

C. ERT Documentation and Program Level Update Types

1. INTRODUCTION

This appendix documents the type of update that was made for each parameter in the 173 programs for which the IOUs are claiming energy savings in the 2006-2008 program cycle. These updates were made in compliance with Commission direction to the Energy Division to extrapolate findings within the portfolios, and the Energy Division’s “Decision Framework” which further clarifies the implementation of this direction and the criteria for making extrapolations.

There are four types of updates that were made to any given parameter for any given record: 1) EMV, 2) OtherEMV, 3) DEER, and 4) PassThru.¹

- “EMV” represents an update based on 2006-2008 ex post evaluation of the particular HIM, program, or program element in which the program participants were included in the sample frame.
- “OthEMV” represents an update based on 2006-2008 ex post evaluation of the same HIM within a different program or program element in which the participants were not included in the sample frame.
- “DEER” represents an update based on the DEER 2008 database.
- “PassThru” represents the ex ante value filed by the IOU found in the Standard Tracking Database.

The selection of the appropriate update was guided by the ED Decision Framework which is outlined in Section 3.4 of the report, and the professional judgment of the evaluation contractors. Consistency with the evaluated findings was a primary goal. Corrections to errors that were identified in the public comment period are noted in red text in the associated documentation for that program.

The update type for each parameter for each record for each program is indicated in the program-specific Evaluation Reporting Template (ERT) input files submitted by eleven contract groups: [hyperlinked]

1. MAJOR COMMERCIAL	34
2. SMALL COMMERCIAL	50
3. LOCAL GOVERNMENT PARTNERSHIPS	79
4. COMMERCIAL FACILITIES	133
5. SPECIALIZED COMMERCIAL	145
6. RESIDENTIAL RETROFIT	152

¹ These assignments are found in the update type fields in the ERT input files: *IRateType*; *UESType*; *NTGRTType*; *EULType*

7. SCE INDUSTRIAL AND AGRICULTURAL	177
8. COMMERCIAL RETRO-COMMISSIONING.....	188
9. PGE FABRICATION AND MANUFACTURING.....	199
10. PGE AGRICULTURE AND FOOD PROCESSING.....	207
11. NEW CONSTRUCTION	212

For 82 of the 173 programs, each contract group was responsible for preparing an ERT file that included updates for each of the parameters required by the E3 calculator. The ERT input template is embedded in this document. The specific programs for which each contract group was responsible is presented in Table 1. It was possible that a given contract group did not conduct the evaluation for every HIM within a program for which they were responsible. In such cases, they depended on the contract group that did evaluate those HIMs to provide the parameter updates. At the end of the process, for each program for which they were responsible, each contract group had to update each parameter for each record in the Standard Program Tracking Database.

Each contract group prepared documentation to clarify the values they used to update each the records for each program for which they were responsible. In the sections that follow, the documentation from each contract group is provided. Each of these eleven documents is a stand-alone document with its own sections, table numbers and pagination.

Energy Division staff developed a series of tables from the centralized data set to summarize the type of update applied to the reported energy savings for each parameter type (installation rate, unit energy savings, net to gross, and estimated useful life) for each program. These tables show the percentage of the reported savings that received a particular update type, and which contract group was responsible for submitting the updates.

Installation Rates:

Installation Rates			kWh			kW			Therms		
Contract	EDI/OU	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru
ComFac	PGE	PGE2002	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2005	1%	0%	99%	1%	0%	99%	2%	0%	98%
		PGE2007	12%	0%	88%	7%	0%	93%	31%	0%	69%
		PGE2008	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2020	27%	0%	73%	16%	0%	84%	0%	0%	100%
		PGE2026	4%	0%	96%	2%	0%	98%	0%	0%	0%
		PGE2029	5%	0%	95%	4%	0%	96%	0%	0%	100%
		PGE2033	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2050	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2063	63%	0%	37%	60%	0%	40%	0%	0%	0%
		PGE2066	63%	0%	37%	64%	0%	36%	0%	0%	100%
		PGE2077	0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE2086	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
PGE Total			25%	0%	75%	20%	0%	80%	10%	0%	90%
ComFac Total			25%	0%	75%	20%	0%	80%	10%	0%	90%
LGP	PGE	PGE2018	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2036	0%	24%	76%	0%	22%	78%	0%	16%	84%
		PGE2019	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2024	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2027	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2028	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2030	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2031	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2095	0%	0%	100%	0%	0%	100%	0%	0%	100%
	PGE Total			0%	9%	91%	0%	7%	93%	0%	14%
SCE	SCE2526	0%	2%	98%	0%	0%	100%	0%	0%	0%	
	SCE2530	0%	16%	84%	0%	11%	89%	0%	0%	0%	
	SCE2566	24%	27%	49%	43%	16%	40%	0%	0%	0%	
	SCE2519	0%	0%	100%	0%	0%	100%	0%	0%	0%	

Installation Rates			kWh			kW			Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	
		SCE2520	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2521	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2522	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2524	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2525	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2527	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2529	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2567	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2568	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2569	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2570	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2571	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2573	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	SCE Total			5%	10%	85%	14%	6%	80%	0%	0%	0%
	SCG	SCG3518	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
SCG3520		0%	0%	0%	0%	0%	0%	0%	0%	18%	82%	
SCG3543		0%	100%	0%	0%	100%	0%	0%	0%	6%	94%	
SCG3519		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
SCG3523		0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
SCG Total			0%	100%	0%	0%	100%	0%	0%	12%	88%	
SDGE	SDGE3001	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	
	SDGE3026	0%	12%	88%	0%	6%	94%	0%	49%	51%		
SDGE Total			0%	9%	91%	0%	5%	95%	0%	45%	55%	
LGP Total			3%	9%	88%	8%	6%	86%	0%	16%	84%	
MajCom	PGE	PGE2033	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	PGE Total		0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE	SCE2517	83%	0%	17%	79%	0%	21%	0%	0%	0%	
		SCE2560	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2562	0%	0%	100%	0%	0%	100%	0%	0%	0%	
SCE Total			82%	0%	18%	79%	0%	21%	0%	0%	0%	

Installation Rates			kWh			kW			Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	
	SCG	SCG3503	0%	0%	0%	0%	0%	0%	94%	0%	6%	
		SCG3513	0%	0%	0%	0%	0%	0%	99%	0%	1%	
		SCG3546	0%	0%	100%	0%	0%	0%	0%	0%	100%	
	SCG Total			0%	0%	100%	0%	0%	0%	97%	0%	3%
	SDGE	SDGE3010	99%	0%	1%	100%	0%	0%	100%	0%	0%	
		SDGE3025	100%	0%	0%	100%	0%	0%	95%	0%	5%	
		SDGE3054	0%	0%	100%	0%	0%	100%	0%	0%	100%	
	SDGE Total			98%	0%	2%	98%	0%	2%	97%	0%	3%
	MajCom Total			85%	0%	15%	81%	0%	19%	97%	0%	3%
NRNC	PGE	PGE2009	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2059	0%	0%	100%	0%	0%	100%	0%	0%	100%	
	PGE Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
	SCE	SCE2505	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2512	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2534	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2543	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2557	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE Total			0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCG	SCG3502	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		SCG3542	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	SCG Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
	SDGE	SDGE3007	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		SDGE3018	0%	0%	100%	0%	0%	100%	0%	0%	100%	
SDGE3021		0%	0%	100%	0%	0%	100%	0%	0%	100%		
SDGE Total			0%	0%	100%	0%	0%	100%	0%	0%	100%	
NRNC Total			0%	0%	100%	0%	0%	100%	0%	0%	100%	
PGE_Ag	PGE	PGE2001	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2045	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2049	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2065	0%	0%	100%	0%	0%	100%	0%	0%	0%	

Installation Rates			kWh			kW			Therms		
Contract	EDIUO	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru
		PGE2079	0%	0%	100%	0%	0%	100%	0%	0%	0%
	PGE Total		0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ag Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ind	PGE	PGE2004	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2042	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2046	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2058	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2062	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2064	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2081	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2084	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2087	0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ind Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
RCx	PGE	PGE2006	8%	0%	92%	1%	0%	99%	8%	0%	92%
		PGE2015	15%	0%	85%	5%	0%	95%	35%	0%	65%
		PGE2025	2%	0%	98%	2%	0%	98%	4%	0%	96%
		PGE2035	30%	0%	70%	24%	0%	76%	7%	0%	93%
		PGE2052	17%	0%	83%	5%	0%	95%	82%	0%	18%
		PGE2056	100%	0%	0%	100%	0%	0%	100%	0%	0%
		PGE2070	100%	0%	0%	100%	0%	0%	0%	0%	0%
		PGE2071	100%	0%	0%	100%	0%	0%	100%	0%	0%
		PGE2072	100%	0%	0%	100%	0%	0%	100%	0%	0%
		PGE2088	100%	0%	0%	100%	0%	0%	100%	0%	0%
		PGE2090	100%	0%	0%	100%	0%	0%	100%	0%	0%
		PGE2091	99%	0%	1%	100%	0%	0%	100%	0%	0%
	PGE2094	46%	0%	54%	29%	0%	71%	0%	0%	0%	
PGE Total			36%	0%	64%	23%	0%	77%	54%	0%	46%
SCE	SCE2508		100%	0%	0%	99%	0%	1%	0%	0%	0%
	SCE2528		14%	0%	86%	18%	0%	82%	0%	0%	0%

Installation Rates			kWh			kW			Therms		
Contract	EDIUO	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru
	SCE Total		30%	0%	70%	29%	0%	71%	0%	0%	0%
	SCG	SCG3527	0%	0%	0%	0%	0%	0%	61%	0%	39%
	SCG Total		0%	0%	0%	0%	0%	0%	61%	0%	39%
RCx Total			35%	0%	65%	23%	0%	77%	56%	0%	44%
Res	PGE	PGE2000	97%	1%	2%	92%	1%	7%	87%	0%	13%
		PGE2078	27%	0%	73%	89%	0%	11%	70%	0%	30%
		PGE2092	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2093	0%	0%	100%	0%	0%	0%	0%	0%	0%
	PGE Total		97%	1%	3%	91%	1%	8%	87%	0%	13%
	SCE	SCE2500	89%	11%	0%	87%	13%	0%	0%	0%	0%
		SCE2501	99%	0%	1%	97%	0%	3%	0%	0%	0%
		SCE2502	88%	0%	12%	91%	0%	9%	0%	0%	0%
		SCE2507	39%	0%	61%	46%	0%	54%	0%	0%	0%
		SCE2503	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2546	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2550	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2552	0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCE Total		94%	1%	5%	84%	1%	14%	0%	0%	0%
	SCG	SCG3510	0%	0%	100%	0%	0%	100%	0%	0%	100%
		SCG3517	100%	0%	0%	100%	0%	0%	71%	16%	12%
		SCG3539	0%	0%	0%	0%	0%	0%	62%	0%	38%
		SCG3547	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3550	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total		99%	0%	1%	99%	0%	1%	35%	8%	57%
	SDGE	SDGE3006	68%	0%	32%	68%	0%	32%	0%	0%	0%
		SDGE3015	0%	99%	1%	0%	99%	1%	0%	100%	0%
		SDGE3016	100%	0%	0%	100%	0%	0%	0%	0%	0%
SDGE3017		64%	0%	36%	93%	0%	7%	44%	0%	56%	
SDGE3023		0%	0%	0%	0%	0%	0%	100%	0%	0%	
SDGE3024		72%	11%	17%	93%	3%	4%	52%	21%	28%	

Installation Rates			kWh			kW			Therms		
Contract	EDI/OU	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru
		SDGE3028	83%	17%	0%	83%	17%	0%	0%	0%	0%
		SDGE3035	37%	0%	63%	100%	0%	0%	100%	0%	0%
		SDGE3046	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SDGE3049	0%	0%	100%	0%	0%	100%	0%	0%	100%
		SDGE Total	95%	2%	4%	92%	2%	6%	52%	5%	43%
Res Total			95%	1%	4%	87%	1%	11%	64%	3%	32%
SCE_Ag_Ind	SCE	SCE2509	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2510	33%	0%	67%	44%	0%	56%	0%	0%	0%
	SCE Total		14%	0%	86%	27%	0%	73%	0%	0%	0%
SCE_Ag_Ind Total			14%	0%	86%	27%	0%	73%	0%	0%	0%
SmallCom	PGE	PGE2003	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2016	74%	0%	26%	47%	0%	53%	0%	0%	100%
		PGE2017	76%	0%	24%	68%	0%	32%	0%	0%	100%
		PGE2021	75%	0%	25%	82%	0%	18%	0%	0%	100%
		PGE2032	9%	0%	91%	0%	0%	100%	59%	0%	41%
		PGE2054	94%	0%	6%	94%	0%	6%	0%	0%	0%
		PGE2080	84%	0%	16%	84%	0%	16%	72%	0%	28%
		PGE2047	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2048	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2051	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2060	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2074	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2085	0%	0%	100%	0%	0%	100%	0%	0%	0%
	PGE2089	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	PGE Total		78%	0%	22%	77%	0%	23%	69%	0%	31%
SCE	SCE2511	94%	0%	6%	97%	0%	3%	0%	0%	0%	
	SCE2544	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2559	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2563	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2564	0%	0%	100%	0%	0%	100%	0%	0%	0%	

Installation Rates			kWh			kW			Therms			
Contract	EDI OU	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	
	SCE Total		84%	0%	16%	86%	0%	14%	0%	0%	0%	
	SCG	SCG3507	0%	0%	0%	0%	0%	0%	0%	43%	0%	57%
		SCG3526	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3538	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3540	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total		0%	0%	0%	0%	0%	0%	0%	42%	0%	58%
	SDGE	SDGE3012	53%	0%	47%	55%	0%	45%	2%	0%	0%	98%
		SDGE3020	83%	0%	17%	91%	0%	9%	69%	0%	0%	31%
		SDGE3030	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SDGE3039	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
		SDGE3042	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%
		SDGE3050	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
		SDGE3053	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
	SDGE Total		72%	0%	28%	79%	0%	21%	27%	0%	0%	73%
SmallCom Total			78%	0%	22%	78%	0%	22%	49%	0%	51%	
SpecCom	PGE	PGE2068	37%	0%	63%	100%	0%	0%	0%	0%	100%	
		PGE2061	0%	0%	100%	0%	0%	100%	0%	0%	100%	
	PGE Total		34%	0%	66%	88%	0%	12%	0%	0%	100%	
	SCE	SCE2504	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%
		SCE2537	27%	0%	73%	14%	0%	86%	0%	0%	0%	0%
		SCE2561	52%	0%	48%	78%	0%	22%	0%	0%	0%	0%
		SCE2535	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2536	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2538	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2565	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
	SCE Total		35%	0%	65%	20%	0%	80%	0%	0%	0%	0%
	SCG	SCG3536	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
		SCG3544	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
SCG Total		0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	
SDGE	SDGE3029	56%	0%	44%	70%	0%	30%	108%	0%	0%	-8%	

Installation Rates			kWh			kW			Therms		
Contract	EDI/OU	EDPrgID	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru	EMV	OthEMV	PassThru
		SDGE3043	51%	0%	49%	64%	0%	36%	-5%	0%	105%
		SDGE3034	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SDGE Total	53%	0%	47%	67%	0%	33%	0%	0%	100%
SpecCom Total			38%	0%	62%	48%	0%	52%	0%	0%	100%

Unit Energy Savings:

Unit Energy Savings			kWh				kW				Therms			
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
ComFac	PGE	PGE2086	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		PGE2077	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2066	63%	0%	0%	37%	64%	0%	0%	36%	0%	0%	0%	100%
		PGE2063	63%	0%	0%	37%	60%	0%	0%	40%	0%	0%	0%	0%
		PGE2050	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2033	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2029	5%	0%	0%	95%	4%	0%	0%	96%	0%	0%	0%	100%
		PGE2026	4%	0%	0%	96%	2%	0%	0%	98%	0%	0%	0%	0%
		PGE2020	27%	0%	0%	73%	16%	0%	0%	84%	0%	0%	0%	100%
		PGE2008	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2007	100%	0%	0%	0%	100%	0%	0%	0%	95%	0%	0%	5%
		PGE2005	100%	0%	0%	0%	100%	0%	0%	0%	83%	0%	0%	17%
		PGE2002	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
PGE Total			64%	0%	0%	36%	54%	0%	0%	46%	60%	0%	0%	40%
ComFac Total			64%	0%	0%	36%	54%	0%	0%	46%	60%	0%	0%	40%
LGP	PGE	PGE2095	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2036	76%	24%	0%	0%	78%	22%	0%	0%	84%	16%	0%	0%
		PGE2031	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2030	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2028	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%

Unit Energy Savings			kWh				kW				Therms			
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
		PGE2027	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2024	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2019	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2018	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE Total	41%	9%	0%	50%	41%	7%	0%	52%	83%	14%	0%	3%
	SCE	SCE2573	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
		SCE2571	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2570	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2569	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2568	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2567	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2566	2%	34%	32%	32%	5%	46%	30%	19%	0%	0%	0%	0%
		SCE2530	83%	16%	0%	1%	87%	11%	0%	2%	0%	0%	0%	0%
		SCE2529	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2527	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2526	98%	2%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		SCE2525	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2524	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2522	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2521	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2520	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2519	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE Total	35%	11%	7%	47%	42%	16%	9%	33%	0%	0%	0%	0%
	SCG	SCG3543	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SCG3523	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3520	0%	0%	0%	0%	0%	0%	0%	0%	74%	18%	0%	8%
		SCG3519	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3518	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%
		SCG Total	0%	0%	0%	100%	0%	0%	0%	100%	80%	12%	0%	8%
	SDG	SDGE3026	88%	12%	0%	0%	94%	6%	0%	0%	51%	49%	0%	0%

