140   var MnTyr MnT_1-MnT_12 ;
141  title3 'Monthly MINIMUM NEGATIVE-Temperature (Deg-F) from 1972 thru 2010.';
142  run ;
143  ***************/
144
145
146
147
148
149  proc transpose data=mostat out=MxTData prefix=MxT_ ;
150     where (year < 2011) ;    **<< Update "year" value as necessary! >>** ;
151     by year;
152     id month ;
153     var MxNegAvg ;
154  run ;

NOTE: The data set WORK.MXTDATA has 39 observations and 14 variables.
NOTE: The PROCEDURE TRANSPOSE used 0.25 seconds.


155
156  data MxTData ;
157     set MxTData ;
158   MxTyr = max(of MxT_1-MxT_12) ;
159  run ;

NOTE: The data set WORK.MXTDATA has 39 observations and 15 variables.
NOTE: The DATA statement used 0.17 seconds.


160
161  proc print data=MxTData ;
162   id year ;
163   var MxTyr MxT_1-MxT_12 ;
164  title3 'Monthly MAXIMUM NEGATIVE-Temperature (Deg-F) from 1972 thru 2010.';  **<< Update "year" value as
necessary! >>** ;
165  run ;

NOTE: The PROCEDURE PRINT used 0.01 seconds.


166
167
168
169
170
171
172
173
174
175
176  /****************
177  ***<< Descriptive Statistics: Maximums of daily NEGATIVE-Temperatures (Deg-F) for Year and each calendar month.
>>*** ;
178
179
180  proc corr data=MxTData ;
181    var MxTyr MxT_1 - MxT_12 ;
182  title3 'Correlation Matrix of Monthly Maximum NEGATIVE-Temperatures (Deg-F) within same year.';
```

```
183  run ;
184
185  proc arima data=MxTData ;
186    identify var=MxTyr ;
187    identify var=MxT_1 ;
188    identify var=MxT_2 ;
189    identify var=MxT_3 ;
190    identify var=MxT_4 ;
191    identify var=MxT_5 ;
192    identify var=MxT_6 ;
193    identify var=MxT_7 ;
194    identify var=MxT_8 ;
195    identify var=MxT_9 ;
196    identify var=MxT_10 ;
197    identify var=MxT_11 ;
198    identify var=MxT_12 ;
199  title3 "Auto-correlation analysis of each calendar month's Maximum NEGATIVE-Temperatures (Deg-F) within same
year.";
200  run ;
201
202  proc univariate normal data=MxTData plot ;
203    id year ;
204    var MxTyr MxT_1 - MxT_12 ;
205  title3 "Probability plots and tests for NORMALity by each calendar month's Maximun NEGATIVE-Temperatures (Deg-F)
time series.";
206  run ;
207
208
209  proc means data=MxTData ;
210    var MxT_1 - MxT_12  MxTYr ;
211  run ;
212  ***************/
213
214
215
216
217
218
219
220
221  ***<< Statistical Estimation of GEV Models: Maximums of daily heating degrees for Year and each calendar month.
>>*** ;
222
223  %macro RankIt(file=MxTData,var=MxTYr,rank=RankYr,prob=PrMxTYr,Nobser=39,PltValue=0.375) ;
224
225                  **<< Update "Nobser" value as necessary! >>** ;
226
227  proc sort data=&file ;
228    by &var ;
229  run ;
230
231  data &file ;
232     set &file ;
233     retain &rank 0     alpha &pltvalue ;
234
235    &rank = &rank + 1 ;
236    &prob =  (&rank - alpha) / (&Nobser +(1 - 2*alpha)) ;
237  run ;
238
239  proc print data=&file ;
240    var &var &rank &prob alpha year ;
241  run ;
242  %mend RankIt ;
243
244
245
246
247  %macro GEVfit(file=MxTData,ofile=MxTNL1,outfit=fit1,outest=est1,depvar=PrMxTYr,var=MxTYr,typeGEV=1,
248                KappaI=0.25,GammaI=-47.05,ThetaI=2.77,YrLo=1972,YrHi=2010) ;
249
250                   **<< Update "YrHi" value as necessary! >>** ;
251
252  proc sort data=&file ;
253     by year ;
254  run ;
255
256
```

```
257
258  proc model data=&file converge=0.001
259             maxit=500 dw ;  outmodel=&ofile ;
260       range year = &YrLo to &YrHi ;   **<< Dropped monthly data beyond 2010 data. >>** ;
261
262
263       y = (&var - Gamma) / Theta ;
264
265      %if &typeGEV=1 %then %do ;  ***<< 3-parameter GEV Model. >>>*** ;
266          &depvar = exp( -(1 - Kappa * (y))**(1/Kappa) ) ;
267          %let typmod = 3-parameter GEV Model. ;
268          %end ;
269
270      %if &typeGEV=2 %then %do ;  **<< 2-parameter "Double Exponential" or  "Gumbel" Model. >>** ;
271          &depvar = exp( -exp(-(y)) ) ;
272          %let typmod = 2-parameter Double Exponential or Gumbel Model. ;
273          %end ;
274
275      %if (&typeGEV NE 1) AND (&typeGEV NE 2) %then  %do ; **<< 2-parameter "T-Dist" Model. >>** ;
276          dft=(&YrHi - &YrLo) +1 -2 ;
277          &depvar = probt(y,dft) ;
278          %let typmod = 2-parameter T-Dist Model. ;
279          %end ;
280
281
282    %if &typeGEV = 1 %then %do ;
283    parms
284          Kappa  &KappaI
285          Gamma  &GammaI
286          Theta  &ThetaI ;
287    %end ;
288
289    %if (&typeGEV NE 1)  %then %do ;
290    parms
291          Gamma  &GammaI
292          Theta  &ThetaI ;
293    %end ;
294
295
296    fit &depvar   /out=&outfit  outall
297                   outest=&outest corrb corrs outcov ;
298
299  title3 "Non-linear Estimation of &&typmod: for Maximum NEGATIVE Temperature (Deg-F)." ;
300  run ;
301  %mend GEVfit ;
302
303
304
305
306
307
308
309  /****************
310  ****************/
311
312  proc means data=MxTData ;
313    var MxT_1 - MxT_12  MxTYr ;
314   output out=VarStat
315          mean=mean1-mean12 meanYr
316          std=stdev1-stdev12 stdevYr;
317  title3 "Calc. Means and Standard Deviantions to use as Starting Values in Non-Linear Estimations." ;
318  run ;

NOTE: The data set WORK.VARSTAT has 1 observations and 28 variables.
NOTE: The PROCEDURE MEANS used 0.25 seconds.


319
320
321  proc print data=VarStat ;
322  run ;

NOTE: The PROCEDURE PRINT used 0.0 seconds.


323
324
```

```
325  data _null_ ;
326     set VarStat ;
327
328    call symput('gamma_Yr',meanYr) ;
329    call symput('theta_Yr',stdevYr) ;
330
331    call symput('gamma_12',mean12) ;
332    call symput('theta_12',stdev12) ;
333
334    call symput('gamma_11',mean11) ;
335    call symput('theta_11',stdev11) ;
336
337    call symput('gamma_10',mean10) ;
338    call symput('theta_10',stdev10) ;
339
340    call symput('gamma_9',mean9) ;
341    call symput('theta_9',stdev9) ;
342
343    call symput('gamma_8',mean8) ;
344    call symput('theta_8',stdev8) ;
345
346    call symput('gamma_7',mean7) ;
347    call symput('theta_7',stdev7) ;
348
349    call symput('gamma_6',mean6) ;
350    call symput('theta_6',stdev6) ;
351
352    call symput('gamma_5',mean5) ;
353    call symput('theta_5',stdev5) ;
354
355    call symput('gamma_4',mean4) ;
356    call symput('theta_4',stdev4) ;
357
358    call symput('gamma_3',mean3) ;
359    call symput('theta_3',stdev3) ;
360
361    call symput('gamma_2',mean2) ;
362    call symput('theta_2',stdev2) ;
363
364    call symput('gamma_1',mean1) ;
365    call symput('theta_1',stdev1) ;
366
367  run ;

NOTE: Numeric values have been converted to character values at the places given by: (Line):(Column).
      328:26   329:26   331:26   332:26   334:26   335:26   337:26   338:26   340:25   341:25   343:25   344:25
346:25   347:25   349:25   350:25   352:25   353:25   355:25   356:25   358:25   359:25
      361:25   362:25   364:25   365:25
NOTE: The DATA statement used 0.07 seconds.


368
369
370
371
372
373
374  *********<<< Analysis for "Annual" Data  (i.e., SUFIX "mm" = "_Yr"  >>>******************;
375
376
377
MPRINT(RANKIT):   **<< UPDATE "NOBSER" VALUE AS NECESSARY! >>** ;
378
379
380  %RankIt(file=MxTData,var=MxTYr,rank=RankYr,prob=PrMxTYr,Nobser=39,PltValue=0.375) ;
MPRINT(RANKIT):   PROC SORT DATA=MXTDATA ;
MPRINT(RANKIT):   BY MXTYR ;
MPRINT(RANKIT):   RUN ;

NOTE: The data set WORK.MXTDATA has 39 observations and 15 variables.
NOTE: The PROCEDURE SORT used 0.15 seconds.


MPRINT(RANKIT):   DATA MXTDATA ;
MPRINT(RANKIT):   SET MXTDATA ;
MPRINT(RANKIT):   RETAIN RANKYR 0 ALPHA 0.375 ;
MPRINT(RANKIT):   RANKYR = RANKYR + 1 ;
```

```
MPRINT(RANKIT):   PRMXTYR = (RANKYR - ALPHA) / (39 +(1 - 2*ALPHA)) ;
MPRINT(RANKIT):   RUN ;

NOTE: The data set WORK.MXTDATA has 39 observations and 18 variables.
NOTE: The DATA statement used 0.21 seconds.


MPRINT(RANKIT):   PROC PRINT DATA=MXTDATA ;
MPRINT(RANKIT):   VAR MXTYR RANKYR PRMXTYR ALPHA YEAR ;
MPRINT(RANKIT):   RUN ;

NOTE: The PROCEDURE PRINT used 0.01 seconds.


381
382                  **<< Update "Nobser" value as necessary! >>** ;
383
384
385
386
387  %GEVfit(file=MxTData,ofile=MxTNL1,outfit=fit1,outest=est1,depvar=PrMxTYr,var=MxTYr,typeGEV=1,
MPRINT(GEVFIT):   **<< UPDATE "YRHI" VALUE AS NECESSARY! >>** ;
388          KappaI=0.25,GammaI=&gamma_Yr,ThetaI=&theta_Yr,YrLo=1972,YrHi=2010) ;
MPRINT(GEVFIT):   PROC SORT DATA=MXTDATA ;
MPRINT(GEVFIT):   BY YEAR ;
MPRINT(GEVFIT):   RUN ;

NOTE: The data set WORK.MXTDATA has 39 observations and 18 variables.
NOTE: The PROCEDURE SORT used 0.15 seconds.


MPRINT(GEVFIT):   PROC MODEL DATA=MXTDATA CONVERGE=0.001 MAXIT=500 DW ;
MPRINT(GEVFIT):   OUTMODEL%MXTNL1 ;
MPRINT(GEVFIT):   RANGE YEAR = 1972 TO 2010 ;
MPRINT(GEVFIT):   **<< DROPPED MONTHLY DATA BEYOND 2010 DATA. >>** ;
MPRINT(GEVFIT):   Y % (MXTYR - GAMMA) / THETA ;
MPRINT(GEVFIT):   ***<< 3-PARAMETER GEV MODEL. >>>*** ;
MPRINT(GEVFIT):   PRMXTYR % EXP( -(1 - KAPPA * (Y))**(1/KAPPA) ) ;
MPRINT(GEVFIT):   PARMS KAPPA 0.25 GAMMA -47.45166428 THETA 2.6014161571 ;

MPRINT(GEVFIT):   FIT PRMXTYR /OUT=FIT1 OUTALL OUTEST=EST1 CORRB CORRS OUTCOV ;
MPRINT(GEVFIT):   TITLE3 "Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F)." ;
MPRINT(GEVFIT):   RUN ;

NOTE: At OLS Iteration 4 CONVERGE=0.001 Criteria Met.
NOTE: The data set WORK.FIT1 has 117 observations and 6 variables.
NOTE: The data set WORK.EST1 has 4 observations and 6 variables.
389
390                  **<< Update "YrHi" value as necessary! >>** ;
391
392

NOTE: The PROCEDURE MODEL used 0.23 seconds.


393  proc print data=fit1 ;
394  run ;

NOTE: The PROCEDURE PRINT used 0.0 seconds.


395
396
397
398
399  proc transpose data=fit1 out=pred1 prefix=probP ;
400      where (_type_ = "PREDICT" ) ;
401      by year;
402      var prmxtyr ;
403  run ;

NOTE: The data set WORK.PRED1 has 39 observations and 3 variables.
NOTE: The PROCEDURE TRANSPOSE used 0.09 seconds.


404
405  data comb1 ;
```

```
406     merge MxTData pred1 ;
407    by year ;
408     ProbP = ProbP1 ;
409    keep year MxTYr PrMxTYr ProbP ;
410  run ;

NOTE: The data set WORK.COMB1 has 39 observations and 4 variables.
NOTE: The DATA statement used 0.17 seconds.


411
412
413  proc print data=comb1 ;
414  run ;

NOTE: The PROCEDURE PRINT used 0.01 seconds.


415
416
417  proc plot data=comb1 ;
418    plot prmxtyr*MxTYr='*'
419         probP*MxTYr='-' / overlay ;
420  run ;

421
422

NOTE: The PROCEDURE PLOT used 0.03 seconds.


423  proc print data=est1 ;
424  run ;

NOTE: The PROCEDURE PRINT used 0.0 seconds.


425
426
427  /**************
428  data estout2.est1_Yr ;   ***<<< Save a copy of the "3-parameter G.E.V Model" estimation results!  >>>*** ;
429    set est1 ;
430  run ;
431  **************/
432
433
434
435
436
437
438  data comb  ;
439     merge MxTData pred1(rename=(ProbP1=ProbP1)) ;
440    by year ;
441
442   ***<< "Log(PrMxTYr) - Log(ProgP)" to calc. RMSE of Proportional Errors Models! >>** ;
443     LgPrRat1 = Log(PrMxTYr/ProbP1) ;
444
445   label   LgPrRat1 = "Log(PrMxTYr/ProbP1)- T-Dist" ;
446
447     if (PrMxTYr <= (1/3)) then Quantile=1 ;  **<< "Lower Third" >>** ;
448     if (PrMxTYr > (1/3)) AND (PrMxTYr <= (2/3)) then Quantile=2 ; **<< "Middle Third" >>** ;
449     if (PrMxTYr > (2/3)) then Quantile=3 ;  **<< "Upper Third" >>** ;
450
451    keep year MxTYr Quantile PrMxTYr ProbP1 LgPrRat1 ;
452  run ;

NOTE: The data set WORK.COMB has 39 observations and 6 variables.
NOTE: The DATA statement used 0.21 seconds.