Unit Energy Savings			kWh				kW				Therms			
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
	E													
		SDGE3001	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
	SDGE Total	91%	9%	0%	0%	95%	5%	0%	0%	55%	45%	0%	0%	
LGP Total			42%	10%	4%	44%	46%	12%	5%	36%	80%	16%	0%	4%
MajCom	PGE	PGE2033	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
	PGE Total		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
	SCE	SCE2562	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2560	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2517	83%	0%	0%	17%	79%	0%	0%	21%	0%	0%	0%	0%
	SCE Total		82%	0%	0%	18%	79%	0%	0%	21%	0%	0%	0%	0%
	SCG	SCG3546	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3513	0%	0%	0%	0%	0%	0%	0%	0%	99%	0%	0%	1%
		SCG3503	0%	0%	0%	0%	0%	0%	0%	0%	94%	0%	0%	6%
	SCG Total		0%	0%	0%	100%	0%	0%	0%	0%	97%	0%	0%	3%
	SDG E	SDGE3054	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
SDGE3025		100%	0%	0%	0%	100%	0%	0%	0%	95%	0%	0%	5%	
SDGE3010		99%	0%	0%	1%	100%	0%	0%	0%	100%	0%	0%	0%	
SDGE Total		98%	0%	0%	2%	98%	0%	0%	2%	97%	0%	0%	3%	
MajCom Total			85%	0%	0%	15%	81%	0%	0%	19%	97%	0%	0%	3%
NRNC	PGE	PGE2059	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2009	85%	0%	0%	15%	91%	0%	0%	9%	87%	0%	0%	13%
	PGE Total		72%	0%	0%	28%	81%	0%	0%	19%	75%	0%	0%	25%
	SCE	SCE2557	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2543	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2534	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2512	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		SCE2505	42%	0%	0%	58%	70%	0%	0%	30%	0%	0%	0%	0%
SCE Total		99%	0%	0%	1%	95%	0%	0%	5%	0%	0%	0%	0%	

Unit Energy Savings			kWh				kW				Therms				
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
	SCG	SCG3542	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
		SCG3502	3%	0%	0%	97%	1%	0%	0%	99%	8%	0%	0%	92%	
	SCG Total		3%	0%	0%	97%	1%	0%	0%	99%	98%	0%	0%	2%	
	SDGE	SDGE3021	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		SDGE3018	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		SDGE3007	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	SDGE Total		93%	0%	0%	7%	90%	0%	0%	10%	85%	0%	0%	15%	
	NRNC Total			96%	0%	0%	4%	84%	0%	0%	16%	96%	0%	0%	4%
	PGE_Ag	PGE	PGE2079	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
			PGE2065	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
PGE2049			0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
PGE2045			0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
PGE2001			100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
PGE Total		76%	0%	0%	24%	81%	0%	0%	19%	98%	0%	0%	2%		
PGE_Ag Total			76%	0%	0%	24%	81%	0%	0%	19%	98%	0%	0%	2%	
PGE_Ind	PGE	PGE2087	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2084	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2081	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2064	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2062	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2058	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2046	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2042	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
	PGE2004	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%		
PGE Total		100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%		
PGE_Ind Total			100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
RCx	PGE	PGE2094	46%	0%	0%	54%	29%	0%	0%	71%	0%	0%	0%	0%	

Unit Energy Savings			kWh				kW				Therms				
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
		PGE2091	99%	0%	0%	1%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2090	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2088	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2072	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2071	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2070	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		PGE2056	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2052	17%	0%	0%	83%	5%	0%	0%	95%	82%	0%	0%	18%	
		PGE2035	30%	0%	0%	70%	24%	0%	0%	76%	7%	0%	0%	93%	
		PGE2025	2%	0%	0%	98%	2%	0%	0%	98%	4%	0%	0%	96%	
		PGE2015	15%	0%	0%	85%	5%	0%	0%	95%	35%	0%	0%	65%	
	PGE2006	11%	0%	0%	89%	11%	0%	0%	89%	8%	0%	0%	92%		
	PGE Total			36%	0%	0%	64%	23%	0%	0%	77%	54%	0%	0%	46%
	SCE	SCE2528	14%	0%	0%	86%	18%	0%	0%	82%	0%	0%	0%	0%	
		SCE2508	100%	0%	0%	0%	99%	0%	0%	1%	0%	0%	0%	0%	
	SCE Total			30%	0%	0%	70%	29%	0%	0%	71%	0%	0%	0%	0%
	SCG	SCG3527	0%	0%	0%	0%	0%	0%	0%	0%	0%	61%	0%	0%	39%
SCG Total			0%	0%	0%	0%	0%	0%	0%	0%	61%	0%	0%	39%	
RCx Total			35%	0%	0%	65%	23%	0%	0%	77%	56%	0%	0%	44%	
Res	PGE	PGE2093	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	
		PGE2092	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		PGE2078	20%	0%	0%	80%	61%	0%	0%	39%	27%	0%	0%	73%	
		PGE2000	96%	1%	0%	3%	87%	1%	0%	12%	36%	1%	26%	37%	
	PGE Total			96%	1%	0%	3%	86%	1%	0%	13%	36%	1%	26%	38%
	SCE	SCE2552	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2550	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2546	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
SCE2507		39%	0%	0%	61%	46%	0%	0%	54%	0%	0%	0%	0%		
SCE2503	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%		

Unit Energy Savings			kWh				kW				Therms				
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
		SCE2502	87%	0%	0%	13%	67%	0%	0%	33%	0%	0%	0%	0%	
		SCE2501	99%	0%	0%	1%	96%	1%	0%	3%	0%	0%	0%	0%	
		SCE2500	89%	11%	0%	0%	87%	13%	0%	0%	0%	0%	0%	0%	0%
	SCE Total			94%	1%	0%	5%	83%	2%	0%	15%	0%	0%	0%	0%
	SCG	SCG3550		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3547		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3539		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3517		100%	0%	0%	0%	100%	0%	0%	0%	66%	9%	0%	26%
		SCG3510		0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%
	SCG Total			99%	1%	0%	0%	99%	1%	0%	0%	31%	4%	0%	65%
	SDGE	SDGE3049		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SDGE3046		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SDGE3035		28%	0%	0%	72%	55%	0%	0%	45%	38%	0%	0%	62%
		SDGE3028		83%	17%	0%	0%	83%	16%	0%	1%	0%	0%	0%	0%
		SDGE3024		72%	0%	0%	28%	93%	0%	0%	7%	46%	0%	5%	48%
		SDGE3023		0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%
		SDGE3017		64%	0%	0%	36%	93%	0%	0%	7%	0%	0%	44%	56%
		SDGE3016		100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		SDGE3015		0%	99%	0%	1%	0%	99%	0%	1%	0%	100%	0%	0%
	SDGE3006		68%	0%	0%	32%	68%	0%	0%	32%	0%	0%	0%	0%	
SDGE Total			94%	1%	0%	4%	90%	1%	0%	9%	38%	0%	7%	55%	
Res Total				95%	1%	0%	4%	85%	1%	0%	14%	34%	2%	14%	49%
SCE_Ag_Ind	SCE	SCE2510	34%	0%	0%	66%	44%	0%	0%	56%	0%	0%	0%	0%	
		SCE2509	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	SCE Total			72%	0%	0%	28%	66%	0%	0%	34%	0%	0%	0%	0%
SCE_Ag_Ind Total				72%	0%	0%	28%	66%	0%	0%	34%	0%	0%	0%	0%
SmallCo m	PGE	PGE2089	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	

Unit Energy Savings			kWh				kW				Therms			
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
		PGE2085	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2080	84%	5%	0%	11%	84%	3%	0%	13%	87%	0%	0%	13%
		PGE2074	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2060	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2054	94%	0%	0%	6%	94%	0%	0%	6%	0%	0%	0%	0%
		PGE2051	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2048	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2047	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2032	9%	0%	0%	91%	0%	0%	0%	100%	59%	0%	0%	41%
		PGE2021	75%	1%	0%	24%	82%	0%	0%	18%	0%	0%	0%	100%
		PGE2017	76%	0%	0%	24%	68%	0%	0%	32%	0%	0%	0%	100%
		PGE2016	74%	0%	0%	26%	47%	0%	0%	53%	0%	0%	0%	100%
		PGE2003	40%	0%	0%	60%	60%	0%	0%	40%	130%	0%	0%	-30%
		PGE Total	79%	4%	0%	17%	78%	2%	0%	20%	82%	0%	0%	18%
	SCE	SCE2564	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2563	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2559	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2544	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2511	94%	3%	0%	3%	97%	1%	0%	2%	0%	0%	0%	0%
		SCE Total	84%	2%	0%	13%	86%	1%	0%	13%	0%	0%	0%	0%
	SCG	SCG3540	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3538	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3526	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3507	0%	0%	0%	0%	0%	0%	0%	0%	95%	0%	0%	5%
		SCG Total	0%	0%	0%	0%	0%	0%	0%	0%	93%	0%	0%	7%
	SDG E	SDGE3053	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SDGE3050	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SDGE3042	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
		SDGE3039	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%

Unit Energy Savings			kWh				kW				Therms				
Contract	IOU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
		SDGE3030	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SDGE3020	83%	2%	0%	15%	91%	1%	0%	8%	75%	0%	0%	25%	
		SDGE3012	53%	21%	0%	26%	55%	13%	0%	32%	86%	0%	0%	14%	
		SDGE Total	72%	7%	0%	20%	79%	4%	0%	17%	61%	0%	0%	39%	
SmallCom Total			79%	4%	0%	17%	79%	2%	0%	19%	89%	0%	0%	11%	
SpecCom	PGE	PGE2068	37%	0%	0%	63%	100%	0%	0%	0%	0%	0%	0%	100%	
		PGE2061	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	PGE Total		34%	0%	0%	66%	88%	0%	0%	12%	0%	0%	0%	100%	
	SCE	SCE2565	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2561	52%	0%	0%	48%	78%	0%	0%	22%	0%	0%	0%	0%	
		SCE2538	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2537	27%	0%	0%	73%	14%	0%	0%	86%	0%	0%	0%	0%	
		SCE2536	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2535	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2504	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	SCE Total		35%	0%	0%	65%	20%	0%	0%	80%	0%	0%	0%	0%	
	SCG	SCG3544	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3536	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%
	SCG Total		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%
	SDGE	SDGE3043	51%	0%	0%	49%	64%	0%	0%	36%	-5%	0%	0%	0%	105%
		SDGE3034	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
SDGE3029		52%	0%	0%	48%	65%	0%	0%	35%	99%	0%	0%	0%	1%	
SDGE Total		51%	0%	0%	49%	64%	0%	0%	36%	0%	0%	0%	100%		
SpecCom Total			37%	0%	0%	63%	46%	0%	0%	54%	0%	0%	0%	100%	

Net To Gross:

Net to Gross			kWh				kW				Therms				
Contract	EDI/OU	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
ComFac	PGE	PGE2002	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2005	100%	0%	0%	0%	100%	0%	0%	0%	83%	0%	0%	17%	
		PGE2007	100%	0%	0%	0%	100%	0%	0%	0%	95%	0%	0%	5%	
		PGE2008	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2020	27%	0%	0%	73%	16%	0%	0%	84%	0%	0%	0%	100%	
		PGE2026	4%	0%	0%	96%	2%	0%	0%	98%	0%	0%	0%	0%	
		PGE2029	5%	0%	0%	95%	4%	0%	0%	96%	0%	0%	0%	100%	
		PGE2033	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2050	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2063	63%	0%	0%	37%	60%	0%	0%	40%	0%	0%	0%	0%	
		PGE2066	63%	0%	0%	37%	64%	0%	0%	36%	0%	0%	0%	100%	
		PGE2077	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2086	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
PGE Total			64%	0%	0%	36%	54%	0%	0%	46%	60%	0%	0%	40%	
ComFac Total			64%	0%	0%	36%	54%	0%	0%	46%	60%	0%	0%	40%	
LGP	PGE	PGE2018	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2036	76%	24%	0%	0%	78%	22%	0%	0%	84%	16%	0%	0%	
		PGE2019	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2024	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		PGE2027	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2028	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2030	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2031	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2095	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	PGE Total			41%	9%	0%	50%	41%	7%	0%	52%	83%	14%	0%	3%
	SCE	SCE2526	98%	2%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
SCE2530		83%	16%	0%	1%	87%	11%	0%	2%	0%	0%	0%	0%	0%	
SCE2566		100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	
SCE2519		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	

Net to Gross			kWh				kW				Therms				
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
		SCE2520	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2521	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2522	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2524	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2525	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2527	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2529	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2567	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2568	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2569	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2570	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2571	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2573	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	
		SCE Total			57%	3%	0%	40%	72%	1%	0%	27%	0%	0%	0%
SCG		SCG3518	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
		SCG3520	0%	0%	0%	0%	0%	0%	0%	0%	74%	18%	0%	8%	
		SCG3543	0%	100%	0%	0%	0%	0%	100%	0%	0%	6%	0%	94%	
		SCG3519	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
		SCG3523	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
SCG Total			0%	100%	0%	0%	0%	100%	0%	0%	80%	12%	0%	8%	
SDGE		SDGE3001	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		SDGE3026	88%	12%	0%	0%	94%	6%	0%	0%	51%	49%	0%	0%	
SDGE Total			91%	9%	0%	0%	95%	5%	0%	0%	55%	45%	0%	0%	
LGP Total			54%	6%	0%	40%	64%	3%	0%	33%	80%	16%	0%	4%	
MajCom	PGE	PGE2033	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	PGE Total		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	SCE		SCE2517	80%	2%	7%	12%	76%	0%	10%	13%	0%	0%	0%	0%
			SCE2560	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
			SCE2562	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
SCE Total			79%	1%	7%	13%	76%	0%	10%	14%	0%	0%	0%		

Net to Gross			kWh				kW				Therms				
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
	SCG	SCG3503	0%	0%	0%	0%	0%	0%	0%	0%	94%	0%	0%	6%	
		SCG3513	0%	0%	0%	0%	0%	0%	0%	0%	99%	0%	0%	1%	
		SCG3546	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	
	SCG Total			0%	0%	0%	100%	0%	0%	0%	0%	97%	0%	0%	3%
	SDGE	SDGE3010	99%	0%	0%	1%	98%	0%	0%	2%	82%	0%	0%	18%	
		SDGE3025	98%	0%	0%	2%	99%	0%	0%	1%	95%	0%	0%	5%	
		SDGE3054	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	SDGE Total			97%	0%	0%	3%	96%	0%	0%	4%	84%	0%	0%	16%
	MajCom Total			82%	1%	6%	12%	78%	0%	9%	12%	96%	0%	0%	4%
NRNC	PGE	PGE2009	85%	0%	0%	15%	91%	0%	0%	9%	87%	0%	0%	13%	
		PGE2059	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	PGE Total			72%	0%	0%	28%	81%	0%	0%	19%	75%	0%	0%	25%
	SCE	SCE2505	42%	0%	0%	58%	70%	0%	0%	30%	0%	0%	0%	0%	
		SCE2512	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
		SCE2534	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2543	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		SCE2557	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	SCE Total			99%	0%	0%	1%	95%	0%	0%	5%	0%	0%	0%	0%
	SCG	SCG3502	3%	0%	0%	97%	1%	0%	0%	99%	8%	0%	0%	92%	
		SCG3542	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
	SCG Total			3%	0%	0%	97%	1%	0%	0%	99%	98%	0%	0%	2%
	SDGE	SDGE3007	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
SDGE3018		100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%		
SDGE3021		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%		
SDGE Total			93%	0%	0%	7%	90%	0%	0%	10%	85%	0%	0%	15%	
NRNC Total			96%	0%	0%	4%	84%	0%	0%	16%	96%	0%	0%	4%	
PGE_Ag	PGE	PGE2001	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
		PGE2045	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
		PGE2049	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
		PGE2065	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	

Net to Gross			kWh				kW				Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
		PGE2079	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE Total	76%	0%	0%	24%	81%	0%	0%	19%	98%	0%	0%	2%
PGE_Ag Total			76%	0%	0%	24%	81%	0%	0%	19%	98%	0%	0%	2%
PGE_Ind	PGE	PGE2004	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2042	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2046	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2058	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2062	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2064	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2081	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2084	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2087	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%
		PGE Total	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
PGE_Ind Total			100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
RCx	PGE	PGE2006	11%	0%	0%	89%	11%	0%	0%	89%	8%	0%	0%	92%
		PGE2015	15%	0%	0%	85%	5%	0%	0%	95%	35%	0%	0%	65%
		PGE2025	2%	0%	0%	98%	2%	0%	0%	98%	4%	0%	0%	96%
		PGE2035	30%	0%	0%	70%	24%	0%	0%	76%	7%	0%	0%	93%
		PGE2052	17%	0%	0%	83%	5%	0%	0%	95%	82%	0%	0%	18%
		PGE2056	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2070	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		PGE2071	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2072	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2088	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2090	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%
		PGE2091	99%	0%	0%	1%	100%	0%	0%	0%	100%	0%	0%	0%
	PGE2094	46%	0%	0%	54%	29%	0%	0%	71%	0%	0%	0%	0%	
		PGE Total	36%	0%	0%	64%	23%	0%	0%	77%	54%	0%	0%	46%
	SCE	SCE2508	100%	0%	0%	0%	99%	0%	0%	1%	0%	0%	0%	0%
		SCE2528	14%	0%	0%	86%	18%	0%	0%	82%	0%	0%	0%	0%

Net to Gross			kWh				kW				Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
	SCE Total		30%	0%	0%	70%	29%	0%	0%	71%	0%	0%	0%	0%
	SCG	SCG3527	0%	0%	0%	0%	0%	0%	0%	0%	61%	0%	0%	39%
	SCG Total		0%	0%	0%	0%	0%	0%	0%	0%	61%	0%	0%	39%
RCx Total			35%	0%	0%	65%	23%	0%	0%	77%	56%	0%	0%	44%
Res	PGE	PGE2000	97%	1%	0%	2%	92%	1%	0%	7%	87%	0%	0%	13%
		PGE2078	27%	0%	0%	73%	89%	0%	0%	11%	70%	0%	0%	30%
		PGE2092	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2093	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
	PGE Total		97%	1%	0%	3%	91%	1%	0%	8%	87%	0%	0%	13%
	SCE	SCE2500	89%	11%	0%	0%	87%	13%	0%	0%	0%	0%	0%	0%
		SCE2501	99%	0%	0%	1%	97%	0%	0%	3%	0%	0%	0%	0%
		SCE2502	88%	0%	0%	12%	91%	0%	0%	9%	0%	0%	0%	0%
		SCE2507	39%	0%	0%	61%	46%	0%	0%	54%	0%	0%	0%	0%
		SCE2503	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2546	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2550	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SCE2552	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
	SCE Total		94%	1%	0%	5%	84%	1%	0%	14%	0%	0%	0%	0%
	SCG	SCG3510	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SCG3517	100%	0%	0%	0%	100%	0%	0%	0%	71%	16%	0%	12%
		SCG3539	0%	0%	0%	0%	0%	0%	0%	0%	62%	0%	0%	38%
		SCG3547	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3550	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total		99%	0%	0%	1%	99%	0%	0%	1%	35%	8%	0%	57%
	SDGE	SDGE3006	68%	0%	0%	32%	68%	0%	0%	32%	0%	0%	0%	0%
		SDGE3015	0%	99%	0%	1%	0%	99%	0%	1%	0%	100%	0%	0%
		SDGE3016	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		SDGE3017	64%	0%	0%	36%	93%	0%	0%	7%	44%	0%	0%	56%
SDGE3023		0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
SDGE3024		72%	11%	0%	17%	93%	3%	0%	4%	52%	21%	0%	28%	

Net to Gross			kWh				kW				Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
		SDGE3028	83%	17%	0%	0%	83%	17%	0%	0%	0%	0%	0%	0%
		SDGE3035	37%	0%	0%	63%	100%	0%	0%	0%	100%	0%	0%	0%
		SDGE3046	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		SDGE3049	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		SDGE Total	95%	2%	0%	4%	92%	2%	0%	6%	52%	5%	0%	43%
Res Total			95%	1%	0%	4%	87%	1%	0%	11%	64%	3%	0%	32%
SCE_Ag_Ind	SCE	SCE2509	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
		SCE2510	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
	SCE Total		100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
SCE_Ag_Ind Total			100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%
SmallCom	PGE	PGE2003	40%	0%	0%	60%	60%	0%	0%	40%	130%	0%	0%	-30%
		PGE2016	74%	0%	0%	26%	47%	0%	0%	53%	0%	0%	0%	100%
		PGE2017	76%	0%	0%	24%	68%	0%	0%	32%	0%	0%	0%	100%
		PGE2021	75%	1%	0%	24%	82%	0%	0%	18%	0%	0%	0%	100%
		PGE2032	9%	0%	0%	91%	0%	0%	0%	100%	59%	0%	0%	41%
		PGE2054	94%	0%	0%	6%	94%	0%	0%	6%	0%	0%	0%	0%
		PGE2080	97%	0%	1%	1%	99%	0%	1%	1%	100%	0%	0%	0%
		PGE2047	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2048	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2051	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
		PGE2060	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2074	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
		PGE2085	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%
	PGE2089	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	PGE Total		90%	0%	1%	8%	91%	0%	1%	8%	95%	0%	0%	5%
SCE	SCE2511	99%	0%	0%	1%	100%	0%	0%	0%	0%	0%	0%	0%	
	SCE2544	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	SCE2559	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	SCE2563	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	
	SCE2564	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	

Net to Gross			kWh				kW				Therms				
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	
	SCE Total		89%	0%	0%	11%	88%	0%	0%	12%	0%	0%	0%	0%	
	SCG	SCG3507	0%	0%	0%	0%	0%	0%	0%	0%	0%	97%	0%	0%	3%
		SCG3526	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3538	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3540	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total		0%	0%	0%	0%	0%	0%	0%	0%	0%	95%	0%	0%	5%
	SDGE	SDGE3012	96%	0%	0%	4%	97%	0%	0%	3%	100%	0%	0%	0%	0%
		SDGE3020	97%	0%	0%	3%	98%	0%	0%	2%	100%	0%	0%	0%	0%
		SDGE3030	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
		SDGE3039	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%
		SDGE3042	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SDGE3050	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%
	SDGE3053	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	
	SDGE Total		94%	0%	0%	6%	95%	0%	0%	5%	76%	0%	0%	0%	24%
	SmallCom Total			91%	0%	1%	8%	91%	0%	0%	8%	94%	0%	0%	6%
SpecCom	PGE	PGE2068	37%	0%	0%	63%	100%	0%	0%	0%	0%	0%	0%	100%	
		PGE2061	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	
	PGE Total		34%	0%	0%	66%	88%	0%	0%	12%	0%	0%	0%	100%	
	SCE	SCE2504	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
		SCE2537	27%	0%	0%	73%	14%	0%	0%	86%	0%	0%	0%	0%	0%
		SCE2561	52%	0%	0%	48%	78%	0%	0%	22%	0%	0%	0%	0%	0%
		SCE2535	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
		SCE2536	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
		SCE2538	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%
	SCE2565	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	
	SCE Total		18%	0%	0%	82%	13%	0%	0%	87%	0%	0%	0%	0%	0%
	SCG	SCG3536	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%
SCG3544		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
SCG Total		0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	
SDGE	SDGE3029	54%	0%	0%	46%	69%	0%	0%	31%	108%	0%	0%	0%	-8%	

Net to Gross			kWh				kW				Therms			
Contract	EDIUO	EDPrgID	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru	EMV	OthEMV	DEER	PassThru
		SDGE3043	51%	0%	0%	49%	64%	0%	0%	36%	-5%	0%	0%	105%
		SDGE3034	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SDGE Total	52%	0%	0%	48%	66%	0%	0%	34%	0%	0%	0%	100%
SpecCom Total			30%	0%	0%	70%	45%	0%	0%	55%	0%	0%	0%	100%

Effective Useful Life:

Effective Useful Life			kWh			kW			Therms		
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru
ComFac	PGE	PGE2002	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2005	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2007	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2008	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2020	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2026	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2029	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2033	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2050	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2063	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2066	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2077	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2086	0%	0%	0%	0%	0%	0%	0%	0%	100%
PGE Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
ComFac Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
LGP	PGE	PGE2018	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2036	0%	21%	79%	0%	18%	82%	0%	51%	49%
		PGE2019	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2024	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2027	0%	0%	100%	0%	0%	100%	0%	0%	100%

Effective Useful Life			kWh			kW			Therms		
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru
		PGE2028	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2030	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2031	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2095	0%	0%	100%	0%	0%	100%	0%	0%	100%
	PGE Total		0%	8%	92%	0%	6%	94%	0%	44%	56%
	SCE	SCE2526	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2530	0%	19%	81%	0%	11%	89%	0%	0%	0%
		SCE2566	0%	87%	13%	0%	93%	7%	0%	0%	0%
		SCE2519	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2520	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2521	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2522	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2524	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2525	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2527	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2529	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2567	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2568	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2569	0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCE2570	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2571	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE2573	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	SCE Total		0%	23%	77%	0%	30%	70%	0%	0%	0%
	SCG	SCG3518	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3520	0%	0%	0%	0%	0%	0%	0%	13%	87%
		SCG3543	0%	100%	0%	0%	100%	0%	0%	40%	60%
		SCG3519	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3523	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total		0%	100%	0%	0%	100%	0%	0%	9%	91%
	SDGE	SDGE3001	0%	0%	100%	0%	0%	100%	0%	0%	100%

Effective Useful Life			kWh			kW			Therms		
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru
		SDGE3026	0%	2%	98%	0%	1%	99%	0%	11%	89%
	SDGE Total		0%	1%	99%	0%	1%	99%	0%	10%	90%
LGP Total			0%	15%	85%	0%	20%	80%	0%	34%	66%
MajCom	PGE	PGE2033	0%	0%	100%	0%	0%	100%	0%	0%	0%
	PGE Total		0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCE	SCE2517	0%	37%	63%	0%	49%	51%	0%	0%	0%
		SCE2560	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2562	0%	100%	0%	0%	100%	0%	0%	0%	0%
	SCE Total		0%	36%	64%	0%	49%	51%	0%	0%	0%
	SCG	SCG3503	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3513	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3546	0%	0%	100%	0%	0%	0%	0%	0%	100%
	SCG Total		0%	0%	100%	0%	0%	0%	0%	0%	100%
	SDGE	SDGE3010	0%	0%	100%	0%	0%	100%	0%	0%	100%
SDGE3025		0%	0%	100%	0%	0%	100%	0%	0%	100%	
SDGE3054		0%	0%	100%	0%	0%	100%	0%	0%	100%	
SDGE Total		0%	0%	100%	0%	0%	100%	0%	0%	100%	
MajCom Total			0%	31%	69%	0%	43%	57%	0%	0%	100%
NRNC	PGE	PGE2009	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2059	0%	0%	100%	0%	0%	100%	0%	0%	100%
	PGE Total		0%	0%	100%	0%	0%	100%	0%	0%	100%
	SCE	SCE2505	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2512	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2534	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2543	0%	0%	100%	0%	0%	100%	0%	0%	0%
		SCE2557	0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCE Total		0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCG	SCG3502	0%	0%	100%	0%	0%	100%	0%	0%	100%
SCG3542		0%	0%	0%	0%	0%	0%	0%	0%	100%	

Effective Useful Life			kWh			kW			Therms		
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru
	SCG Total		0%	0%	100%	0%	0%	100%	0%	0%	100%
	SDGE	SDGE3007	0%	0%	100%	0%	0%	100%	0%	0%	100%
		SDGE3018	0%	0%	100%	0%	0%	100%	0%	0%	100%
		SDGE3021	0%	0%	100%	0%	0%	100%	0%	0%	100%
	SDGE Total		0%	0%	100%	0%	0%	100%	0%	0%	100%
NRNC Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ag	PGE	PGE2001	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2045	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2049	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2065	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2079	0%	0%	100%	0%	0%	100%	0%	0%	0%
	PGE Total		0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ag Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
PGE_Ind	PGE	PGE2004	17%	0%	83%	15%	0%	85%	0%	0%	100%
		PGE2042	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2046	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2058	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2062	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2064	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2081	0%	0%	100%	0%	0%	100%	0%	0%	0%
		PGE2084	0%	0%	100%	0%	0%	100%	0%	0%	0%
	PGE2087	0%	0%	100%	0%	0%	100%	0%	0%	100%	
PGE Total		9%	0%	91%	8%	0%	92%	0%	0%	100%	
PGE_Ind Total			9%	0%	91%	8%	0%	92%	0%	0%	100%
RCx	PGE	PGE2006	0%	0%	100%	0%	0%	100%	0%	0%	100%
		PGE2015	0%	8%	92%	0%	8%	92%	0%	4%	96%
		PGE2025	0%	28%	72%	0%	15%	85%	0%	15%	85%
		PGE2035	0%	0%	100%	0%	0%	100%	0%	0%	100%

Effective Useful Life			kWh			kW			Therms			
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru	
		PGE2052	0%	2%	98%	0%	0%	100%	0%	10%	90%	
		PGE2056	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2070	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2071	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2072	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2088	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2090	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2091	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2094	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	PGE Total			0%	3%	97%	0%	2%	98%	0%	4%	96%
	SCE	SCE2508	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2528	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE Total			0%	0%	100%	0%	0%	100%	0%	0%	0%
	SCG	SCG3527	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total			0%	0%	0%	0%	0%	0%	0%	0%	100%
RCx Total			0%	3%	97%	0%	2%	98%	0%	3%	97%	
Res	PGE	PGE2000	0%	98%	2%	0%	93%	7%	0%	88%	12%	
		PGE2078	0%	27%	73%	0%	89%	11%	0%	70%	30%	
		PGE2092	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2093	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PGE Total			0%	98%	2%	0%	93%	7%	0%	88%	12%
	SCE	SCE2500	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%
		SCE2501	0%	99%	1%	0%	97%	3%	0%	0%	0%	0%
		SCE2502	0%	88%	12%	0%	91%	9%	0%	0%	0%	0%
		SCE2507	0%	39%	61%	0%	46%	54%	0%	0%	0%	0%
		SCE2503	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2546	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2550	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
SCE2552		0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
SCE Total			0%	95%	5%	0%	86%	14%	0%	0%	0%	

Effective Useful Life			kWh			kW			Therms			
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru	
	SCG	SCG3510	0%	100%	0%	0%	100%	0%	0%	0%	100%	
		SCG3517	0%	100%	0%	0%	100%	0%	0%	88%	12%	
		SCG3539	0%	0%	0%	0%	0%	0%	0%	0%	62%	38%
		SCG3547	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3550	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total			0%	100%	0%	0%	100%	0%	0%	43%	57%
	SDGE	SDGE3006	0%	68%	32%	0%	68%	32%	0%	0%	0%	0%
		SDGE3015	0%	99%	1%	0%	99%	1%	0%	0%	100%	0%
		SDGE3016	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%
		SDGE3017	0%	64%	36%	0%	93%	7%	0%	0%	44%	56%
		SDGE3023	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%
		SDGE3024	0%	83%	17%	0%	96%	4%	0%	0%	72%	28%
		SDGE3028	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%
		SDGE3035	0%	37%	63%	0%	100%	0%	0%	0%	100%	0%
		SDGE3046	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
SDGE3049	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%		
SDGE Total			0%	96%	4%	0%	94%	6%	0%	57%	43%	
Res Total			0%	96%	4%	0%	89%	11%	0%	68%	32%	
SCE_Ag_Ind	SCE	SCE2509	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2510	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE Total			0%	0%	100%	0%	0%	100%	0%	0%	
SCE_Ag_Ind Total			0%	0%	100%	0%	0%	100%	0%	0%	0%	
SmallCom	PGE	PGE2003	0%	4%	96%	0%	3%	97%	0%	0%	100%	
		PGE2016	0%	93%	7%	0%	91%	9%	0%	16%	84%	
		PGE2017	0%	89%	11%	0%	83%	17%	0%	0%	100%	
		PGE2021	0%	89%	11%	0%	94%	6%	0%	100%	0%	
		PGE2032	0%	0%	100%	0%	2%	98%	0%	0%	100%	
		PGE2054	0%	98%	2%	0%	97%	3%	0%	0%	0%	
		PGE2080	0%	99%	1%	0%	100%	0%	0%	0%	91%	9%
		PGE2047	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%

Effective Useful Life			kWh			kW			Therms			
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru	
		PGE2048	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2051	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		PGE2060	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2074	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2085	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		PGE2089	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	PGE Total			0%	92%	8%	0%	92%	8%	0%	88%	12%
	SCE	SCE2511	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%
		SCE2544	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2559	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2563	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SCE2564	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
	SCE Total			0%	89%	11%	0%	88%	12%	0%	0%	0%
	SCG	SCG3507	0%	0%	0%	0%	0%	0%	0%	0%	56%	44%
		SCG3526	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3538	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
		SCG3540	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
	SCG Total			0%	0%	0%	0%	0%	0%	0%	54%	46%
	SDGE	SDGE3012	0%	99%	1%	0%	99%	1%	0%	0%	95%	5%
		SDGE3020	0%	100%	0%	0%	100%	0%	0%	0%	89%	11%
		SDGE3030	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%
		SDGE3039	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%
		SDGE3042	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%
SDGE3050		0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	
SDGE3053		0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	
SDGE Total			0%	97%	3%	0%	97%	3%	0%	70%	30%	
SmallCom Total			0%	92%	8%	0%	92%	8%	0%	64%	36%	
SpecCom	PGE	PGE2068	0%	100%	0%	0%	100%	0%	0%	100%	0%	
		PGE2061	0%	0%	100%	0%	0%	100%	0%	0%	100%	
	PGE Total			0%	90%	10%	0%	88%	12%	0%	16%	84%

Effective Useful Life			kWh			kW			Therms			
Contract	IOU	PrgID	EMV	DEER	PassThru	EMV	DEER	PassThru	EMV	DEER	PassThru	
	SCE	SCE2504	0%	91%	9%	0%	71%	29%	0%	0%	0%	
		SCE2537	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2561	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2535	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2536	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2538	0%	0%	100%	0%	0%	100%	0%	0%	0%	
		SCE2565	0%	0%	100%	0%	0%	100%	0%	0%	0%	
	SCE Total			0%	15%	85%	0%	5%	95%	0%	0%	0%
	SCG	SCG3536	0%	0%	100%	0%	0%	100%	0%	0%	100%	
		SCG3544	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	SCG Total			0%	0%	100%	0%	0%	100%	0%	0%	100%
	SDGE	SDGE3029	0%	54%	46%	0%	69%	31%	0%	108%	-8%	
		SDGE3043	0%	51%	49%	0%	64%	36%	0%	-5%	105%	
		SDGE3034	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	SDGE Total			0%	52%	48%	0%	66%	34%	0%	0%	100%
SpecCom Total			0%	47%	53%	0%	42%	58%	0%	4%	96%	

1. MAJOR COMMERCIAL

This section provides an overview of the Evaluation Reporting Tool (ERT) input files submitted by the Major Commercial (MC) contract group and the basis for their updates.

ERT Input File Name

Major Commercial programs are included in the file "ERTInput_SBW_Multi_MC_Programs.txt."