453
454
455  proc print data=comb  ;
456    var year MxTYr Quantile  PrMxTYr ProbP1  LgPrRat1 ;
457  title3 "Est'd CDFs and Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models." ;
458  run ;
```

```
NOTE: The PROCEDURE PRINT used 0.01 seconds.


459
460
461
462  proc means data=comb  n mean std min max var uss ;
463    var LgPrRat1 ;
464  title3 "Stats for Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models to calc. RMSE of Prop. Model
Spec" ;
465  run ;

NOTE: The PROCEDURE MEANS used 0.01 seconds.


466
467
468  proc sort data=comb ;
469    by Quantile ;
470  run ;

NOTE: The data set WORK.COMB has 39 observations and 6 variables.
NOTE: The PROCEDURE SORT used 0.14 seconds.


471
472
473  proc means data=comb  n mean std min max var uss ;
474    by Quantile ;
475    var LgPrRat1 ;
476  title3 "Stats By Quantile for Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models to calc. RMSE of
Prop. Model Spec" ;
477  run ;

NOTE: The PROCEDURE MEANS used 0.01 seconds.


478
479
480
481  proc means data=comb  n mean std min max var uss ;
482    by Quantile ;
483    var LgPrRat1 ;
484  title3 "Stats By Quantile for Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models to calc. RMSE of
Prop. Model Spec" ;
485  run ;

NOTE: The PROCEDURE MEANS used 0.01 seconds.