Programs Included in ERT Input File

The input file provides evaluation summaries for the following nine programs.

- SCE2517
- SCE2560
- SCE2562
- SCG3503
- SCG3513
- SCG3546
- SDGE3010
- SDGE3025
- SDGE3054

Correction in the Final Report: Therm impacts were incorrectly applied to exterior lighting measures in programs SCE2517, resulting in an under-estimation of the therm impacts by 554 therms, representing 0.004% of the total SCE ex-post net therm impacts.
SDG&E

Procedures for ERT Updates

The following six programs or program elements were included in the Major Commercial EM&V activities. Updates to these programs were substantially derived from EM&V results.

- SCE2517 Standard Performance Contract (SPC)
- SCE2517 Nonres Audits
- SCG3503 (All)
- SCG3513 (All)
- SDGE3010 (All)
- SDGE3025 (All)

Some measures in the SCE2517 Express program element were evaluated as part of High Impact Measure (HIM) studies undertaken by other contract groups. These measures were updated based on the EM&V results from those studies. The measure groups are summarized in the following table.

Table 1: HIM Studies applied to Major Commercial Programs

Program Element	HIM	Contract Group
SCE2517 Express	Linear Fluorescent Lighting	Small Commercial
SCE2517 Express	High Bay Lighting	Small Commercial
SCE2517 Express	Downstream CFLs	Small Commercial
SCE2517 Express	Refrigeration Door Gaskets	Commercial Facilities
SCE2517 Express	Refrigeration Strip Curtains	Commercial Facilities

Certain measures in all programs were updated where appropriate with values from the Database for Energy Efficiency Resources (DEER). Measures which were updated were “deemed” measures – measures with prescriptive rebates and energy savings in the IOU programs. Deemed measures were updated where a match could be made between the Standard Program Tracking (SPT) measure information (derived from IOU program tracking data) and the DEER measure information. Custom measures did not receive updates from DEER.

The remaining sections in this report document decisions made about the following four types of updates modeled with the ERT.

- Irate: Installation Rate
- UES: Unit Energy Savings
- NTGR: Net-To-Gross Ratio.
- EUL: Effective Useful Life.

Four sources of update values were considered and applied as deemed appropriate. These sources are listed below in priority order. Update values were applied from the highest priority applicable source.

- EMV. Updates based on evaluation of a sample directly representative of the subject program or some portion of the program defined by program element or measure group.
- OthEMV. Updates based on the results of evaluation study of measures sampled from other 2006-08 programs that are determined to be similar to the subject program or some portion of the program defined by program element or measure group.

- DEER. Updates based on the similarity of a measure or program to the assumed characteristics of measures and program delivery methods as defined by DEER.
- PassThru. This indicates that the value associated with a record’s E3 Calculator line item has been used, i.e., the value is the value claimed by the IOU.

Differences with IOU E3 Claim

We expect that the ERT input file, when used with the ERT “NoUpdate” scenario, will produce results which exactly match the E3 claims filed by the IOUs. In one case, the MC NoUpdate scenario produces a discrepancy with the E3 claim of 1.6% - in the kW savings reported for the SDGE3025 program. This discrepancy was traced to differences in some measures in the kW savings entered by the IOU in the E3 claim vs. that entered in the IOU program tracking database. The following table shows the affected line items and the magnitude of the differences. This table just shows lines with differences; other program tracking lines exactly match the E3 kW/unit.

Table 2: SDGE3025 Differences between E3 Claim and Program Tracking Data

E3 Measure	E3 kW/unit	Number of Program Tracking Lines	Program Tracking kW/unit
232002-Lighting	0.000183	101	0.00018
232003-HVAC	0.000215	42	0.00021
232004-Other	0.0000833	179	0.00008

Unit Energy Savings (UES) Updates

Directly Evaluated Programs

Measures in the six programs or program elements directly evaluated by the MC contract group received EMV updates to the energy savings values (kW, kWh, and therms), with exceptions noted below. Measures were assigned to sample frames by program/program element and fuel type (electric or gas).² Measures were stratified within a frame according to ex-ante savings (kWh or therms). Based on EM&V site work, a strata-weighted realization rate (RR) was calculated (where possible) for each frame as the ratio of ex-post to ex-ante savings. The RR for a frame was extrapolated to measures within the frame that were not directly studied, and ex-post savings were calculated as, *ex-post_svs = ex-ante_svs × RR*.

The realization rate could not be used in cases where the ex-ante savings were zero. This occurred where savings were found in a fuel domain other than that of the sample frame, e.g., where gas savings were found in an electric frame. Ex-post savings were assigned in these cases using the UES method. A strata-weighted average measure

² For details, see the MC report, *Final_0608_Major_Evaluation_Report_021010*, available at <http://www.energydataweb.com/cpuc/home.aspx>

savings value was calculated based on EM&V results. This average becomes the UES for every measure in the frame (with the unit being the measure).

Measures in the strata with lowest ex-ante savings were excluded from the sample frame and did not receive updated energy values.

Interactive Effects

Study EM&V results were modified for interior lighting measures using heat-cool interactive factors (HCIFs). Based on HCIFs, new strata-weighted values were calculated for RR, *UESkW*, *UESkWh*, and *UESTherms*. The RR method could not be used to extrapolate savings, since the changes due to interactive effects only impact interior lighting measures. A modified UES method was used to calculate savings with interactive effects as follows.

Total domain savings were calculated as $\sum UES \times Quantity$ for kWh, kW, and therms, where *UES* is the newly-calculated value including interactive effects. Savings assigned to non-interior-lighting measures were left unchanged. The difference between the total savings and the savings assigned to non-lighting measures was then assigned to the interior lighting measures. Savings were distributed to the interior lighting measures according to the measure’s ex-post (non-interactive) share of the total ex-post interior lighting kWh savings. This method of apportioning savings, based on the measure’s kWh share of total interior lighting kWh savings, was applied to interactive kW, kWh, and therms savings. New *UES_i* values were then calculated. For non-interior-lighting measures, the *UES_i* value was unchanged from the *UES* value. For interior lighting measures, the *UES_i* value was the result of the distribution described above divided by *EDFilledExAnteQuantity* for the measure.

Sample sizes and relative precisions for directly studied program RR results are shown in the table below.

Table 3: Directly Evaluated Programs Gross Impact Realization Rate Relative Precisions

Program	Population	Sample	Gross Savings			90%		
			kW	kWh	Therms	Realization Rate	Relative Precision	
			kW	kWh	Therms	kW	kWh	Therms
SCE2517 SPC	1,397	18	0.82	0.80	N/A	0.10	0.15	N/A
SCG3513	700	19	N/A	N/A	0.72	N/A	N/A	0.74
SDGE3010 kWh	719	9	0.66	0.67	N/A	0.34	0.34	N/A
SDGE3010 Therm	14	7	N/A	N/A	0.98	N/A	N/A	0.11
SDGE3025 kWh	343	8	1.28	1.54	N/A	0.33	0.60	N/A
SDGE3025 Therm	24	6	N/A	N/A	0.33	N/A	N/A	0.59
SCE2517 NRA	10,415	58	0.27	0.27	N/A	0.53	0.55	N/A
SCG3503	34	12	N/A	N/A	0.02	N/A	N/A	0.36

Sample sizes and relative precisions for directly studied program UES results are shown in the table below.

Table 4: Directly Evaluated Programs Gross Impact UES Relative Precisions

Program	Population	Sample	Gross Ex Post			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
SCE2517 SPC	1,397	18	41.0	274,897	30	0.10	0.15	0.91
SCG3513	700	19	0.0	0	14,467	N/A	N/A	0.74
SDGE3010 kWh	719	9	17.0	112,395	0	0.34	0.34	N/A
SDGE3010 Therm	14	7	0.0	0	98,072	N/A	N/A	0.11
SDGE3025 kWh	343	8	21.0	167,423	71	0.33	0.60	1.34
SDGE3025 Therm	24	6	0.0	-217	7,679	1.29	1.29	0.59
SCE2517 NRA	10,415	58	0.6	3,070		0.53	0.55	N/A
SCG3503	34	12			4,365	N/A	N/A	0.36

Application of HIM Studies to MC Programs

For the Express element of SCE2517, 8594 of 16,220 measures were updated with UES results from HIM studies carried out by other contract groups. As part of the Small Commercial contract group, Itron evaluated three lighting HIMs – Interior Screw Lighting, linear fluorescents, and high bay lighting – statewide³. In addition, ADM evaluated the savings impacts of refrigeration door gaskets statewide⁴.

In the lighting studies, Itron found the average operating hours by market segment and developed pre- and post-wattages for each lighting measure. In some cases, pre-existing lighting wattage was found by measurement, and in other cases this information was based on other data. In some cases the sample sizes were sufficient that the evaluation found operating hours at the program level and in other cases the hours were found within all IOU programs evaluated (The Small Commercial study evaluated two SCE programs – SCE2511 and SCE2517). These findings led to the calculation of ex-post per unit kW and kWh savings. These UES values were applied by measure name, market segment, and IOU Program,. Verification rates were developed by IOU and HIM. Sample sizes and precisions attained in this study are shown in the following table. The sample sizes in the table below are based on the number of sites with lighting loggers installed. The HIM population was not provided in the Small Commercial report.

³ See the SC report, *Small Commercial Contract Group Direct Impact Evaluation Report*, available at <http://www.energydataweb.com/cpuc/home.aspx>

⁴ See the CF report, *Commercial Facilities Contract Group Direct Impact Final Evaluation Report*, at <http://www.energydataweb.com/cpuc/home.aspx>

Table 5: Small Commercial Gross Impact Parameter Relative Precision

HIM	Population	Sample	90% Relative Precision		
			UESkW	UESkWh	UESTherms
SCE Linear Fluorescents	N/A	464	0.10	0.11	N/A
SCE Interior Screw Lighting	N/A	104	0.09	0.09	N/A
SCE High Bay Lighting	N/A	13	0.41	0.36	N/A

As part of the Commercial Facilities contract group, the door gasket refrigeration HIM was evaluated by ADM Associates. The evaluation drew on statewide results of baseline gasket conditions, the mix of refrigerated case type by store type, and mix of store types by IOU territory. ADM found a realization rate for SCE that differs from that of the other IOUs due to differing baseline assumptions by SCE. Other aspects of the study apply statewide. Sample size and population size are difficult to determine from the report since the study was segmented into multiple phases. The result reported for SCE2517 is based on the mix of coolers/freezers and store types in this program, together with findings regarding the savings of the different units and store types found elsewhere. ADM found a relative precision of 154% in an estimate which combined sampling error with measurement error. The variance found in the efficacy of baseline gaskets dominated the estimate of relative precision. Please see the Commercial Facility section of the appendix for more detail on their evaluation.

Table 6: Commercial Facilities Door Gasket Study Relative Precision

Program	Population	Sample	Gross		Savings		90%		
			Realization	Rate	kW	kWh	Therms	kW	kWh
SCE	N/A	N/A	0.129	0.129	N/A	154%	154%	N/A	

Distribution of UESType within Program Elements

The table below shows the SPT records associated with each combination of program, program element, EMV study, and source of UES updates. For each of these groups of records the table shows the percent of kW, kWh and Therms ex-ante savings. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 7: UES Updates

EDPrgID	ProgramElement	EMV_Study	UESType	RecordCount	PctkW	PctkWh	PctTherms
SCE2517	Express	ADM Refrigeration Door gasket	EMV	1,520	-	1%	-
SCE2517	Express	ADM Refrigeration Door gasket	PassThru	244	-	-	-

EDPrgID	ProgramElement	EMV_Study	UESType	RecordCount	PctkW	PctkWh	PctTherms
SCE2517	Express	ADM Refrigeration strip curtain	PassThru	340	-	1%	-
SCE2517	Express	ltron_SC_Lighting	EMV	7,074	30%	22%	-
SCE2517	Express	SBW_MC	PassThru	7,022	16%	12%	-
SCE2517	Nonres Audits	SBW_MC	EMV	12,439	14%	14%	-
SCE2517	Nonres Audits	SBW_MC	PassThru	3,003	2%	2%	-
SCE2517	SPC	SBW_MC	EMV	1,397	36%	47%	-
SCE2517	SPC	SBW_MC	PassThru	1,751	2%	2%	-
SCE2560			PassThru	29	100%	100%	-
SCE2562			PassThru	36	100%	100%	-
SCG3503		SBW_MC	EMV	23	-	-	94%
SCG3503		SBW_MC	PassThru	11	-	-	6%
SCG3513			PassThru	9	-	-	-
SCG3513		SBW_MC	EMV	700	-	-	99%
SCG3513		SBW_MC	PassThru	409	-	-	1%
SCG3546			PassThru	44	-	100%	100%
SDGE3010		SBW_MC	EMV	817	100%	99%	100%
SDGE3010		SBW_MC	PassThru	688	-	1%	-
SDGE3025		SBW_MC	EMV	414	100%	100%	95%
SDGE3025		SBW_MC	PassThru	42	-	-	5%
SDGE3054			PassThru	7	100%	100%	100%

Explanation of UESType Assignments

The following table provides details relating to each UESType assignment, and the source of the update data.

Table 8: UES Update Decisions

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
SCE2517	Express	ADM Refrigeration Door gasket	EMV	Update values provided by ADM Refrigeration Door gasket study.
SCE2517	Express	ADM Refrigeration Door gasket	PassThru	These records have a building type that was not represented by the ADM Refrigeration Door Gasket study and thus no update was applied.
SCE2517	Express	ADM Refrigeration strip curtain	PassThru	These records were not updated as the HIM contractor (ADM) did not feel the records were sufficiently comparable to those sampled for that HIM study.

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
SCE2517	Express	Itron_SC_Lighting	EMV	Updates for High Bay Fluorescent, Linear Fluorescent, and Interior Screw Lighting are from the Itron Small Commercial study.
SCE2517	Express	SBW_MC	PassThru	Records did not fall within a studied HIM. For exit signs, DEER update considered but not applied because DEER08 assumes customer-average basecase (mix of CFL/incandescent), and SCE has 3 measures – one with CFL basecase, one with incand, one unspec'd. (The unspec'd assumes incand basecase to calc savings.) We don't know for these records whether on average they matched the DEER mix of CFL/incandescent.
SCE2517	Nonres Audits	SBW_MC	EMV	Update values provided by SBW Major Commercial study. This includes a special group of Nonres Audits whose UES was set = 0 based on the fact that these audits did not result in any recommendations to SCE customers.
SCE2517	Nonres Audits	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCE2517	SPC	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCE2517	SPC	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCE2560			PassThru	The Linear Fluorescent and Rooftop/Split System records had building type of program-average so no DEER update was made. The remaining records did not fall within a studied HIM.
SCE2562			PassThru	Program was limited to college residence halls. The measure did not fall within the scope covered by any HIM study.
SCG3503		SBW_MC	EMV	Update values provided by SBW Major Commercial study.

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
SCG3503		SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCG3513			PassThru	At the time that the Major Commercial sample was drawn, SCG indicated that these 9 records were not in the claim. However, SCG included them in the claim in order to match SPT to their filed E3s. As they were not part of the sample no update was applied.
SCG3513		SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCG3513		SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCG3546			PassThru	Records did not fall within a studied HIM.
SDGE3010		SBW_MC	EMV	Update values provided by SBW Major Commercial study. This includes a special group of measures described by SDGE as "M&V Incremental," which were adjustments to the savings of other measures. UES was set = 0 for these as their impact was accounted for by the Major Commercial sample.
SDGE3010		SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SDGE3025		SBW_MC	EMV	Update values provided by SBW Major Commercial study. This includes a special group of measures described by SDGE as "Interactive," which were adjustments to the savings of other measures. UES was set = 0 for these as their impact was accounted for by the Major Commercial sample.
SDGE3025		SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
SDGE3054			PassThru	2 records are in the RCx HIM. However, they get no update, because they were discovered after the RCx sample was finalized and thus are not represented by the sample. The remaining records did not fall within a studied HIM.

Installation Rate Updates (IRate)

Directly Evaluated Programs

The six programs or program elements directly evaluated in the MC study were custom programs. In all cases, the installation rate was set to one. Any variations in fact from this setting were accounted for in the UES results. Irate values are entered in the ERT input file as type “EMV.”

Application of HIM Studies to MC Programs

The Small Commercial lighting studies found installation rates for each HIM for SCE2517 Express. These values are entered in the ERT input file as type “EMV.” The values provided are specific to SCE2517.

The Irate values were set to one in the Commercial Facilities HIM records, and marked as records of type “EMV.”

Distribution of IrateType within Program Elements

The table below shows the SPT (Standard Program Tracking) records associated with each combination of program, program element, EMV study, and source of Installation Rate update for the nine programs modeled by the Major Commercial contract group. In addition, for each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 9: Irate Updates

EDPrgID	ProgramElement	EMV_Study	IRateType	RecordCount	PctkW	PctkWh	PctTherms
SCE2517	Express	ADM Refrigeration Door gasket	EMV	1,520	-	1%	-
SCE2517	Express	ADM Refrigeration Door gasket	PassThru	244	-	-	-
SCE2517	Express	ADM Refrigeration strip curtain	PassThru	340	-	1%	-
SCE2517	Express	Itron_SC_Lighting	EMV	7,074	30%	22%	-
SCE2517	Express	SBW_MC	PassThru	7,022	16%	12%	-
SCE2517	Nonres Audits	SBW_MC	EMV	12,439	14%	14%	-
SCE2517	Nonres Audits	SBW_MC	PassThru	3,003	2%	2%	-
SCE2517	SPC	SBW_MC	EMV	1,397	36%	47%	-
SCE2517	SPC	SBW_MC	PassThru	1,751	2%	2%	-

EDPrgID	ProgramElement	EMV_Study	IRateType	RecordCount	PctkW	PctkWh	PctTherms
SCE2560			PassThru	29	100%	100%	-
SCE2562			PassThru	36	100%	100%	-
SCG3503		SBW_MC	EMV	23	-	-	94%
SCG3503		SBW_MC	PassThru	11	-	-	6%
SCG3513			PassThru	9	-	-	-
SCG3513		SBW_MC	EMV	700	-	-	99%
SCG3513		SBW_MC	PassThru	409	-	-	1%
SCG3546			PassThru	44	-	100%	100%
SDGE3010		SBW_MC	EMV	817	100%	99%	100%
SDGE3010		SBW_MC	PassThru	688	-	1%	-
SDGE3025		SBW_MC	EMV	414	100%	100%	95%
SDGE3025		SBW_MC	PassThru	42	-	-	5%
SDGE3054			PassThru	7	100%	100%	100%

Net-To-Gross Ratio (NTGR) Updates

Directly Evaluated Programs

Directly evaluated MC programs were evaluated for net savings. The net savings sample was a superset of the gross savings sample. The following table shows sample sizes and relative precisions for NTGR findings.