486
487
488
489  quit ;
```

IX. Attachment 2: SAS Program Output

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 1
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.

CONTENTS PROCEDURE

Data Set Name:	OUT2.SAVGSDGE	Observations:	14335
Member Type:	DATA	Variables:	6
Engine:	V612	Indexes:	0
Created:	11:31 Friday, April 8, 2011	Observation Length:	48
Last Modified:	11:31 Friday, April 8, 2011	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size:	8192
Number of Data Set Pages:	85
File Format:	607
First Data Page:	1
Max Obs per Page:	169
Obs in First Data Page:	147

-----Alphabetic List of Variables and Attributes-----

#	Variable	Type	Len	Pos	Format	Informat	Label
2	AVG	Num	8	8			Syst-Avg. Avg
6	CDD	Num	8	40			Syst-Avg. Cdd
1	DATE	Num	8	0	DATE9.	DATE12.	
5	HDD	Num	8	32			Syst-Avg. Hdd
3	MAX	Num	8	16			Syst-Avg. Max
4	MIN	Num	8	24			Syst-Avg. Min

YEAR	MXTYR	MXT_1	MXT_2	MXT_3	MXT_4	MXT_5	MXT_6	MXT_7	MXT_8	MXT_9	MXT_10	MXT_11	MXT_12
1972	-46.7838	-47.0885	-50.2291	-54.6692	-56.7239	-59.1406	-63.6120	-69.3308	-67.6953	-66.0000	-55.5026	-54.1979	-46.7838
1973	-46.1979	-46.1979	-54.1145	-52.9739	-56.1145	-57.6953	-63.6692	-67.6953	-69.0000	-66.0000	-61.8098	-52.1145	-52.0312
1974	-44.2291	-48.2291	-51.0573	-52.4192	-57.5598	-60.0573	-64.3880	-67.0261	-69.2761	-66.9427	-57.5598	-54.7838	-44.2291
1975	-44.1979	-44.1979	-49.0885	-48.3124	-51.1406	-57.1145	-60.3620	-66.3880	-68.0833	-66.0000	-60.1145	-50.0312	-50.1718
1976	-45.0885	-45.0885	-54.1145	-49.8098	-55.0573	-60.0000	-63.0573	-69.4974	-68.6692	-68.1979	-61.7265	-49.8671	-52.6744
1977	-50.6692	-51.7838	-52.1979	-50.6692	-54.0312	-58.5547	-65.5547	-68.8594	-71.6953	-68.0312	-63.1145	-56.1718	-56.2291
1978	-42.7265	-52.2291	-53.1718	-55.5598	-55.0885	-60.1145	-66.3620	-68.0000	-68.4192	-66.5026	-65.0573	-54.6171	-42.7265
1979	-45.1718	-45.1718	-50.1145	-51.0885	-58.1145	-60.4453	-63.6953	-67.6953	-70.7651	-71.3880	-61.0211	-52.0312	-52.4765
1980	-53.8098	-53.8098	-56.0312	-54.0312	-55.7526	-58.7265	-64.0000	-69.3308	-70.0261	-67.6692	-60.1979	-55.8671	-54.8410
1981	-49.8671	-49.8671	-53.0859	-53.2761	-56.1718	-61.7239	-66.6380	-71.6380	-72.2474	-68.3906	-58.5051	-54.5338	-53.4479
1982	-48.8385	-49.4479	-54.3333	-53.7526	-53.1145	-60.4192	-62.0573	-67.0000	-70.9714	-64.0859	-61.5051	-55.4479	-48.8385
1983	-51.5051	-51.5051	-53.2291	-55.7812	-54.1432	-60.1718	-62.2004	-67.9427	-70.0573	-67.8671	-66.7526	-51.8957	-52.5624
1984	-48.4765	-51.5624	-51.8385	-58.7526	-57.6120	-59.4479	-65.3906	-72.6094	-73.6667	-72.1145	-61.0286	-53.1718	-48.4765
1985	-46.1145	-48.8385	-46.8385	-49.4479	-58.4192	-60.3620	-62.6667	-71.6953	-68.6094	-65.3906	-63.0573	-50.8385	-46.1145
1986	-50.1145	-56.3620	-50.1145	-53.4192	-57.3333	-58.7812	-65.9714	-67.5808	-70.2474	-60.1145	-60.7239	-58.1145	-53.1432
1987	-41.5051	-42.4192	-49.1432	-53.0859	-56.0573	-60.3620	-63.8855	-64.6094	-64.3333	-66.9714	-63.5051	-54.4479	-41.5051
1988	-45.4479	-49.1432	-52.4192	-55.2004	-55.6667	-57.0573	-59.6953	-68.5521	-68.5521	-63.3333	-62.3047	-53.3906	-45.4479
1989	-45.1718	-45.1718	-45.8098	-51.7239	-56.7239	-58.4192	-62.0000	-68.0000	-69.0286	-62.7239	-61.0286	-56.7812	-51.5051
1990	-43.7812	-48.1145	-43.7812	-50.1145	-58.7239	-58.1145	-63.0286	-68.7996	-68.9714	-68.0000	-65.0286	-55.1432	-43.7812
1991	-48.7812	-51.6953	-54.6667	-48.7812	-57.9427	-58.0000	-61.3047	-66.4949	-67.8855	-65.0000	-58.0000	-51.1432	-50.5051
1992	-47.1718	-52.0573	-56.3906	-56.0000	-63.0859	-64.2761	-65.3333	-68.1329	-68.3906	-69.9427	-64.4192	-55.1432	-47.1718
1993	-46.7812	-46.7812	-52.3906	-54.4192	-58.6667	-59.8098	-61.3620	-67.9427	-67.6953	-64.3906	-62.4192	-55.6953	-52.0573
1994	-48.0573	-51.7526	-52.1718	-53.7239	-55.3333	-59.2761	-64.6094	-67.8855	-70.2474	-66.6667	-61.3906	-48.0573	-50.4765
1995	-51.1718	-52.4192	-56.0859	-52.4479	-53.3906	-56.0859	-60.9714	-66.6094	-70.0000	-66.7239	-62.6094	-60.1145	-51.1718
1996	-48.7812	-50.3906	-48.7812	-54.9714	-58.3620	-61.6380	-64.6094	-68.1902	-69.2188	-67.0286	-55.0859	-53.3906	-52.1145
1997	-49.0859	-51.0000	-50.8957	-52.3620	-53.0859	-64.6667	-63.9427	-67.6094	-70.5521	-69.5808	-62.0573	-57.6953	-49.0859
1998	-46.7812	-51.4479	-52.7812	-50.0573	-51.0859	-57.4479	-62.0573	-66.4949	-71.2188	-64.0000	-61.2761	-56.3333	-46.7812
1999	-48.8098	-48.8098	-49.7526	-50.1145	-49.2577	-56.9714	-58.3620	-64.1902	-67.1615	-63.6094	-64.2474	-54.3906	-51.0573
2000	-50.3620	-50.3620	-52.6667	-50.3906	-57.7239	-62.3333	-64.3047	-66.9714	-67.6667	-67.2761	-59.0286	-50.8098	-52.3906
2001	-47.6953	-47.6953	-49.0859	-52.3906	-51.4479	-60.2188	-62.4192	-66.9714	-66.8568	-67.9427	-64.2474	-50.8957	-50.3906
2002	-45.7526	-45.7526	-47.7812	-52.7239	-57.2761	-57.6380	-61.6667	-66.5808	-67.2188	-64.4192	-59.6380	-57.3333	-50.1145
2003	-49.0573	-54.6953	-52.7812	-52.8385	-53.4765	-57.4479	-61.3333	-67.8855	-70.8855	-68.2188	-61.3906	-54.7812	-49.0573
2004	-47.7526	-51.0286	-53.0859	-54.8385	-58.3620	-63.3620	-64.9714	-67.3906	-69.5808	-66.0000	-57.3333	-47.7526	-49.4192
2005	-47.8098	-47.8098	-53.9530	-55.8098	-58.0000	-60.7239	-64.0000	-67.7027	-69.4376	-64.6667	-60.7526	-55.0859	-52.6667