Table 10: Directly Studied Programs Net Impact Relative Precision

Program	Population	Sample	Net to Gross Ratios			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
SCE2517 SPC	1,397	47	0.57	0.59	N/A	0.14	0.13	N/A
SCG3513	700	33	N/A	N/A	0.54	N/A	N/A	0.16
SDGE3010 kWh	719	33	0.68	0.70	N/A	0.13	0.12	N/A
SDGE3010 Therm	14	8	N/A	N/A	0.85	N/A	N/A	0.02
SDGE3025 kWh	343	27	0.56	0.54	N/A	0.13	0.13	N/A
SDGE3025 Therm	24	10	N/A	N/A	0.43	N/A	N/A	0.19
SCE2517 NRA	10,415	31	0.42	0.40	N/A	0.26	0.24	N/A

Application of HIM Studies to MC Programs

Lighting HIMs included in the Small Commercial evaluation were evaluated for net savings. Results were reported at the IOU and program level. Records included in the ERT input file are at the program level. The reported relative precisions at the program

element level are reported below. The report did not note the sample sizes for these results.

Table 11: Small Commercial HIM Studies Net Impact Relative Precision

Program Element	Population	Sample	HIM	Net to Gross Ratios			90% Relative Precision		
				kW	kWh	Therms	kW	kWh	Therms
SCE2517 Express	N/A	N/A	Interior Screw Lighting	0.52	0.48	N/A	16.8%	16.8%	N/A
SCE2517 Express	N/A	N/A	Linear Fluorescents	0.72	0.72	N/A	6.4%	6.4%	N/A
SCE2517 Express	N/A	N/A	High Bay Lighting	0.70	0.68	N/A	12.2%	12.2%	N/A

Refrigeration HIMs included in the Commercial Facilities evaluation were evaluated for net savings. Results were reported at the statewide level. The report did not note relative precision or sample sizes for these results, however, these values were reported, along with updated NTGRs, in the Commercial Facilities document describing HIM ERT input records.

Table 12: Commercial Facilities HIM Studies Net Impact Relative Precision

Program	Population	Sample	HIM	Net to Gross Ratios			90% Relative Precision		
				kW	kWh	Therms	kW	kWh	Therms
Statewide	N/A	71	Refrigeration Door Gaskets	0.21	0.21	N/A	24%	24%	N/A
Statewide	N/A	98	Refrigeration Strip Curtains	0.41	0.41	N/A	10%	10%	N/A

Application of DEER Values to MC Programs

DEER provides NTGR values for certain measures⁵. For deemed measures in all programs, where the measure did not receive an EMV update, an attempt was made to map a DEER NTGR to the measure. A mapping required a match on Measure, Sector, Target Market, and Program Delivery Method. Matches on all elements were found only in the SCE2517 Express program element.

Distribution of NTGRType within Program Elements

The table below shows the SPT records associated with each combination of program, program element, EMV study, and source of NTGR updates. For each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

⁵ Updated DEER NTG Values for 2006-07 final 2008-10-10.xls

Table 13: NTGR Updates

EDPrgID	ProgramElement	EMV_Study	NTGRType	RecordCount	PctkW	PctkWh	PctTherms
SCE2517	Express		DEER	4,105	10%	6%	-
SCE2517	Express	ADM Refrigeration Door gasket	OthEMV	1,764	-	1%	-
SCE2517	Express	ADM Refrigeration strip curtain	OthEMV	340	-	1%	-
SCE2517	Express	Itron_SC_Lighting	EMV	7,074	30%	22%	-
SCE2517	Express	SBW_MC	PassThru	2,917	7%	6%	-
SCE2517	Nonres Audits	SBW_MC	EMV	10,415	11%	12%	-
SCE2517	Nonres Audits	SBW_MC	PassThru	5,027	4%	4%	-
SCE2517	SPC	SBW_MC	EMV	1,397	36%	47%	-
SCE2517	SPC	SBW_MC	PassThru	1,751	2%	2%	-
SCE2560			PassThru	29	100%	100%	-
SCE2562			PassThru	36	100%	100%	-
SCG3503		SBW_MC	EMV	23	-	-	94%
SCG3503		SBW_MC	PassThru	11	-	-	6%
SCG3513			PassThru	9	-	-	-
SCG3513		SBW_MC	EMV	700	-	-	99%
SCG3513		SBW_MC	PassThru	409	-	-	1%
SCG3546			PassThru	44	-	100%	100%
SDGE3010		SBW_MC	EMV	733	98%	99%	82%
SDGE3010		SBW_MC	PassThru	772	2%	1%	18%
SDGE3025		SBW_MC	EMV	367	99%	98%	95%
SDGE3025		SBW_MC	PassThru	89	1%	2%	5%
SDGE3054			PassThru	7	100%	100%	100%

Explanation of NTGRType Assignments

The following table explains the assignment of NTGR updates to measures.

Table 14: NTGR Update Decisions

EDPrgID	ProgramElement	EMV_Study	NTGRType	Update Decision
SCE2517	Express		DEER	Measures belonging to the following HIMs were successfully mapped to DEER NTGR values: CFL Fixture, Exit sign, HID, High bay fluorescent, Induction lighting, Interior screw lighting, Lighting - other, Occupancy sensor, Outdoor CFL Fixture, Outdoor HID, Outdoor lighting - other, PTAC/PTHP, VFD - HVAC Fan. Some of these measures are in the same HIM covered by the Itron Small Commercial Lighting study. However, these records were not included in the Itron sample frame and thus did not receive the EMV update values from that study.
SCE2517	Express	ADM Refrigeration Door gasket	OthEMV	These measures and the SCE2517 Express program element were deemed sufficiently similar to the ADM statewide Refrigeration Door Gasket study to allow the application of the update values from that study.
SCE2517	Express	ADM Refrigeration strip curtain	OthEMV	These measures and the SCE2517 Express program element were deemed sufficiently similar to the ADM statewide Refrigeration Strip Curtain study to allow the application of the update values from that study.
SCE2517	Express	Itron_SC_Lighting	EMV	Updates for High Bay Fluorescent, Linear Fluorescent and Interior Screw Lighting are from the Itron Small Commercial study.
SCE2517	Express	SBW_MC	PassThru	No match for DEER technology and delivery mechanism thus no update.
SCE2517	Nonres Audits	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCE2517	Nonres Audits	SBW_MC	PassThru	Some of these measures are the Nonres Audits for which SCE did not provide audit recommendations. The other measures were excluded from the SBW Major Commercial sample frame due to their small savings. No update was applied for either group as they were not represented by the Major Commercial sample.
SCE2517	SPC	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCE2517	SPC	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCE2560			PassThru	No match for DEER technology and delivery mechanism thus no update.
SCE2562			PassThru	No match for DEER technology and delivery mechanism thus no update.

SCG3503	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCG3503	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCG3513		PassThru	No match for DEER technology and delivery mechanism thus no update.
SCG3513	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SCG3513	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SCG3546		PassThru	No match for DEER technology and delivery mechanism thus no update.
SDGE3010	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SDGE3010	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SDGE3025	SBW_MC	EMV	Update values provided by SBW Major Commercial study.
SDGE3025	SBW_MC	PassThru	This group of measures was excluded from the SBW Major Commercial sample frame due to their small savings, thus no update value was applied.
SDGE3054		PassThru	No match for DEER technology and delivery mechanism thus no update.

Effective Useful Life (EUL) Updates

No evaluation studies of EULs were applied to MC records. DEER provides EULs for certain measures⁶. For deemed measures in all programs, an attempt was made to map measures to DEER EULs. A mapping required a match on measure description and, in the case of lighting measures, a match on building type. Mappings were possible for SCE2517 Express and SCE2562.

Distribution of EULType within Program Elements

The table below shows the SPT records associated with each combination of program, program element, EMV study and source of EUL updates. For each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the

⁶ DEER2008 Database Definition - EUL v2.xls

IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 15: EUL Updates

EDPrgID	ProgramElement	EMV_Study	EULType	RecordCount	PctkW	PctkWh	PctTherms
SCE2517	Express		DEER	16,012	47%	35%	-
SCE2517	Express		PassThru	33	-	-	-
SCE2517	Express	SBW_MC	PassThru	155	-	1%	-
SCE2517	Nonres Audits	SBW_MC	PassThru	15,442	16%	16%	-
SCE2517	SPC	SBW_MC	PassThru	3,148	38%	49%	-
SCE2560			PassThru	29	100%	100%	-
SCE2562			DEER	36	100%	100%	-
SCG3503		SBW_MC	PassThru	34	-	-	100%
SCG3513			PassThru	9	-	-	-
SCG3513		SBW_MC	PassThru	1,109	-	-	100%
SCG3546			PassThru	44	-	100%	100%
SDGE3010		SBW_MC	PassThru	1,505	100%	100%	100%
SDGE3025		SBW_MC	PassThru	456	100%	100%	100%
SDGE3054			PassThru	7	100%	100%	100%

2. SMALL COMMERCIAL

Contract Group:	Small Commercial
Analyst Submitting ERT input File:	Christine Hungeling
ERT Input File Name:	ERTInput_SmCom_PGE2003 ERTInput_SmCom_PGE2016 ERTInput_SmCom_PGE2017 ERTInput_SmCom_PGE2021 ERTInput_SmCom_PGE2032 ERTInput_SmCom_PGE2054 ERTInput_SmCom_PGE2080 ERTInput_SmCom_SCE2511 ERTInput_SmCom_SCG3507 ERTInput_SmCom_SDGE3012 ERTInput_SmCom_SDGE3020
Programs included in ERT input File:	PGE2003 PGE2016 PGE2017 PGE2021 PGE2032 PGE2054 PGE2080 SCE2511 SCG3507 SDGE3012 SDGE3020

Corrections for FINAL Results:

The interactive effects which were incorrectly applied to Upstream Exterior Lighting were removed from PGE2080. Removing the interactive effects decreased electric savings by about 50,000 kwh and 30kW which increasing therm savings by about 5,700 therms.

Program Summary

The Small Commercial contract group was responsible for ERT updates for eleven programs. These programs are listed in the following table along with the total ex ante savings claimed by IOU. In addition, shown in the table is the number of SPT (Standardized Program Tracking) records that were processed thru the ERT.

Table 1: Summary of Programs Processed thru the ERT

EDPrgID	ProgramName	RecordCount	kWh	kW	Therms
PGE2003	RetailStores(IOU)	418	41,978,890	7,659	(72,092)
PGE2016	LGPAMBAG	27,884	35,631,734	6,940	61,949
PGE2017	LGPBAKERSFIELD	8,889	18,448,463	4,043	92,196
PGE2021	LGPFRESNO	9,644	19,498,123	3,342	1,109
PGE2032	SonomaCountyEnergyWatch(SCEW)	160	7,738,257	1,102	52,833
PGE2054	3PENENERGYFITNESS-RHA	7,062	39,966,200	7,375	-
PGE2080	COREMASSMARKETNRES	149,137	1,876,349,798	383,441	13,337,834
SCE2511	NonresidentialDirectInstallation	190,477	287,484,203	51,395	-
SCG3507	ExpressEfficiencyRebateProgram	6,927	-	-	36,769,706
SDGE3012	ExpressEfficiencyRebateProgram	1,993	88,012,180	16,167	752,576
SDGE3020	SmallBusinessSuperSaver	29,639	224,726,951	43,097	796,385

The following sections document the decisions made about five types of updates

- IRate. Installation Rate
- UES. Unit Energy Savings
- NTGR. Net-To-Gross Ratio.
- EUL. Effective Useful Life.
- Interactive Effects

Each parameter has been updated based on its direct HIM evaluation result, indirect HIM evaluation result, the DEER 2008 database, or its ex ante claimed value.

The updates applied to each of these programs come from several of the EM&V HIM studies including Lighting, Door Gasket/Strip Curtains, Pipe Insulation, Steam traps, RCA/AC Replacement, Retro-commissioning and Heat Curtains/Infrared Film. In the sections below you will see a summary of the records with each type of update (EMV, DEER, or PassThru) and the source of the updates from the EM&V results.

IRate

Below is a summary of how the records were updated for install rate by program.

Table 2: Summary of IRateType by Program

EDPrgID	Count of EMV Records	% EMV kWh Savings	% EMV kW Savings	% EMV Therm Savings	Count of PassThru Records	% PassThru kWh Savings	% PassThru kW Savings	% PassThru Therm Savings
PGE2003	-	-	-	-	418	100%	100%	100%
PGE2016	15,824	74%	47%	-	12,060	26%	53%	100%
PGE2017	6,120	76%	69%	-	2,769	24%	31%	100%
PGE2021	6,261	76%	82%	-	3,383	24%	18%	100%
PGE2032	4	7%	-	54%	156	93%	100%	46%
PGE2054	6,332	94%	94%	-	730	6%	6%	-
PGE2080	104,786	84%	84%	72%	44,351	16%	16%	28%
SCE2511	178,445	94%	97%	-	12,032	6%	3%	-
SCG3507	2,741	-	-	43%	4,186	-	-	57%
SDGE3012	774	53%	55%	2%	1,219	47%	45%	98%
SDGE3020	24,113	83%	91%	69%	5,526	17%	9%	31%

Linears, Downstream CFLs, and High Bays (all programs except SCG3507)

The downstream lighting install rates from each of these programs came from the following tables in the Small Commercial evaluation report:

Table 3: Installed and Operable Verification Rates and Percent of Rebated Measures Received by IOU and Program for Linear Fluorescent and High Bay Lighting (Table 4-1)

HIM	IOU	Program	Installed and Operable	% Received
HIGH BAY	PG&E	PGE2080	92%	93%
HIGH BAY	SCE	SCE2517	93%	95%
HIGH BAY	SDG&E	SDGE3012	104%	104%
HIGH BAY	SDG&E	SDGE3020	97%	98%
LINEAR	PG&E	PGE2016	92%	92%
LINEAR	PG&E	PGE2017	97%	97%
LINEAR	PG&E	PGE2021	95%	97%
LINEAR	PG&E	PGE2054	98%	98%
LINEAR	PG&E	PGE2080	88%	91%
LINEAR	SCE	SCE2511	93%	93%
LINEAR	SCE	SCE2517	97%	98%
LINEAR	SDG&E	SDGE3012	78%	78%
LINEAR	SDG&E	SDGE3020	91%	92%

Table 4: Installed and Operable Verification Rates, Storage Rates, and Percent of Rebated Measures Received by IOU and Program for Downstream CFLs (Table 4-2)

IOU	Program	Installed and Operable	Storage Rates	% Received
PG&E	PGE2016	91%	5%	97%
PG&E	PGE2017	85%	2%	93%
PG&E	PGE2021	98%	2%	100%
PG&E	PGE2054	83%	2%	87%
PG&E	PGE2060	93%	7%	100%
PG&E	PGE2080	74%	11%	86%
SCE	SCE2511	67%	3%	76%
SCE	SCE2517	60%	6%	66%
SDG&E	SDGE3012	99%	-	99%
SDG&E	SDGE3020	67%	35%	94%

Relative precisions can be found in Tables 3-23 through 3-25 in the Small Commercial evaluation report.

Table 5: Linear Fluorescents – Verification and Received Rates with 90% Confidence Intervals by IOU (Table 3-23)

	Verification Rate		Received Rate	
	Rate	Relative Precision	Rate	Relative Precision
PG&E	92%	2.7%	88%	2.3%
SCE	95%	4.2%	68%	6.3%
SDG&E	89%	8.-	96%	2.-

Table 6: High Bay Lighting – Verification and Received Rates with 90% Confidence Intervals by IOU (Table 3-24)

	Verification Rate		Received Rate	
	Rate	Relative Precision	Rate	Relative Precision
PG&E	92%	5.2%	93%	5.1%
SCE	93%	5.8%	95%	5.7%
SDG&E	100%	1.8%	100%	1.7%

Table 7: Downstream CFL – Verification, Received, and Storage Rates with 90% Confidence Intervals by IOU (Table 3-25)

	Verification Rate		Received Rate		Storage Rate	
	Rate	Relative Precision	Rate	Relative Precision	Rate	Relative Precision
PG&E	77%	3.3%	88%	2.3%	12%	19.3%
SCE	61%	6.6%	68%	6.3%	8%	10.7%
SDG&E	83%	8.7%	96%	2.-	15%	65.8%

Upstream CFLs, LEDs and Fixtures (PGE2080 only)

The install rate for upstream CFLs is a combination of the final adjustment rate from Table 12 in the Upstream Lighting report and the install rate from Table 26. The install rate for Upstream LEDs is a combination of the final adjustment rate from Table 12 and the install rate from Table 34. The install rate for Upstream Fixtures is a combination of the final adjustment rate from Table 12 and the install rate from Table 30. The relative precision for each factor contributing to the Final Adjustments for all upstream lighting are found in tables 50, 52, and 53. The relative precision for the installation rates of CFLs can be found in Table 3-26 of the Small Commercial Evaluation Report.

Table 8: Final Adjustments to Quantity of Measures Rebated (Table 12)

Adjustment	PG&E	SCE	SDG&E
Invoice/Application Verification	96%	99%	96%
2008 Shipments Sold in 2008	88%	87%	87%
Leakage	99%	96%	93%
Final Adjustment	86%	90%	85%
Percent Residential	94%	94%	95%

Table 9: Invoice Verification Results with Confidence Intervals (Table 50)

IOU	Rate	90% CI +/-	90% CI +/- %
PG&E	96.1%	4.-	4.2%
SCE	98.8%	1.1%	1.1%
SDG&E	95.5%	3.-	3.1%
All IOUs	96.8%	2.4%	2.4%

Table 10: Leakage Adjustment Factors with Confidence Intervals (Table 52)

IOU	Leakage Adjustment	90% CI +/-	90% CI +/- %
PG&E	99.5%	0.4%	0.4%
SCE	95.9%	3.2%	3.4%
SDG&E	92.6%	10.6%	11.4%

Table 11: Percent of 2008 Shipments Sold by End of 2008 per Retail Store Managers with Confidence Intervals (Table 53)

Channel	Percent Sold	90% CI +/-	90% CI +/- %
Discount	82.8%	10.2%	12.3%
Drug	96.-	7.5%	7.8%
Grocery	80.6%	4.9%	6.1%
Hardware	70.3%	7.3%	10.4%
Home Improvement	84.6%	10.4%	12.3%
Mass Merchandiser	77.4%	6.9%	9.-
Membership Club	84.1%	15.8%	18.8%
All Channels	80.9%	3.9%	4.8%

Table 12: Ex Ante vs. Ex Post Savings Parameters – Upstream Screw-In CFLs (Table 26)

	PG&E		SCE		SDG&E	
	Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE INSTALLATION RATES						
All CFLs	92%	76%	92%	90%	n/a	90%
EX-POST INSTALLATION RATES						
All CFLs	73%	67%	81%	77%	76%	67%

Table 13: Upstream CFL – Installation and Storage Rates with 90% Confidence Intervals by IOU (Table 3-26)

	Verification Rate		Storage Rate	
	Rate	Relative Precision	Rate	Relative Precision
PG&E	73%	4.9%	19%	19%
SCE	81%	1.6%	9%	44%
SDG&E	76%	1.9%	14%	26%
Total	76%	2.3%	15%	16%

Table 14: Ex Ante vs. Ex Post Savings Parameters – Upstream LEDs (Table 34)

	PG&E		SCE		SDG&E	
	Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE INSTALL RATES						
All LEDs	100%	100%	100%	100%	100%	100%
EX-POST INSTALLATION RATES						
All LEDs	100%	100%	100%	100%	100%	100%

Table 15: Ex Ante vs. Ex Post Savings Parameters – Upstream Fixtures (Table 30)

	PG&E		SCE		SDG&E	
	Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE INSTALL RATES						
All Fixtures	100%	100%	100%	100%	100%	100%
EX-POST INSTALLATION RATES						
All Fixtures	100%	100%	100%	100%	100%	100%

Strip Curtains and Door Gaskets (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

Pipe Insulation (PGE2080, SCG3507)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

Steam Traps (PGE2080, SDGE3012, SDGE3020, SCG3507)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

RCA and AC Replacement (PGE2080)

Installation rates were developed separately from UES for RCA measures in the estimated gross realization rates. Installation rates (EDIRate) were set to 1.0 for AC replacement and the installation rate type (IRateType) was set to "EMV" for all HIM

measures. Measures not updated had IRate set to 1.0 and type set to “PassThru” for those records.

Table 16: C&I RCA M&V Achieved Precision (p.56 Table 5-22)

Final Commercial RCA Inputs		Relative Precision		
Charge Change Category	Sample Size (n)	Cap Frac	Sens Cap Frac	EIR Frac (comp and cond fan)
Charge Increase	19.000	2%	4%	2%
Charge Decrease	4.000	2%	2%	3%

Table 17: PGE2080 Verification Screening Results (p.85 Table 5-56)

	Superheat / Subcooling Target Screen	EER Target Screen	Final Screen Result
Pass	4	1	45.5%
Fail	7	6	54.5%
Total	11	7	100.0%

Table 18: Commercial Metering Sample Plan and Achieved Sample PGE2080 (p.116 Table 6-19)

Stratum	1	2	3	4	5	6	Total
Climate Zone	NP - CZ13	CZ13	CZ12	CZ2	CZ3	Other	Total
Population - Program Tracking: Number of units in each stratum	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	20373
Metering Sampling Target by number of units	110	60	30	10	10	0	220
Metered Sites	16	11	4	2	4	0	37
Metered Units	47	32	11	7	9	0	106
Good Data	18	18	6	4	5	0	51

Table 19: AC Replacement Energy Savings Summary (Table 6-45 p.154) and Commercial RCA ex-post Gross Annual Energy Savings (Table 5-63, p.89)

Program	NTG	Install Rate
PGE2080 AC Replacement	0.94	100%
PGE2080 C&I RCA	0.55	45%

Infrared Film and Heat Curtains (PGE2080, SDGE3012, SDGE3020, SCG3507)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

Retrocommissioning (PGE2032)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

Non-Residential New Construction (PGE2003)

Install rate is included in gross realization rate. Therefore, the Install Rate is set to 1.0.

Non HIM (all programs)

The install rates for all non evaluated measures were passed thru as Irate=1.

UES

Below is a summary of how the records were updated for Unit Energy Savings.

Table 20: Summary of UESType by Program

EDPrgID	Count of EMV records	% EMV kWh savings	% EMV kW savings	% EMV Therm savings	Count of			% Other		Count of Pass thru records	% Pass thru kWh savings	% Pass thru kW savings	% Pass thru Therm savings
					Other EMV records	% Other EMV kWh savings	% Other EMV kW savings	EMV Therm savings					
PGE2003	92	36%	56%	140%	-	-	-	-	-	326	64%	44%	-40%
PGE2016	15,824	74%	47%	-	-	-	-	-	-	12,060	26%	53%	100%
PGE2017	6,120	76%	69%	-	-	-	-	-	-	2,769	24%	31%	100%
PGE2021	6,261	76%	82%	-	12	1%	-	-	-	3,371	24%	18%	100%
PGE2032	4	7%	-	54%	-	-	-	-	-	156	93%	100%	46%
PGE2054	6,332	94%	94%	-	-	-	-	-	-	730	6%	6%	-
PGE2080	105,072	84%	84%	87%	3,766	5%	3%	-	-	40,299	11%	14%	13%
SCE2511	178,504	94%	97%	-	3,066	3%	1%	-	-	8,907	3%	2%	-
SCG3507	6,205	-	-	95%	-	-	-	-	-	722	-	-	5%
SDGE3012	798	53%	55%	86%	307	21%	13%	-	-	888	26%	32%	14%
SDGE3020	24,116	83%	91%	75%	283	2%	1%	-	-	5,240	15%	8%	25%

Linears, Downstream CFLs, and High Bays (all programs except SCG3507)

The downstream lighting unit energy savings for each of these programs came from the tables in Appendix K of the Small Commercial evaluation report. The UES is applied by program, measure, and building type. Relative precision values can be seen in Tables 3-27 through 3-29 in the Small Commercial evaluation report.

Table 21: Linear Fluorescents – 90% Confidence Interval Relative Precision Estimates for Gross Impact Parameters (Table 3-27)

	Wattage		Usage		Unit Energy Savings	
	Pre-Retrofit Wattage	Post-Retrofit Wattage	Annual Operating Hours	Peak Diversity Factor	kWh	kW
PG&E	5%	3%	12%	6%	14%	10%
SCE	5%	2%	7%	6%	11%	10%
SDG&E	5%	3%	6%	5%	9%	9%

Table 22: High Bay Lighting – 90% Confidence Interval Relative Precision Estimates for Gross Impact Parameters (Table 3-28)

	Wattage		Usage		Unit Energy Savings	
	Pre-Retrofit Wattage	Post-Retrofit Wattage	Annual Operating Hours	Peak Diversity Factor	kWh	kW
PG&E	16%	14%	16%	13%	24%	22%
SCE	24%	18%	25%	33%	36%	41%
SDG&E	15%	27%	33%	27%	45%	42%

Table 23: Downstream CFL – 90% Confidence Interval Relative Precision Estimates for Gross Impact Parameters (Table 3-29)

	Wattage		Usage		Unit Energy Savings	
	Pre-Retrofit Wattage	Post-Retrofit Wattage	Annual Operating Hours	Peak Diversity Factor	kWh	kW
PG&E	1%	2%	9%	9%	9%	9%
SCE	1%	3%	9%	9%	9%	9%
SDG&E	1%	5%	32%	33%	32%	33%

Upstream CFLs, LEDs, and Fixtures (PGE2080 only)

The UES values for Upstream CFLs, LEDs, and Fixtures can be found in tables 26, 34, and 30 respectively in the Upstream Lighting evaluation report. These UES values are a weighted average across building types. The relative precision for the UES values of CFLs can be found in Table 3-30 of the Small Commercial Evaluation Report. The relative precision for the UES values of LEDs and Fixtures was not directly reported. The delta watt precision is shown in Table 58 from the Upstream Lighting Report. The hours of use came from the same estimates shown for CFLs.

Table 24: Ex Ante vs. Ex Post Savings Parameters – Upstream Screw-In CFLs (Table 26)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE UES KWH/YR							
CFL	Globe	n/a	n/a	75.29	13.96	n/a	15.16
	Reflector	n/a	n/a	127.16	35.96	n/a	44.53
	Twister/A-lamp	n/a	n/a	227.80	58.99	n/a	52.69
	All CFLs	270.41	59.15	217.71	57.62	n/a	50.92
EX-POST UES KWH/YR							
CFL	Globe	n/a	23.09	n/a	24.55	n/a	19.05
	Reflector	n/a	36.82	n/a	36.27	n/a	28.96
	Twister/A-lamp	n/a	32.73	n/a	33.15	n/a	26.77
	All CFLs	121.00	30.72	105.30	31.07	98.70	24.31
		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE UES PEAK KW							
CFL	Globe	n/a	n/a	0.0185	0.0017	n/a	0.0036
	Reflector	n/a	n/a	0.0312	0.0029	n/a	0.0042
	Twister/A-lamp	n/a	n/a	0.0558	0.0052	n/a	0.0051
	All CFLs	0.0491	0.0056	0.0533	0.0051	n/a	0.0050
EX-POST UES PEAK KW							
CFL	Globe	n/a	0.0021	n/a	0.0023	n/a	0.0022
	Reflector	n/a	0.0034	n/a	0.0033	n/a	0.0034
	Twister/A-lamp	n/a	0.0030	n/a	0.0031	n/a	0.0031
	All CFLs	0.0196	0.0028	0.0161	0.0029	0.0163	0.0028

Table 25: Upstream CFL – 90% Confidence Interval Relative Precision Estimates for Gross Impact Parameters (Table 3-30)

	Wattage		Usage		Unit Energy Savings	
	Pre-Retrofit Wattage	Post-Retrofit Wattage	Annual Operating Hours	Peak Diversity Factor	kWh	kW
PG&E	1%	4%	9%	11%	9%	12%
SCE	1%	4%	10%	10%	10%	10%
SDG&E	1%	5%	7%	8%	8%	8%

Table 26: Ex Ante vs. Ex Post Savings Parameters – Upstream LEDs (Table 34)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE UES KWH/YR							
LEDs	Holiday Lights	5.16	0.31				0.02
	Night Light	72.88	29.42		28.14		
	LED Bulb						73.58
	Signage				159.50	54.75	
	Table/Desk Lamp				0.00		19.75
	All LEDs	14.34	4.18		24.16	54.75	8.06
EX-POST UES KWH/YR							
LEDs	Holiday Lights	0.86	0.53			0.86	0.53
	Night Light	23.84	23.84	23.80	23.80		
	LED Bulb					23.84	23.84
	Signage			78.03		67.92	
	Table/Desk Lamp			0.00	0.00	0.00	0.00
		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE UES PEAK KW							
LEDs	Holiday Lights	0.0014	0.0000				0.0000
	Night Light	0.0000	0.0000		0.0000		
	LED Bulb						0.0000
	Signage				0.0300	0.0500	
	Table/Desk Lamp				0.0000		0.0000
	All LEDs	0.0012	0.0000		0.0001	0.0500	0.0000
EX-POST UES PEAK KW							
LEDs	Holiday Lights	0.0000	0.0000			0.0000	0.0000
	Night Light	0.0000	0.0000	0.0000	0.0000		
	LED Bulb					0.0000	0.0000
	Signage			0.0121		0.0112	
	Table/Desk Lamp			0.0000	0.0000	0.0000	0.0000

Table 27: Ex Ante vs. Ex Post Savings Parameters – Upstream Fixtures (Table 30)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE UES KWH/YR							
Fixtures	Desk/Table/Floor Lamp				81.46		
	Exterior HW (no control)	335.70	225.46	111.52			95.00
	Exterior HW (control)			270.58			
	Interior HW (ceiling)				91.45		
	Interior HW (unspecified)	341.65	59.85		38.06		58.96
	Torchiere	607.80	106.98		132.72		
	All Fixtures	346.74	138.22	175.62	91.61		72.60
EX-POST UES KWH/YR							
Fixtures	Desk/Table/Floor Lamp			125.58	34.60		
	Exterior HW (no control)	118.67	59.14	101.80	59.05	77.75	44.04
	Exterior HW (control)			189.71	112.79		
	Interior HW (ceiling)			79.64	21.94		
	Interior HW (unspecified)	79.54	18.21	91.54	25.22	66.75	15.57
	Torchiere	260.74	59.70	190.65	52.53		
EX-ANTE UES PEAK KW							
Fixtures	Desk/Table/Floor Lamp				0.0064		
	Exterior HW (no control)	0.0000	0.0000	0.0000			0.0000
	Exterior HW (control)			0.0000			
	Interior HW (ceiling)				0.0055		
	Interior HW (unspecified)	0.0620	0.0057		0.0049		0.0056
	Torchiere	0.1103	0.0101		0.0094		
	All Fixtures	0.0346	0.0032	0.0000	0.0056		0.0035
EX-POST UES PEAK KW							
Fixtures	Desk/Table/Floor Lamp			0.0195	0.0027		
	Exterior HW (no control)	0.0193	0.0059	0.0158	0.0062	0.0128	0.0043
	Exterior HW (control)			0.0294	0.0115		
	Interior HW (ceiling)			0.0139	0.0017		
	Interior HW (unspecified)	0.0129	0.0016	0.0142	0.0020	0.0110	0.0016
	Torchiere	0.0423	0.0052	0.0295	0.0041		

Table 28: Residential Delta Watts with Confidence Intervals (Table 58)

IOU	Delta Watts	90% CI +/-	90% CI +/- %
PG&E	44.3	0.6	1.3%
SCE	44.8	0.9	2.-
SDG&E	44.4	1.1	2.4%
All IOUs	44.5	0.5	1.1%

Strip Curtains and Door Gaskets (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020)

The door gaskets and strip curtains in programs PGE2021, PGE2080, SCE2511, SDGE3012, and SDGE3020 were updated by the Commercial Facilities contract group. Their sample did not include the programs listed above. The results were extrapolated based on the building type and end use using the statewide results. Therefore, the results are marked with a UES type "OTHEREMV." Please refer to ADM's documentation of strip curtains and door gaskets for detailed explanation of UES updates.

Pipe Insulation (PGE2080, SCG3507)

The unit energy savings for pipe insulation was calculated in the following manner:

$$ED_{filledUE} \text{ STherms} \times \text{Gross Impact Realization Rate} = ED_{UE} \text{ STherms}$$

The Gross Impact Realization Rate came from the following table found in the Evaluation Report for the Southern California Industrial and Agricultural Contract Group.

Table 29: Summary of Final Pipe Insulation Realization Rates for SCG and PG&E Service Territories (Table 3-17)

Final Realization Rate Results	SCG	PG&E
Gross Impact Realization Rate	7.9%	35%
Sample Size	66	38
90% Confidence Bounds	7.4 - 8.4%	33.5 - 36.4%
Relative Margin of Error	6%	4%
Net-to-gross Ratio	72.2%	49.2%
Sample Size	248	38
90% Confidence Bounds	72.0-72.4%	47.7-50.7%
Relative Margin of Error	0.3%	3.1%
Final Realization Rate	5.7%	17.2%
90% Confidence Bounds	5.4-6.1%	16.3-18.1%
Relative Margin of Error	5.9%	8.7%

Steam Traps (PGE2080, SDGE3012, SDGE3020, SCG3507)

The steam trap evaluation calculated a gross realization rate separately for commercial and industrial steam traps. The unit energy savings for steam traps were calculated in the following manner:

$$ED_{filledUE} \text{ STherms} \times \text{Gross Impact Realization Rate} = ED_{UE} \text{ STherms}$$

The gross impact realization rates used in the ERT can be found in the Evaluation Report for the Southern California Industrial and Agricultural Contract Group:

Table 30: Small Commercial Steam Trap Net Ex-Post Therm Savings (Table 1-2)

Strata	Total Gross Ex-Ante Therms	Number of Traps	Gross Ex-Ante Therms per Trap	Realization Rate	NTG Ratio	Ex-Post Net Therms per Trap
PG&E	993,544	21,660	45.87	0.30	0.62	8.63
SCG	4,646,492	33,428	139	0.12	0.70	11.43

SDG&E	514,022	3,698	139	0.12	0.72	11.78
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Table 31: Measure Level Realization Rates, NTG Ratios, and Net Ex-Post Therm Savings per Industrial Steam Trap (Table 1-3)

Measure Type	Total Gross Ex-Ante Therms	Number of Traps	Gross Ex-Ante Therms per Trap	Realization Rate	NTG Ratio	Net Ex-Post Therms per Trap
High Pressure	18,639,978	7,959	2,342	2.15	0.52	2,630
Low Pressure	1,159,884	1,818	638	2.19	0.57	794

RCA and AC Replacement (PGE2080)

The RCA and AC Replacement records were updated by the Specialized Commercial HVAC evaluation team:

The EMV UES estimates were developed through onsite metering of air conditioners and analyzed to be applicable to programs at the climate zone level on a per ton basis. These results provide improvements to program-level ex-ante estimates by introducing direct measurement and analysis activities that were applied to a statistically representative sample of projects. The measurement and analyses take into account actual, as-built equipment configuration and operating conditions whereas the ex-ante estimates were based on forecasts of what savings the energy efficiency measures would provide.