2006	-48.3620	-51.0000	-49.1145	-48.8098	-55.6953	-61.0859	-66.2761	-73.6953	-70.3333	-66.8568	-59.8098	-51.9427	-48.3620
2007	-43.3620	-43.3620	-51.3333	-50.6667	-54.9714	-60.0000	-61.9427	-68.6094	-70.6094	-63.6953	-61.2188	-57.0286	-48.4479
2008	-48.7239	-49.6667	-49.7526	-50.7239	-53.6667	-57.0573	-60.9141	-68.4949	-69.2761	-67.3333	-59.6953	-59.0859	-48.7239
2009	-48.4192	-49.0859	-48.4192	-53.3906	-54.4765	-60.9714	-63.0286	-67.7709	-68.2761	-67.6380	-57.0859	-55.1432	-49.5051
2010	-48.2004	-51.3906	-51.1432	-50.8385	-53.0000	-57.6667	-62.0000	-63.2188	-65.3333	-64.9141	-59.1432	-51.1432	-48.2004

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 3
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Calc. Means and Standard Deviantions to use as Starting Values in Non-Linear Estimations.

Variable	N	Mean	Std Dev	Minimum	Maximum
MXT_1	39	-49.3443666	3.1429806	-56.3619655	-42.4192299
MXT_2	39	-51.3780834	2.8114484	-56.3905977	-43.7811954
MXT_3	39	-52.5740073	2.3866542	-58.7525632	-48.3123907
MXT_4	39	-55.6886033	2.6863860	-63.0858965	-49.2576896
MXT_5	39	-59.5739640	2.0203989	-64.6666667	-56.0858965
MXT_6	39	-63.1703375	1.9350431	-66.6380345	-58.3619655
MXT_7	39	-67.9767179	2.0115536	-73.6952988	-63.2188046
MXT_8	39	-69.1835683	1.7981917	-73.6666667	-64.3333333
MXT_9	39	-66.4519832	2.3618924	-72.1145287	-60.1145287
MXT_10	39	-61.0357029	2.6040714	-66.7525632	-55.0858965
MXT_11	39	-54.0105620	2.8959304	-60.1145287	-47.7525632
MXT_12	39	-49.6073074	3.2704112	-56.2290574	-41.5051264
MXTYR	39	-47.4516643	2.6014162	-53.8098275	-41.5051264

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 4
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Calc. Means and Standard Deviantions to use as Starting Values in Non-Linear Estimations.

OBS	_TYPE_	_FREQ_	MEAN1	MEAN2	MEAN3	MEAN4	MEAN5	MEAN6	MEAN7	MEAN8	MEAN9	MEAN10	MEAN11	MEAN12
1	0	39	-49.3444	-51.3781	-52.5740	-55.6886	-59.5740	-63.1703	-67.9767	-69.1836	-66.4520	-61.0357	-54.0106	-49.6073

OBS	MEANYR	STDEV1	STDEV2	STDEV3	STDEV4	STDEV5	STDEV6	STDEV7	STDEV8	STDEV9	STDEV10	STDEV11	STDEV12	STDEVYR
1	-47.4517	3.14298	2.81145	2.38665	2.68639	2.02040	1.93504	2.01155	1.79819	2.36189	2.60407	2.89593	3.27041	2.60142

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 5
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Calc. Means and Standard Deviantions to use as Starting Values in Non-Linear Estimations.

OBS	MXTYR	RANKYR	PRMXTYR	ALPHA	YEAR
1	-53.8098	1	0.01592	0.375	1980
2	-51.5051	2	0.04140	0.375	1983
3	-51.1718	3	0.06688	0.375	1995
4	-50.6692	4	0.09236	0.375	1977
5	-50.3620	5	0.11783	0.375	2000
6	-50.1145	6	0.14331	0.375	1986
7	-49.8671	7	0.16879	0.375	1981
8	-49.0859	8	0.19427	0.375	1997
9	-49.0573	9	0.21975	0.375	2003
10	-48.8385	10	0.24522	0.375	1982
11	-48.8098	11	0.27070	0.375	1999
12	-48.7812	12	0.29618	0.375	1991
13	-48.7812	13	0.32166	0.375	1996
14	-48.7239	14	0.34713	0.375	2008
15	-48.4765	15	0.37261	0.375	1984
16	-48.4192	16	0.39809	0.375	2009
17	-48.3620	17	0.42357	0.375	2006
18	-48.2004	18	0.44904	0.375	2010
19	-48.0573	19	0.47452	0.375	1994
20	-47.8098	20	0.50000	0.375	2005
21	-47.7526	21	0.52548	0.375	2004
22	-47.6953	22	0.55096	0.375	2001
23	-47.1718	23	0.57643	0.375	1992
24	-46.7838	24	0.60191	0.375	1972
25	-46.7812	25	0.62739	0.375	1993
26	-46.7812	26	0.65287	0.375	1998
27	-46.1979	27	0.67834	0.375	1973
28	-46.1145	28	0.70382	0.375	1985
29	-45.7526	29	0.72930	0.375	2002
30	-45.4479	30	0.75478	0.375	1988
31	-45.1718	31	0.78025	0.375	1979
32	-45.1718	32	0.80573	0.375	1989
33	-45.0885	33	0.83121	0.375	1976
34	-44.2291	34	0.85669	0.375	1974
35	-44.1979	35	0.88217	0.375	1975
36	-43.7812	36	0.90764	0.375	1990
37	-43.3620	37	0.93312	0.375	2007
38	-42.7265	38	0.95860	0.375	1978
39	-41.5051	39	0.98408	0.375	1987

MODEL Procedure

Model Summary

Model Variables	1
Parameters	4
RANGE Variable	YEAR
Equations	1
Number of Statements	3

Model Variables: PRMXTYR

Parameters: GAMMA: -47.45 THETA: 2.601 KAPPA: 0.25 MXTNL1

Equations: PRMXTYR

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 7
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

MODEL Procedure

The Equation to Estimate is:

PRMXTYR = F(GAMMA, THETA, KAPPA)

MODEL Procedure
OLS Estimation

OLS Estimation Summary

Dataset Option	Dataset
DATA=	MXTDATA
OUT=	FIT1
OUTEST=	EST1
Parameters Estimated	3
RANGE Processed	YEAR
First	1972
Last	2010

Minimization Summary

Method	GAUSS
Iterations	4

Final Convergence Criteria	
R	0.00028869
PPC(KAPPA)	0.001608
RPC(KAPPA)	0.006845
Object	0.00001633
Trace(S)	0.0009168
Objective Value	0.00084628

Observations Processed

Read	39
Solved	39

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded).
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

MODEL Procedure
OLS Estimation

Nonlinear OLS Summary of Residual Errors

Equation	DF Model	DF Error	SSE	MSE	Root MSE	R-Square	Adj R-Sq	Durbin Watson
PRMXTYR	3	36	0.03300	0.0009168	0.03028	0.9897	0.9891	2.024

Nonlinear OLS Parameter Estimates

Parameter	Estimate	Approx. Std Err	'T' Ratio	Approx. Prob>|T|
GAMMA	-48.478934	0.04417	-1097.53	0.0001
THETA	2.248793	0.08988	25.02	0.0001
KAPPA	0.062871	0.05842	1.08	0.2890