The UES Type was set to “EMV” for RCA and AC replacement records as well as those non-HIM measures with M&V.

Table 32: PGE2080 C&I RCA Ex Post UES and Total Savings (Table 5-60, p.87)

Climate Zone	A kWh/ton	B Tons	C Total kWh [Column A * Column B]
Education	35.12	-	-
Office	55.21	623	34,396
Restaurant	66.18	351	23,229
Retail	79.34	369	29,276
Other	58.97	33,147	1,954,679

Table 33: PGE2080 C&I AC Replacement Energy Savings Summary (Table 6-45, p.154)

High Impact Measure	Program with Measure	HIM Ex-ante Gross kWh Savings	HIM Ex-post Gross kWh Savings	HIM Gross kWh Realization Rate	HIM Install Rate	HIM installed Ex-post Gross kWh Savings	HIM NTGR	HIM Ex-post Net kWh Savings
C/I AC Replacement	PGE2080	36,969,145	17,258,976	47%	100%	17,258,976	0.94	16,223,438

Table 34: PGE2080 C&I AC Replacement Demand Savings Summary (Table 6-46, p.154)

High Impact Measure	Program with Measure	HIM Ex-ante Gross kWh Savings	HIM Ex-post Gross kWh Savings	HIM Gross kWh Realization Rate	HIM Install Rate	HIM installed Ex-post Gross kWh Savings	HIM NTGR	HIM Ex-post Net kWh Savings
C/I AC Replacement	PGE2080	27,521	22,445	82%	100%	22,445	0.94	21,098

Table 35: Commercial Confidence and Precision of Savings Estimates (Table 6-35, p.144)

	Zone6		Zone7		Zone8		Zone9	
	Burnout	Early	Burnout	Early	Burnout	Early	Burnout	Early
number of units used	39		39		39		39	
Annual Usage/ton (kWh)	611		692		838		987	
Savings/ton (kWh)	64	162	81	201	115	272	149	337
Savings/ton +-	31	56	36	63	46	72	55	83
Savings/ton +- %	49%	35%	45%	31%	39%	27%	37%	25%
Grid Demand/ton (kW)	0.281		0.326		0.571		0.608	
Grid Savings/ton (kW)	0.06	0.144	0.069	0.166	0.116	0.259	0.123	0.271
Grid Savings/ton (kW) +-	0.03	0.047	0.034	0.051	0.061	0.082	0.067	0.089
Grid Savings/ton (kW) +- %	51%	32%	49%	31%	53%	32%	54%	33%
	Zone10		Zone13		Zone14		Zone15	
	Burnout	Early	Burnout	Early	Burnout	Early	Burnout	Early
number of units used	32		32		32		32	
Annual Usage/ton (kWh)	1,075		1,277		1,207		2,373	
Savings/ton (kWh)	161	356	206	441	195	414	424	852
Savings/ton +-	56	106	70	122	66	113	150	228
Savings/ton +- %	35%	30%	34%	28%	34%	27%	35%	27%
Grid Demand/ton (kW)	0.827		0.889		0.891		1.054	
Grid Savings/ton (kW)	0.184	0.355	0.196	0.373	0.196	0.374	0.224	0.416
Grid Savings/ton (kW) +-	0.068	0.116	0.077	0.125	0.077	0.126	0.108	0.156
Grid Savings/ton (kW) +- %	37%	33%	39%	34%	39%	34%	48%	38%

Table 36: Commercial Monitoring Results by Climate Zone (Table 6-23, p.126)

	Zone 2	Zone 3	Zone 4	Zone 6	Zone 7	Zone 8	Zone 9
Annual Cooling/ton (kWh)	708	449	657	611	692	838	987
Peak Demand/ton (kW)	0.656	0.303	0.505	0.281	0.326	0.571	0.608
Savings/nameplate ton/year SEER13 (replace on burnout base case) (kWh)	94	35	81	64	81	115	149
Savings/nameplate ton/year RCA (early retirement base case) (kWh)	213	90	193	162	201	272	337
Peak Demand Savings/ton SEER13 (replace on burnout base case) (kW)	0.134	0.06	0.104	0.06	0.069	0.116	0.123
Peak Demand Savings/ton RCA (early retirement base case) (kW)	0.289	0.147	0.237	0.144	0.166	0.259	0.271
	Zone 10	Zone 11	Zone 12	Zone 13	Zone 14	Zone 15	
Annual Cooling/ton (kWh)	-	1075	1075	1026	1277	1207	2373
Peak Demand/ton (kW)	-	0.827	0.827	0.779	0.889	0.891	1.054
Savings/nameplate ton/year SEER13 (replace on burnout base case) (kWh)	-	161	161	156	206	195	424
Savings/nameplate ton/year RCA (early retirement base case) (kWh)	-	356	340	255	441	414	852
Peak Demand Savings/ton SEER13 (replace on burnout base case) (kW)	-	0.184	0.175	0.186	0.196	0.196	0.224
Peak Demand Savings/ton RCA (early retirement base case) (kW)	-	0.355	0.339	0.356	0.373	0.374	0.416

For the other programs and measures UESs were set equal to the EDFilledUESs, which are based on the ex-ante savings and installed units, and the UESType was set to “PassThru” for those records.

Infrared Film and Heat Curtains (PGE2080, SDGE3012, SDGE3020, SCG3507)

These HIMs were updated by PG&E Agricultural and Food Processing evaluation team. For each measure, the UES was calculated as follows:

$$Gas\ UES = \frac{(EDFilledExAnteGrSavTherms) \times (realization\ rate)}{(EDFilledExAnteQuantity)}$$

$$Electric\ kWh\ UES = \frac{(total\ electric\ kWh\ savings\ from\ the\ report)}{\div (number\ of\ records\ from\ therm\ UES < 0)} \div (EDFilledExAnteQuantity)$$

$$Electric\ kW\ UES = 0$$

The following are tables from the report showing the realization rate and total electric kWh savings for both infrared film and heat curtains:

Table 37: Greenhouse Heat Curtain Statewide Measure-Level Gross Impacts (Table 33)

Fuel	Result	Estimate
Gas	Ex-Ante Savings - Therms	3,246,599
	Realization Rate	0.63
	Ex-Post Savings - Therms	2,034,028
	Relative Precision	9.7%
	Lower Bound, 90% Confidence Interval - Therms	1,836,404
	Upper Bound, 90% Confidence Interval - Therms	2,231,653
Electricity	Number of project Sites	69
	Mean kWh	3,292
	Ex-Post Savings - kWh	227,123
	Relative Precision	24.-
	Lower Bound, 90% Confidence Interval - kWh	172,595
	Upper Bound, 90% Confidence Interval - kWh	281,651

Table 38: Greenhouse Infrared Film Statewide Measure-Level Gross Impacts (Table 45)

Fuel	Result	Estimate
Gas	Ex-Ante Savings - Therms	1,290,728
	Realization Rate	0.39
	Ex-Post Savings - Therms	500,527
	Relative Precision	16.9%
	Lower Bound, 90% Confidence Interval - Therms	415,916
	Upper Bound, 90% Confidence Interval - Therms	585,138
Electricity	Number of project Sites	57
	Mean kWh	2,307
	Ex-Post Savings - kWh	131,481
	Relative Precision	31.4%
	Lower Bound, 90% Confidence Interval - kWh	90,207
	Upper Bound, 90% Confidence Interval - kWh	172,755

The relative precision for the gross realization rate is shown in the table below:

Table 39: Summary of Key Evaluation Parameters and Their Associated Precision (Table 1)

Measure/Program	Gross		NTGR	Relative Precision
	Realization Rate	Relative Precision		
Greenhouse Heat Curtains – Therms	0.63	9.7%	0.63	5.3%
Greenhouse Infrared Film – Therms	0.39	16.9%	0.46	10.2%
PG&E Ag-Food – kWh	0.68	16.9%	0.70	14.6%
PG&E Ag-Food – kW	0.52	30.4%	0.78	14.1%
PG&E Ag-Food – Therms	1.07	24.6%	0.69	16.1%

Retrocommissioning (PGE2032)

The gross realization rate from Table 8 in SBW’s Retro-Commissioning Impact Evaluation is shown below. The UES was calculated as follows.

$$ED_{filledUE} SkWh \times Gross\ Impact\ Realization\ Rate\ kWh = EDUESkWh$$

$$ED_{filledUE} STherms \times Gross\ Impact\ Realization\ Rate = EDUESTherms$$

Table 40: Gross Savings Realization Rates (Table 8)

Utility	Population	Sample	Gross Savings Realization Rate			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	24	0.31	0.45	0.53	0.51	0.23	0.24
SCE	58	13	2.07	0.94	N/A	0.66	0.17	N/A
SCG	28	10	N/A	N/A	0.93	N/A	N/A	0.23
SDG&E	4	3	2.60	1.23	0.21	0.04	0.06	0.01

Nonresidential New Construction (PGE2003)

The NCCS Nonresidential New Construction (NRNC) evaluation was designed at the utility level with samples selected based on kWh savings with the exception of SCG, which was based on therms savings. The number of sample projects listed in the table above represents all NRNC projects across all of the programs contained within the NRNC evaluation: PGE2001-PGE2008 with the exception of PGE2005, which were evaluated exclusively by ADM.

Realization rates were applied to E3 filed savings contained in the standard program tracking database (SPTdb) to calculate UES values for each fuel type. The analysis results listed in the NRNC report for PG&E are based on the paid savings claims for all projects and therefore do not match up identically with the savings listed in the E3 report and the SPTdb which may use the paid or claimed savings value depending on when the check was issued. The total ex-ante savings for the NRNC report, which were based on the paid claims, are within 2% of the E3 reported total ex-ante savings for all

fuel types. Gross realization rates and associated precision are reported in chapter 3.4 of the NRNC report.

Table 41: Gross Savings Realization Rates

	kWh	kW	Therms
Weighted RR	0.822	0.566	1.2
90 Percent CI	0.74 to 0.90	0.51 to 0.62	0.46 to 1.94
Relative Precision	10.-	18.1%	62.-
N projects in sample	57	57	57
N projects in population	279	279	279
ER	0.42	0.58	

NTGR

The following is a summary of how the records were updated for the net-to-gross ratio.

Table 42: Summary of NTGRType

EDPrgID	Count of EMV Records	% EMV kWh Savings	% EMV kW Savings	% EMV Therm Savings	Count of % Other				Count of DEER Records	% DEER kWh Savings	% DEER kW Savings	% DEER Therm Savings	Count of Pass Thru Records	% Pass Thru kWh Savings	% Pass Thru kW Savings	% Pass Thru Therm Savings
					Other EMV Records	Other EMV kWh Savings	Other EMV kW Savings	Other EMV Therm Savings								
PGE2003	92	36%	56%	140%	-	-	-	-	-	-	-	-	326	64%	44%	-40%
PGE2016	15,824	74%	47%	-	-	-	-	-	-	-	-	-	12,060	26%	53%	100%
PGE2017	6,120	76%	69%	-	-	-	-	-	-	-	-	-	2,769	24%	31%	100%
PGE2021	6,261	76%	82%	-	12	1%	-	-	-	-	-	-	3,371	24%	18%	100%
PGE2032	4	7%	-	54%	-	-	-	-	-	-	-	-	156	93%	100%	46%
PGE2054	6,332	94%	94%	-	-	-	-	-	-	-	-	-	730	6%	6%	-
PGE2080	147,334	97%	99%	100%	-	-	-	-	784	2%	1%	-	1,019	1%	1%	-
SCE2511	189,959	99%	100%	-	-	-	-	-	-	-	-	-	518	1%	-	-
SCG3507	6,855	-	-	97%	-	-	-	-	-	-	-	-	72	-	-	3%
SDGE3012	1,835	96%	97%	100%	-	-	-	-	-	-	-	-	158	4%	3%	-
SDGE3020	29,107	97%	98%	100%	-	-	-	-	-	-	-	-	532	3%	2%	-

Linears, Downstream CFLs, High Bays, and Lighting Controls (all programs except SCG3507)

The following table from the Small Commercial Evaluation Report shows the values used to update the kWh and kW NTGRs. The Therm NTGR was set equal to the kWh NTGR.

Table 43: Free-Ridership Findings by HIM and Program (Table 4-16)

HIM	Program # (EEGA Code)	Free Ridership (FR) Estimates and Net-to-Gross Ratio (NTGR) Findings			
		kWh Weighted		kW Weighted	
		%FR	NTGR % (1-% FR)	%FR	NTGR % (1-% FR)
CFL	PGE2016	27%	73%	18%	82%
	PGE2017	33%	67%	50%	50%
	PGE2021	34%	66%	31%	69%
	PGE2054	28%	72%	26%	74%

	PGE2080	45%	55%	40%	60%
	SCE2511	19%	81%	19%	81%
	SCE2517	52%	48%	48%	52%
	SDGE3012	18%	82%	18%	82%
	SDGE3020	13%	87%	16%	84%
High Bay	PGE2080	32%	68%	32%	68%
	SCE2517	32%	68%	30%	70%
	SDGE3012	10%	90%	10%	90%
	SDGE3020	1%	99%	1%	99%
Linear	PGE2017	9%	91%	9%	91%
	PGE2021	8%	92%	8%	92%
	PGE2054	8%	92%	8%	92%
	PGE2080	36%	64%	36%	64%
	SCE2511	13%	87%	13%	87%
	SCE2517	28%	72%	28%	72%
	SDGE3012	26%	74%	25%	75%
	SDGE3020	12%	88%	12%	88%
Lighting Controls	PGE2080	32%	68%	30%	70%
	SDGE3012	46%	54%	46%	54%
	SDGE3020	11%	89%	26%	74%

The relative precision can be seen in Table 3-21 in the Small Commercial evaluation report.

Table 44: Relative Precision for NTG Estimates Measured at the 90% Confidence Level for Downstream Lighting HIMs, by IOU and Program (3-21)

HIM	Program	Relative Precision
CFL	PGE2016	11.2%
	PGE2017	25.8%
	PGE2021	14.6%
	PGE2054	9.8%
	PGE2080	12.3%
	SCE2511	3.-
	SCE2517	16.8%
	SDGE3012	20.1%
	SDGE3020	4.8%
High Bay Lighting	PGE2080	5.8%
	SCE2517	12.2%
	SDGE3012	8.8%
	SDGE3020	2.6%
Linear Fluorescent	PGE2017	4.8%
	PGE2021	4.9%
	PGE2054	6.9%
	PGE2080	6.4%
	SCE2511	1.6%
	SCE2517	6.4%
	SDGE3012	14.-
	SDGE3020	1.4%
Occupancy Sensors	PGE2080	10.7%

SDGE3012

29.2%

SDGE3020

4.9%

Upstream CFLs, LEDs and Fixtures (PGE2080 only)

The NTGR values for Upstream CFLs, LEDs, and Fixtures can be found in Table 26, Table 34, and Table 30, respectively, in the Upstream Lighting evaluation report. The confidence intervals for Upstream CFLs are found in Table 63. The DEER values were used for LEDs and Fixtures.

Table 45: Ex Ante vs. Ex Post Savings Parameters – Upstream Screw-In CFLs (Table 26)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE NTGR							
CFL	Globe	n/a	n/a	78%	78%	n/a	80%
	Reflector	n/a	n/a	78%	78%	n/a	80%
	Twister/A-lamp	n/a	n/a	75%	75%	n/a	80%
	All CFLs	96%	80%	75%	75%		80
EX-POST NTGR							
CFL	Globe	n/a	49%	n/a	64%	n/a	48%
	Reflector	n/a	49%	n/a	64%	n/a	48%
	Twister/A-lamp	n/a	49%	n/a	64%	n/a	48%
	All CFLs	49%	49%	64%	64%	48%	48%

Table 46: Final Recommended NTGR Estimates with Confidence Intervals (Table 63)

Channel	Final Recommended NTGR Estimates	90% CI +/-	90% CI +/-%
All IOUs	54%	3.20%	5.90%
PG&E	49%	3.90%	8.00%
SCE	64%	2.60%	4.10%
SDG&E	48%	3.80%	7.90%

Table 47: Ex Ante vs. Ex Post Savings Parameters – Upstream LEDs (Table 34)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE NTGR							
LEDs	Holiday Lights	80%	80%				80%
	Night Light	96%	80%		80%		
	LED Bulb						80%
	Signage				80%	80%	
	Table/Desk Lamp						80%
EX-POST NTGR							
LEDs	Holiday Lights	80%	80%			80%	80%
	Night Light	80%	80%	80%	80%		
	LED Bulb					80%	80%
	Signage			80%		80%	
	Table/Desk Lamp			80%	80%	80%	80%

Table 48: Ex Ante vs. Ex Post Savings Parameters – Upstream Fixtures (Table 30)

		PG&E		SCE		SDG&E	
		Nonresidential	Residential	Nonresidential	Residential	Nonresidential	Residential
EX-ANTE NTGR							
Fixtures	Desk/Table/Floor Lamp				80%		
	Exterior HW (no control)	96%	80%	76%			80%
	Exterior HW (control)			76%			
	Interior HW (ceiling)				76%		
	Interior HW (unspecified)	96%	80%	76%			80%
	Torchiere	96%	80%		80%		
	All Fixtures						
EX-POST NTGR							
Fixtures	Desk/Table/Floor Lamp			80%	80%		
	Exterior HW (no control)	80%	80%	80%	80%	80%	80%
	Exterior HW (control)			80%	80%		
	Interior HW (ceiling)			80%	80%		
	Interior HW (unspecified)	80%	80%	80%	80%	80%	80%
	Torchiere	80%	80%	80%	80%		
	All Fixtures						

Boilers (PGE2080) and Non-Evaluated Measures (PGE2080, SCE2511, SDGE3012, SDGE3020, and SCG3507)

The following table from the Small Commercial Evaluation Report shows the NTGRs assigned to Boilers in PGE2080 and the NTGRs for the non-HIM measures in the small commercial programs:

Table 49 presents the self-report free ridership and net-to-gross ratios for the Non-HIM measures based on the self-report methodology. Results are weighted by kWh, kW, and Therm savings.