Number of Observations		Statistics for System	
Used	39	Objective	0.000846
Missing	0	Objective*N	0.0330

RANGE of Fit: YEAR = 1972 TO 2010

Correlations of Estimates

CorrB	GAMMA	THETA	KAPPA
GAMMA	1.0000	-0.0012	0.3272
THETA	-0.0012	1.0000	0.6934
KAPPA	0.3272	0.6934	1.0000

MODEL Procedure

Model Summary

Model Variables	1
Parameters	4
RANGE Variable	YEAR
Equations	1
Number of Statements	4

Model Variables: PRMXTYR

Parameters: MXTNL1 GAMMA: -48.48(-1098) THETA: 2.249(25) KAPPA: 0.06287(1.1)

Equations: PRMXTYR

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 11
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

OBS	YEAR	_ESTYPE_	_TYPE_	_WEIGHT_	PRMXTYR	MXTYR
1	1972	OLS	ACTUAL	1	0.60191	-46.7838
2	1972	OLS	PREDICT	1	0.63004	-46.7838
3	1972	OLS	RESIDUAL	1	-0.02813	-46.7838
4	1973	OLS	ACTUAL	1	0.67834	-46.1979
5	1973	OLS	PREDICT	1	0.70427	-46.1979
6	1973	OLS	RESIDUAL	1	-0.02593	-46.1979
7	1974	OLS	ACTUAL	1	0.85669	-44.2291
8	1974	OLS	PREDICT	1	0.87482	-44.2291
9	1974	OLS	RESIDUAL	1	-0.01813	-44.2291
10	1975	OLS	ACTUAL	1	0.88217	-44.1979
11	1975	OLS	PREDICT	1	0.87665	-44.1979
12	1975	OLS	RESIDUAL	1	0.00551	-44.1979
13	1976	OLS	ACTUAL	1	0.83121	-45.0885
14	1976	OLS	PREDICT	1	0.81452	-45.0885
15	1976	OLS	RESIDUAL	1	0.01669	-45.0885
16	1977	OLS	ACTUAL	1	0.09236	-50.6692
17	1977	OLS	PREDICT	1	0.07626	-50.6692
18	1977	OLS	RESIDUAL	1	0.01610	-50.6692
19	1978	OLS	ACTUAL	1	0.95860	-42.7265
20	1978	OLS	PREDICT	1	0.94036	-42.7265
21	1978	OLS	RESIDUAL	1	0.01824	-42.7265
22	1979	OLS	ACTUAL	1	0.78025	-45.1718
23	1979	OLS	PREDICT	1	0.80758	-45.1718
24	1979	OLS	RESIDUAL	1	-0.02733	-45.1718
25	1980	OLS	ACTUAL	1	0.01592	-53.8098
26	1980	OLS	PREDICT	1	0.00011	-53.8098
27	1980	OLS	RESIDUAL	1	0.01581	-53.8098
28	1981	OLS	ACTUAL	1	0.16879	-49.8671
29	1981	OLS	PREDICT	1	0.16003	-49.8671
30	1981	OLS	RESIDUAL	1	0.00876	-49.8671
31	1982	OLS	ACTUAL	1	0.24522	-48.8385
32	1982	OLS	PREDICT	1	0.30961	-48.8385
33	1982	OLS	RESIDUAL	1	-0.06439	-48.8385
34	1983	OLS	ACTUAL	1	0.04140	-51.5051
35	1983	OLS	PREDICT	1	0.02627	-51.5051
36	1983	OLS	RESIDUAL	1	0.01513	-51.5051
37	1984	OLS	ACTUAL	1	0.37261	-48.4765
38	1984	OLS	PREDICT	1	0.36828	-48.4765
39	1984	OLS	RESIDUAL	1	0.00433	-48.4765
40	1985	OLS	ACTUAL	1	0.70382	-46.1145
41	1985	OLS	PREDICT	1	0.71393	-46.1145
42	1985	OLS	RESIDUAL	1	-0.01011	-46.1145
43	1986	OLS	ACTUAL	1	0.14331	-50.1145
44	1986	OLS	PREDICT	1	0.13050	-50.1145
45	1986	OLS	RESIDUAL	1	0.01281	-50.1145
46	1987	OLS	ACTUAL	1	0.98408	-41.5051
47	1987	OLS	PREDICT	1	0.96874	-41.5051
48	1987	OLS	RESIDUAL	1	0.01534	-41.5051
49	1988	OLS	ACTUAL	1	0.75478	-45.4479
50	1988	OLS	PREDICT	1	0.78307	-45.4479
51	1988	OLS	RESIDUAL	1	-0.02830	-45.4479
52	1989	OLS	ACTUAL	1	0.80573	-45.1718
53	1989	OLS	PREDICT	1	0.80758	-45.1718
54	1989	OLS	RESIDUAL	1	-0.00185	-45.1718
55	1990	OLS	ACTUAL	1	0.90764	-43.7812
56	1990	OLS	PREDICT	1	0.89897	-43.7812
57	1990	OLS	RESIDUAL	1	0.00868	-43.7812
58	1991	OLS	ACTUAL	1	0.29618	-48.7812
59	1991	OLS	PREDICT	1	0.31879	-48.7812
60	1991	OLS	RESIDUAL	1	-0.02261	-48.7812
61	1992	OLS	ACTUAL	1	0.57643	-47.1718
62	1992	OLS	PREDICT	1	0.57514	-47.1718
63	1992	OLS	RESIDUAL	1	0.00129	-47.1718

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 12
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

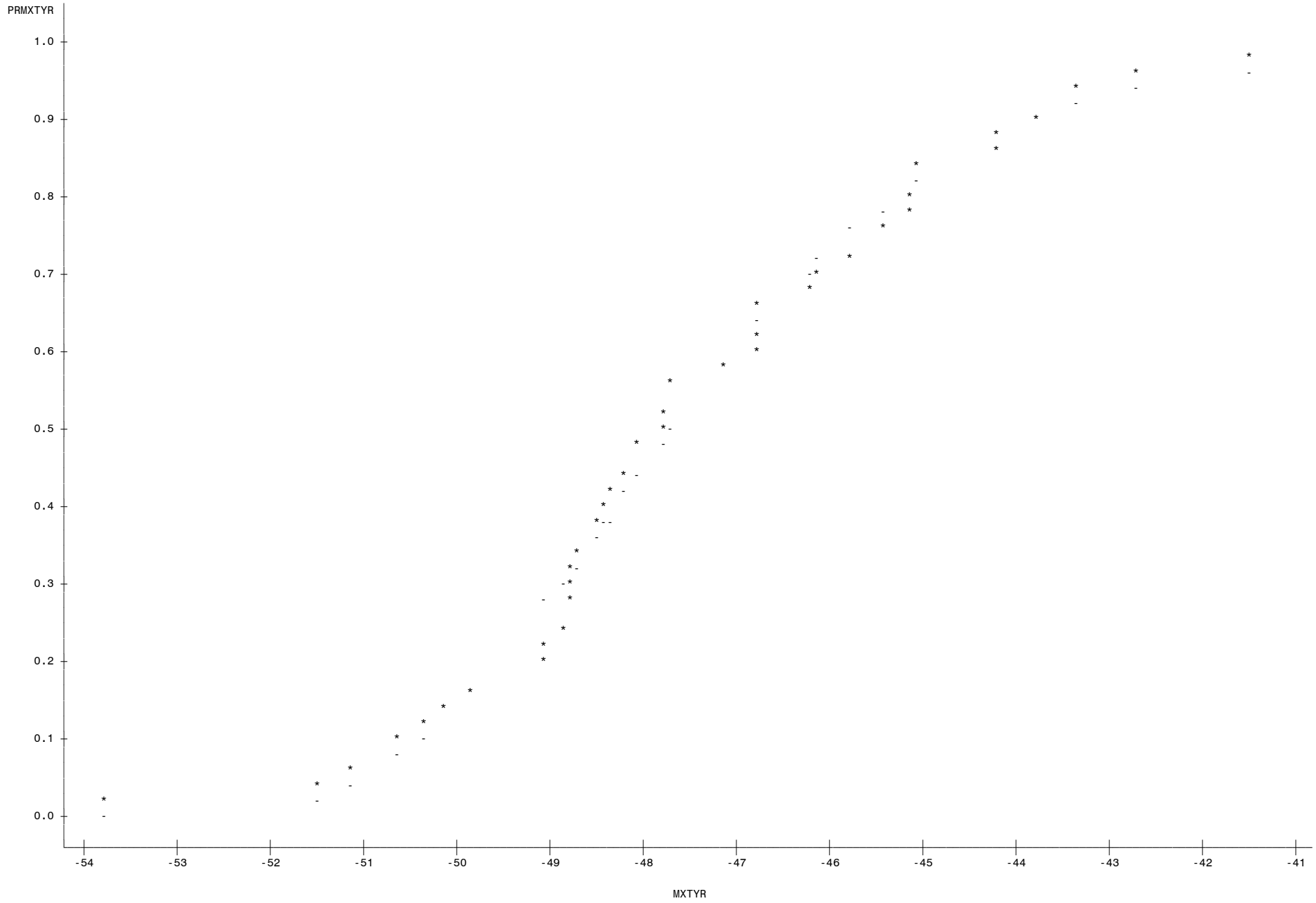
OBS	YEAR	_ESTYPE_	_TYPE_	_WEIGHT_	PRMXTYR	MXTYR
64	1993	OLS	ACTUAL	1	0.62739	-46.7812
65	1993	OLS	PREDICT	1	0.63039	-46.7812
66	1993	OLS	RESIDUAL	1	-0.00300	-46.7812
67	1994	OLS	ACTUAL	1	0.47452	-48.0573
68	1994	OLS	PREDICT	1	0.43688	-48.0573
69	1994	OLS	RESIDUAL	1	0.03764	-48.0573
70	1995	OLS	ACTUAL	1	0.06688	-51.1718
71	1995	OLS	PREDICT	1	0.04190	-51.1718
72	1995	OLS	RESIDUAL	1	0.02498	-51.1718
73	1996	OLS	ACTUAL	1	0.32166	-48.7812
74	1996	OLS	PREDICT	1	0.31879	-48.7812
75	1996	OLS	RESIDUAL	1	0.00286	-48.7812
76	1997	OLS	ACTUAL	1	0.19427	-49.0859
77	1997	OLS	PREDICT	1	0.27066	-49.0859
78	1997	OLS	RESIDUAL	1	-0.07640	-49.0859
79	1998	OLS	ACTUAL	1	0.65287	-46.7812
80	1998	OLS	PREDICT	1	0.63039	-46.7812
81	1998	OLS	RESIDUAL	1	0.02247	-46.7812
82	1999	OLS	ACTUAL	1	0.27070	-48.8098
83	1999	OLS	PREDICT	1	0.31420	-48.8098
84	1999	OLS	RESIDUAL	1	-0.04350	-48.8098
85	2000	OLS	ACTUAL	1	0.11783	-50.3620
86	2000	OLS	PREDICT	1	0.10419	-50.3620
87	2000	OLS	RESIDUAL	1	0.01365	-50.3620
88	2001	OLS	ACTUAL	1	0.55096	-47.6953
89	2001	OLS	PREDICT	1	0.49508	-47.6953
90	2001	OLS	RESIDUAL	1	0.05588	-47.6953
91	2002	OLS	ACTUAL	1	0.72930	-45.7526
92	2002	OLS	PREDICT	1	0.75325	-45.7526
93	2002	OLS	RESIDUAL	1	-0.02396	-45.7526
94	2003	OLS	ACTUAL	1	0.21975	-49.0573
95	2003	OLS	PREDICT	1	0.27510	-49.0573
96	2003	OLS	RESIDUAL	1	-0.05536	-49.0573
97	2004	OLS	ACTUAL	1	0.52548	-47.7526
98	2004	OLS	PREDICT	1	0.48599	-47.7526
99	2004	OLS	RESIDUAL	1	0.03949	-47.7526
100	2005	OLS	ACTUAL	1	0.50000	-47.8098
101	2005	OLS	PREDICT	1	0.47685	-47.8098
102	2005	OLS	RESIDUAL	1	0.02315	-47.8098
103	2006	OLS	ACTUAL	1	0.42357	-48.3620
104	2006	OLS	PREDICT	1	0.38704	-48.3620
105	2006	OLS	RESIDUAL	1	0.03653	-48.3620
106	2007	OLS	ACTUAL	1	0.93312	-43.3620
107	2007	OLS	PREDICT	1	0.91777	-43.3620
108	2007	OLS	RESIDUAL	1	0.01535	-43.3620
109	2008	OLS	ACTUAL	1	0.34713	-48.7239
110	2008	OLS	PREDICT	1	0.32802	-48.7239
111	2008	OLS	RESIDUAL	1	0.01912	-48.7239
112	2009	OLS	ACTUAL	1	0.39809	-48.4192
113	2009	OLS	PREDICT	1	0.37765	-48.4192
114	2009	OLS	RESIDUAL	1	0.02044	-48.4192
115	2010	OLS	ACTUAL	1	0.44904	-48.2004
116	2010	OLS	PREDICT	1	0.41350	-48.2004
117	2010	OLS	RESIDUAL	1	0.03554	-48.2004

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 13
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

OBS	YEAR	MXTYR	PRMXTYR	PROBP
1	1972	-46.7838	0.60191	0.63004
2	1973	-46.1979	0.67834	0.70427
3	1974	-44.2291	0.85669	0.87482
4	1975	-44.1979	0.88217	0.87665
5	1976	-45.0885	0.83121	0.81452
6	1977	-50.6692	0.09236	0.07626
7	1978	-42.7265	0.95860	0.94036
8	1979	-45.1718	0.78025	0.80758
9	1980	-53.8098	0.01592	0.00011
10	1981	-49.8671	0.16879	0.16003
11	1982	-48.8385	0.24522	0.30961
12	1983	-51.5051	0.04140	0.02627
13	1984	-48.4765	0.37261	0.36828
14	1985	-46.1145	0.70382	0.71393
15	1986	-50.1145	0.14331	0.13050
16	1987	-41.5051	0.98408	0.96874
17	1988	-45.4479	0.75478	0.78307
18	1989	-45.1718	0.80573	0.80758
19	1990	-43.7812	0.90764	0.89897
20	1991	-48.7812	0.29618	0.31879
21	1992	-47.1718	0.57643	0.57514
22	1993	-46.7812	0.62739	0.63039
23	1994	-48.0573	0.47452	0.43688
24	1995	-51.1718	0.06688	0.04190
25	1996	-48.7812	0.32166	0.31879
26	1997	-49.0859	0.19427	0.27066
27	1998	-46.7812	0.65287	0.63039
28	1999	-48.8098	0.27070	0.31420
29	2000	-50.3620	0.11783	0.10419
30	2001	-47.6953	0.55096	0.49508
31	2002	-45.7526	0.72930	0.75325
32	2003	-49.0573	0.21975	0.27510
33	2004	-47.7526	0.52548	0.48599
34	2005	-47.8098	0.50000	0.47685
35	2006	-48.3620	0.42357	0.38704
36	2007	-43.3620	0.93312	0.91777
37	2008	-48.7239	0.34713	0.32802
38	2009	-48.4192	0.39809	0.37765
39	2010	-48.2004	0.44904	0.41350

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded).
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

Plot of PRMXTYR*MXTYR. Symbol used is '*'.
Plot of PROBP*MXTYR. Symbol used is '-'.



NOTE: 15 obs hidden.

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 15
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Non-linear Estimation of 3-parameter GEV Model.: for Maximum NEGATIVE Temperature (Deg-F).

OBS	_NAME_	_TYPE_	_NUSED_	GAMMA	THETA	KAPPA
1		OLS	39	-48.4789	2.24879	0.062871
2	GAMMA	OLS	39	0.0020	-0.00000	0.000844
3	THETA	OLS	39	-0.0000	0.00808	0.003641
4	KAPPA	OLS	39	0.0008	0.00364	0.003413

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded).
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Est'd CDFs and Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models.

OBS	YEAR	MXTYR	QUANTILE	PRMXTYR	PROBP1	LGPRRAT1
1	1972	-46.7838	2	0.60191	0.63004	-0.04568
2	1973	-46.1979	3	0.67834	0.70427	-0.03751
3	1974	-44.2291	3	0.85669	0.87482	-0.02095
4	1975	-44.1979	3	0.88217	0.87665	0.00627
5	1976	-45.0885	3	0.83121	0.81452	0.02028
6	1977	-50.6692	1	0.09236	0.07626	0.19157
7	1978	-42.7265	3	0.95860	0.94036	0.01921
8	1979	-45.1718	3	0.78025	0.80758	-0.03442
9	1980	-53.8098	1	0.01592	0.00011	4.97305
10	1981	-49.8671	1	0.16879	0.16003	0.05327
11	1982	-48.8385	1	0.24522	0.30961	-0.23316
12	1983	-51.5051	1	0.04140	0.02627	0.45485
13	1984	-48.4765	2	0.37261	0.36828	0.01170
14	1985	-46.1145	3	0.70382	0.71393	-0.01426
15	1986	-50.1145	1	0.14331	0.13050	0.09367
16	1987	-41.5051	3	0.98408	0.96874	0.01571
17	1988	-45.4479	3	0.75478	0.78307	-0.03680
18	1989	-45.1718	3	0.80573	0.80758	-0.00229
19	1990	-43.7812	3	0.90764	0.89897	0.00961
20	1991	-48.7812	1	0.29618	0.31879	-0.07358
21	1992	-47.1718	2	0.57643	0.57514	0.00224
22	1993	-46.7812	2	0.62739	0.63039	-0.00478
23	1994	-48.0573	2	0.47452	0.43688	0.08265
24	1995	-51.1718	1	0.06688	0.04190	0.46767
25	1996	-48.7812	1	0.32166	0.31879	0.00894
26	1997	-49.0859	1	0.19427	0.27066	-0.33164
27	1998	-46.7812	2	0.65287	0.63039	0.03503
28	1999	-48.8098	1	0.27070	0.31420	-0.14901
29	2000	-50.3620	1	0.11783	0.10419	0.12309
30	2001	-47.6953	2	0.55096	0.49508	0.10694
31	2002	-45.7526	3	0.72930	0.75325	-0.03232
32	2003	-49.0573	1	0.21975	0.27510	-0.22467
33	2004	-47.7526	2	0.52548	0.48599	0.07812
34	2005	-47.8098	2	0.50000	0.47685	0.04741
35	2006	-48.3620	2	0.42357	0.38704	0.09019
36	2007	-43.3620	3	0.93312	0.91777	0.01659
37	2008	-48.7239	2	0.34713	0.32802	0.05664
38	2009	-48.4192	2	0.39809	0.37765	0.05270
39	2010	-48.2004	2	0.44904	0.41350	0.08245

Data Analysis for Maximum/Minimum Daily SysAvg Temperatures (Un-Rounded). 17:13 Tuesday, July 17, 2012 17
Fit GEV Probability Model to Empirical CDF using NL-OLS Regression Methods.
Stats for Logarithms of 'Empirical CDF rel. to Fitted CDF' values by Models to calc. RMSE of Prop. Model Spec

Analysis Variable : LGPRRAT1 Log(PrMxTYr/ProbP1)- T-Dist

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
39	0.1502250	0.8052589	-0.3316407	4.9730523	0.6484419	25.5209262

Analysis Variable : LGPRRAT1 Log(PrMxTYr/ProbP1)- T-Dist

QUANTILE=1

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	0.4118503	1.3921737	-0.3316407	4.9730523	1.9381476	25.4628399

QUANTILE=2

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	0.0458164	0.0444644	-0.0456798	0.1069375	0.0019771	0.0510139

QUANTILE=3

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	-0.0069917	0.0231607	-0.0375125	0.0202791	0.000536417	0.0070725

Analysis Variable : LGPRRAT1 Log(PrMxTYr/ProbP1)- T-Dist

QUANTILE=1

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	0.4118503	1.3921737	-0.3316407	4.9730523	1.9381476	25.4628399

QUANTILE=2

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	0.0458164	0.0444644	-0.0456798	0.1069375	0.0019771	0.0510139

QUANTILE=3

N	Mean	Std Dev	Minimum	Maximum	Variance	USS
13	-0.0069917	0.0231607	-0.0375125	0.0202791	0.000536417	0.0070725

2012 CALIFORNIA GAS REPORT

Service Area Economic Forecast
JULY 2012

SAN DIEGO GAS & ELECTRIC COMPANY SERVICE AREA ECONOMIC FORECAST

(based on Global Insight's February 2012 Regional Forecast)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EMPLOYMENT (1000's)													
Total	1,292.8	1,312.5	1,319.7	1,309.3	1,240.9	1,234.7	1,256.2	1,282.0	1,305.9	1,335.1	1,365.3	1,393.1	1,415.8
I: Industrial (all manufacturing + mining)	104.9	104.4	102.9	103.2	95.7	92.8	92.7	94.1	96.2	97.4	98.7	99.6	100.3
C1: Office (Financial+Bus. & Professional Svcs)	298.5	302.9	303.5	297.5	276.5	277.8	285.8	293.6	301.8	315.2	329.5	340.9	350.4
C2: Restaurants	97.8	102.3	105.5	105.9	100.3	100.3	103.8	107.3	109.2	109.5	109.0	108.5	108.1
C3: Retail Trade	147.4	148.3	148.1	142.0	131.6	130.1	131.0	131.8	133.1	133.9	134.4	134.8	134.9
C4: Laundry & other Personal Services	15.0	15.2	15.3	15.7	15.2	15.4	15.1	15.2	15.4	15.5	15.4	15.3	15.2
C5: Wholesale Trade & Warehouses	46.6	48.1	48.6	47.7	43.2	41.8	43.1	44.5	45.7	46.7	47.7	48.8	49.8
C6: Primary & Secondary Schools	87.0	87.9	90.3	90.7	88.3	90.1	93.5	96.6	98.0	99.4	100.5	102.6	104.7
C7: Colleges (including other adult education)	32.0	32.6	33.4	36.1	38.9	39.7	41.2	42.5	43.1	43.7	44.2	45.2	46.1
C8: Health Services	101.4	103.8	107.6	112.9	117.5	120.0	124.5	128.6	130.5	132.3	133.8	136.6	139.4
C9: Accommodation	29.2	30.5	31.9	32.7	30.2	30.2	31.2	32.3	32.9	33.0	32.8	32.6	32.5
C10: Misc. (all other commercial employment)	56.4	56.8	57.5	58.0	55.8	56.4	55.4	56.0	56.7	56.9	56.5	56.1	56.0
C11: Government (non-education)	117.1	118.8	120.6	122.8	124.1	125.1	124.7	124.8	124.3	124.2	124.5	124.8	125.5
C12: Transportation, Information, and Utilities	57.9	57.3	57.0	57.5	52.9	50.1	50.5	51.1	52.7	53.7	55.0	56.0	57.2
C13: Construction	90.8	92.7	87.0	76.1	61.1	55.6	54.0	53.9	56.7	63.9	73.5	81.3	85.9
C14: Agriculture	10.7	10.9	10.9	10.5	9.5	9.5	9.6	9.6	9.7	9.7	9.8	9.8	9.9
OTHER INDICATORS													
Southern California Consumer Inflation*	4.5%	4.3%	3.3%	3.5%	-0.8%	1.2%	2.7%	1.6%	2.0%	1.9%	2.0%	2.0%	1.9%
Inflation--US Gross Domestic Product**	3.3%	3.2%	2.9%	2.2%	1.1%	1.2%	2.1%	1.2%	1.4%	1.7%	1.8%	1.8%	1.8%

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

** Chained Price Index--US GDP, from Global Insight's Feb 2012 US forecast.

SAN DIEGO GAS & ELECTRIC COMPANY SERVICE AREA ECONOMIC FORECAST

(based on Global Insight's February 2012 Regional Forecast)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
EMPLOYMENT (1000's)													
Total	1,433.4	1,450.0	1,469.2	1,484.7	1,499.0	1,515.3	1,534.0	1,554.1	1,575.7	1,597.7	1,618.8	1,639.8	1,661.0
I: Industrial (all manufacturing + mining)	100.7	101.0	101.1	101.4	101.7	101.4	100.7	99.9	98.9	97.9	96.7	95.6	94.7
C1: Office (Financial+Bus. & Professional Svcs)	358.3	367.5	378.1	388.0	397.3	407.7	418.3	428.3	438.7	449.0	459.0	469.0	479.6
C2: Restaurants	107.5	107.1	106.9	106.5	106.1	106.2	106.7	107.4	108.5	109.8	111.3	113.0	114.5
C3: Retail Trade	134.8	134.7	134.6	134.6	134.4	134.6	135.0	135.8	136.7	137.7	138.8	139.8	140.5
C4: Laundry & other Personal Services	15.2	15.1	15.0	15.0	14.9	14.8	14.8	14.9	14.9	14.9	15.0	15.0	15.1
C5: Wholesale Trade & Warehouses	50.4	50.9	51.3	51.5	51.8	52.2	52.7	53.2	53.7	54.2	54.3	54.5	54.6
C6: Primary & Secondary Schools	106.6	108.1	109.3	110.4	111.2	112.1	113.3	114.7	116.4	118.1	119.9	121.5	123.0
C7: Colleges (including other adult education)	46.9	47.5	48.1	48.6	48.9	49.3	49.8	50.5	51.2	52.0	52.7	53.5	54.1
C8: Health Services	141.9	143.8	145.5	146.9	148.0	149.3	150.8	152.7	154.9	157.3	159.6	161.8	163.7
C9: Accommodation	32.4	32.2	32.2	32.1	31.9	32.0	32.1	32.3	32.7	33.1	33.5	34.0	34.5
C10: Misc. (all other commercial employment)	55.8	55.4	55.2	55.0	54.7	54.5	54.5	54.5	54.6	54.8	55.0	55.2	55.5
C11: Government (non-education)	126.4	127.3	129.8	129.9	131.2	132.3	133.2	134.0	134.8	135.5	136.3	136.9	138.8
C12: Transportation, Information, and Utilities	58.2	58.8	59.3	59.9	60.4	61.1	61.8	62.6	63.5	64.2	65.0	65.8	66.5
C13: Construction	88.5	90.5	92.8	94.8	96.2	97.6	99.9	103.0	105.9	108.9	111.4	113.6	115.5
C14: Agriculture	9.9	10.0	10.0	10.1	10.1	10.2	10.2	10.3	10.3	10.4	10.4	10.5	10.5
OTHER INDICATORS													
Southern California Consumer Inflation*	1.9%	1.8%	1.7%	2.1%	2.2%	2.0%	2.1%	2.1%	2.2%	2.2%	2.2%	2.1%	2.1%
Inflation--US Gross Domestic Product**	1.8%	1.6%	1.6%	1.7%	1.7%	1.7%	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%

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

** Chained Price Index--US GDP, from Global Insight's Feb 2012 US forecast.