Table 49: Free-Ridership Findings by Non-HIM and Program (Table 4-17)

		Free Ridership (FR) Estimates and Net-to-Gross Ratio (NTGR) Findings					
		kWh Weighted		kW Weighted		Therms Weighted	
		% FR	NTGR % (1-FR)	% FR	NTGR % (1-FR)	% FR	NTGR % (1-FR)
Boiler	PGE2080	-	-	-	-	64%	36%
	PGE2080	66%	34%	57%	43%	5%	95%
Other	SCE2511	10%	90%	13%	87%	-	-
	SCG3507	44%	56%	55%	45%	68%	32%
	SDGE3012	64%	36%	86%	14%	96%	4%
	SDGE3020	34%	66%	36%	64%	100%	-

The relative precision can be found in Table 3-22 of the Small Commercial evaluation report.

Table 50: Relative Precision for NTG Estimates Measured at the 90% Confidence Level for Non-HIM measures, by IOU (Table 3-22)

Non-HIM	Utility	Relative Precision
<i>Weighted by kWh</i>		
Other	PGE	13.8%
	SCE	5.1%
	SDGE	13.6%
<i>Weighted by Therms</i>		
Boiler	PGE	18.6%
Other	PGE	9.5%
	SCG	15.6%
	SDGE	472.5%*

* Note that relative precision is a value that is divided by the NTGR. Because the NTGR is only 1% for “Other” SDG&E, the resulting relative precision is very high. However, the margin of error is only 5% for this estimate.

Strip Curtains (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020)

The net to gross ratios for strip curtains in various IOU programs are listed below. Only SCE2511 and PGE2080 have enough statistics to warrant a program-specific NTGR. All other programs are assigned the statewide average NTGR for strip curtains. PGE2080, SCE2511, SDGE3012, and SDGE3020 were part of the NTGR sample frame and therefore the results are marked as “EMV.” PGE2021 was given the statewide NTGR and marked as “OtherEMV.”

Table 51: NTGR for Strip Curtains

Program Number	Mean	N	Std Dev	Std Error
PGE2020	0.49	16	0.19	0.05
PGE2029	0.23	1	.	.
PGE2051	0.59	2	0.07	0.05
PGE2063	0.35	4	0.32	0.16
PGE2066	0.57	6	0.20	0.08
PGE2080	0.40	21	0.21	0.04
SCE2511	0.37	39	0.25	0.04
SDGE3020	0.43	9	0.30	0.10
Total	0.41	98	0.24	0.02

Door Gaskets (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020)

The net to gross ratios for door gaskets in various IOU programs are listed below. No program has enough statistics to warrant a program-specific NTGR. All programs are assigned the statewide average NTGR for door gaskets. PGE2080, SCE2511, SDGE3012, and SDGE3020 were part of the NTGR sample frame and therefore the results are marked as “EMV.” PGE2021 was given the statewide NTGR and marked as “OtherEMV.”

Table 52: NTGR for Door Gaskets

Program Number	Mean	N	Std Dev	Std Error
PGE2020	-	2	-	-
PGE2051	-	3	-	-
PGE2063	0.15	3	0.26	0.15
PGE2066	0.47	6	0.33	0.13
PGE2080	0.15	16	0.24	0.06
SCE2511	0.19	25	0.24	0.05
SDGE3012	-	2	-	-
SDGE3020	0.31	14	0.27	0.07
Total	0.21	71	0.26	0.03

Pipe Insulation (PGE2080, SCG3507)

These values were updated based on Table 3-17 from the Evaluation Report for the Southern California Industrial and Agricultural Contract Group (shown above).

Steam Traps (PGE2080, SDGE3012, SDGE3020, SCG3507)

These values were updated based on Table 1-2 and Table 1-3 from the Evaluation Report for the Southern California Industrial and Agricultural Contract Group (shown above).

RCA and AC Replacement (PGE2080)

If an evaluated measure is comparable to measures in other programs in terms of the delivery strategy and incentive level, Net to Gross (NTG) and Install Rate (Irate) was applied. To determine NTGR, a vendor survey was completed for non-residential sites that indicated a high level of vendor influence in the decision to implement the energy-efficient measure. For those sites that indicated the vendor was very influential in decision making, the vendor survey results entered directly into the NTG scoring. Vendors were queried on the program's significance in their decision to recommend the energy-efficient measures and on their likelihood to have recommended the same measure in the absence of the program. The vendors contacted as part of this study were generally contractors, design engineers, distributors, and installers.

NTGRs were set equal to the ex-ante NTGR (IOUPrgTrkNTG), and the NTGRType was set to "EMV".

Table 53: AC Replacement Energy Savings Summary (Table 6-45 p.154) and Commercial RCA ex-post Gross Annual Energy Savings (Table 5-63 p.89)

Program	NTG	Install Rate
PGE2080 AC Replacement	0.94	100%
PGE2080 C&I RCA	0.55	45%

Table 5-13: C&I Samples and Savings (p.52) and Table 2-54: Planned Precision for Replace on Burnout AC HIMs (p.113)

Program ID	HIM	Pre-Post Units	Error Ratio (er)	Sample RP at 90% CI	2006-08 kWh Savings	kWh Error Bound
PGE2080	AC Replacement	110	0.7	11%	36,732,269	4,019,162
PGE2080	C&I RCA	50	0.5	12%	9,161,619	1,064,462

Infrared Film and Heat Curtains (PGE2080, SDGE3012, SDGE3020, SCG3507)

The NTGRs came from the following tables in the PG&E Agricultural and Food Processing evaluation report:

Table 55: Greenhouse Heat Curtain Gross and Net Impacts (Table 2)

Savings Units	Evaluation Result	Ex Ante	Ex Post	Realization Rate
kWh	Gross Savings		227,123	-
	NTGR		0.63	
	Net Savings		142,411	-
Therms	Gross Savings	3,246,599	2,034,028	0.63
	NTGR	0.95	0.63	
	Net Savings	3,095,637	1,275,383	0.41

Table 56: Greenhouse Infrared Film Gross and Net Impacts (Table 3)

Savings Units	Evaluation Result	Ex Ante	Ex Post	Realization Rate
kWh	Gross Savings		131,481	-
	NTGR		0.46	
	Net Savings		59,940	-
Therms	Gross Savings	1,290,728	500,527	0.39
	NTGR	0.96	0.46	
	Net Savings	1,239,099	228,181	0.18

The confidence intervals are shown below.

Table 57: Greenhouse Heat-Curtain Measure-Level Net Savings Estimates (Table 5)

Result	Therms	kWh
Gross Measure Savings	2,034,028	227,123
Net-to-Gross Ratio	0.63	0.63
Net Measure Savings	1,275,383	142,411
Lower Bound, 90% Confidence Interval	1,133,968	107,370
Upper Bound, 90% Confidence Interval	1,416,797	177,453

Table 58: Greenhouse Infrared-Film Measure-Level Net Savings Estimates (Table 7)

Result	Therms	kWh
Gross Measure Savings	500,527	131,481
Net-to-Gross Ratio	0.46	0.46
Net Measure Savings	228,181	59,940
Lower Bound, 90% Confidence Interval	183,105	38,482
Upper Bound, 90% Confidence Interval	273,257	81,398

Retrocommissioning (PGE2032)

The net to gross ratios from Table 18 in SBW’s Retro-Commissioning Impact Evaluation are shown below.

Table 59: PG&E – NTGR Parameters (Table 18)

Utility	Stratum	RCx Projects		Stratum Boundaries Ex Ante Savings ¹ (MMBTU)		NTGR Weighted by...				
		Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms	
PG&E	1	22	11	264	1,414	0.83	0.57	0.75	0.98	
PG&E	Phase 2 - 1	45	22	78	1,928	0.77	0.78	0.80	0.78	
PG&E	Phase 2 - 2	16	8	1,964	5,885	0.80	0.84	0.83	0.77	
PG&E	Phase 2 - Excl.	14	0	0	61					
PG&E	Phase 2 - 9	5	5	9,944	26,651	0.87	0.89	0.88	0.88	
PG&E	2	25	12	1,444	2,872	0.86	0.82	0.81	0.94	
PG&E	3	12	6	3,044	6,057	0.73	0.72	0.71	0.83	
PG&E	Excluded	2	0	5	55					
PG&E	9	10	9	6,317	17,224	0.88	0.82	0.90	0.87	
PG&E	All Sampled	135	73	0	26,651	0.81	0.76	0.80	0.86	
							Statistics			
							Standard Error	0.02	0.02	0.01
							90% Confidence Interval	0.03	0.03	0.02
							Relative Precision	0.04	0.03	0.02

Nonresidential New Construction (PGE2003)

The NTG results are presented in Chapter 1 of the NRNC report. Precision estimates were calculated for both the gross and net savings types by fuel type, which are contained in Chapter 3 of the report. Precisions were not reported for the NTG in the NRNC report.

Table 60: NRNC NTGR

EDPrgID	kW	NTGR	
		kWh	Therms
NRNC	0.59	0.63	0.82

NonHIM (PGE2003,PGE2016,PGE2017,PGE2021,PGE2032,PGE2054)

The NTGRs for all Non HIMs measures in the following programs were passed through: PGE2016, PGE2017, PGE2021, and PGE2054.

EUL

Here is a summary of how the records were updated for the effective useful life.

Table 61: Summary of EULType

EDPrgID	Count of DEER records	% DEER kWh savings	% DEER kW savings	% DEER Therm savings	Count of PassThru records	% PassThru kWh savings	% PassThru kW savings	% PassThru Therm savings
PGE2003	21	4%	3%	-	397	96%	97%	100%
PGE2016	26,494	93%	91%	15%	1,390	7%	9%	85%
PGE2017	8,036	89%	83%	-	853	11%	17%	100%
PGE2021	8,341	89%	94%	100%	1,303	11%	6%	-
PGE2032	1	-	2%	-	159	100%	98%	100%
PGE2054	6,993	98%	97%	-	69	2%	3%	-
PGE2080	147,504	99%	100%	92%	1,633	1%	-	8%
SCE2511	190,294	100%	100%	-	183	-	-	-
SCG3507	3,562	-	-	55%	3,365	-	-	45%
SDGE3012	1,981	99%	99%	95%	12	1%	1%	5%
SDGE3020	29,616	100%	100%	89%	23	-	-	11%

Linears, Downstream CFLs, Upstream CFLs, High Bays, and Occupancy Sensors (all programs except SCG3507)

EULs were based on DEER 2008 data.

Strip Curtains and Door Gaskets (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020)

The EULs were passed through.

Pipe Insulation (PGE2080, SCG3507)

EULs were based on DEER 2008 data.

Steam Traps (PGE2080, SDGE3012, SDGE3020, SCG3507)

EULs were based on utility work papers.

RCA and AC Replacement (PGE2080)

EUL's were based on DEER 2008 data. If no updates were deemed necessary for the ex-ante EUL estimates and ex-ante UES values were utilized the EULType was set to "PassThru".

The EUL for RCA and AC Replacement was set to 10 years.

Infrared Film and Heat Curtains (PGE2080, SDGE3012, SDGE3020, SCG3507)

The EULs were passed through.

Retrocommissioning (PGE2032)

The EULs were passed through.

Non-Residential New Construction (PGE2003)

The EULs were passed through.

Non-HIMs (all programs)

Any non-HIMs with applicable DEER 2008 EULs were updated with the DEER EUL. Otherwise, the EUL was passed through.

Interactive Effects

The upstream and downstream lighting interactive effects were based on DEER 2008. The refrigeration interactive effects were captured as part of the ex-post savings numbers.

PassThru Programs

PGE2051, PGE2060, and PGE2074 were initially included in the programs with records touched by the Small Commercial Lighting study. While the study did visit a few of these sites, it did not include enough sites to produce results. Therefore, no results were included as part of the Small Commercial final evaluation report and no updates were made to these programs.

3. LOCAL GOVERNMENT PARTNERSHIPS

Procedures for ERT Update for the University of California / California State University (UC/CSU) Energy Efficiency Programs (PGE2036, SCE2530, SCG3520, SDGE3026)

Contract Group: Local Government Partnership

Programs Included in Input File: PGE2036, SCE2530, SCG3520, SDGE3026

Correction for the Final Report: HVAC interactive effects were incorrectly applied to some exterior lighting measures in programs PGE2036 and 2080, resulting in an over-estimation of the kW and kWh savings by 38 kW and 62,242 kWh, and an under-estimation of the therm savings by 7,164 therms, representing 0.01%, 0.02% and -0.3% of the total PG&E ex-post net kW, kWh and therm savings respectively. Holiday lights were incorrectly assigned to the Exterior Lighting Other measure group. HVAC interactive effects were appropriately applied to that measure.

Overview

The Local Government Partnership (LGP) contract group followed the CPUC Energy Division decision framework when updating evaluation parameters in the UC/CSU partnership program. For this program, all project line items were had UES and NTGRs applied based on direct EM&V studies. No results were applied from “Other EM&V” studies. For EUL parameters, updates were made for some project line items where mapping the measure description to a DEER measure was possible.

UES Parameter Update (EDUESkW, EDUESkWh, and EDUESTherms)

The Local Government Partnership (LGP) contract group employed the realization rate (RR) method in its evaluation, which covered all “retrofit” projects in the UC/CSU Partnership programs. Gross realization rates, disaggregated by IOU and fuel type, were multiplied by the *per unit* ex ante savings to calculate the ex post *per unit* savings (e.g., EDUESkW, EDUESkWh, and EDUESTherms), an input to the ERT calculations.

$$EDUES_{(kW, kWh, Therms)} = EDUFilledUES_{(kW, kWh, Therms)} * RR_{(kW, kWh, Therms)}$$

The table below, from the LGP Final Evaluation Report (Table 6-27), provides the gross realization rates applied during this update process.

PY2006-2008 Gross Impact Realization Rates for UC/CSU-IOU Energy Efficiency Programs (Retrofit)

Fuel Type	<i>ex ante</i> Gross Savings	<i>ex post</i> Gross Savings	Gross Realization Rate	Relative Precision
PGE2036				
kW	3,940	4,571	116%	42%
kWh	29,361,194	32,297,313	110%	16%
Therms	3,128,902	1,846,052	59%	20%
SCE2530				
kW	2,903	1,103	38%	34%
kWh	21,277,596	12,128,230	57%	42%
Therms	342,276	N/A	N/A	N/A
SCG3520				
Therms	627,613	389,120	62%	50%
SDGE3026				
kW	2,950	324	11%	15%
kWh	14,442,410	5,776,964	40%	3%
Therms	231,395	249,906	108%	33%

Source: LGP Final Evaluation Report, Table 6-27

Retro-commissioning (RCx) projects in the UC/CSU partnership programs were updated using the realization rates calculated by the statewide Retro-commissioning contract group (SBW). These realization rates were disaggregated by IOU, fuel type, and stratum (based on ex ante savings) and are provided in the table below, taken from the final Retro-commissioning evaluation report, Table 8. The UES update type was set to “EMV” for line items with RCx realization rates applied.

PY2006-2008 Gross Impact Realization Rates for UC/CSU-IOU Energy Efficiency Programs (MBCx)

Utility	Population	Sample	Gross Savings Realization Rate			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	24	0.31	0.45	0.53	0.51	0.23	0.24
SCE	58	13	2.07	0.94	N/A	0.66	0.17	N/A
SCG	28	10	N/A	N/A	0.93	N/A	N/A	0.23
SDG&E	4	3	2.60	1.23	0.21	0.04	0.06	0.01

Source: *Statewide Retro-Commissioning Final Evaluation Report, Table 8*

Installation Rate Update

First-year realization rates presented above include the effects of installation rate. No additional installation rate updates were necessary. The installation rate was set to 1, and the installation rate type was set to “PassThru” for all records.

Interactive Effects

Standard Program Tracking Database line items were identified for which interactive effects between the measure installed and the air conditioning system operating in the same facility are applicable. For these line items, the EDUES_{i,kW,kWh,Therm} values were calculated using the appropriate interactive factor from the final tables provided by ED. For Standard Program Tracking Database line items for which interactive effects are not applicable, the EDUES_i values were set equal to the EDUES_{kW, kWh, Therm} values.

Net-to-Gross Update

For retrofit projects, NTG ratios, disaggregated by fuel type only (i.e., the same NTGR was applied to each of the four IOUs in the UC/CSU program), were updated based on the results provided in Table 6-20 of the final LGP Evaluation Report, which is copied below. The NTG Type was set to “EMV” for all retrofit projects.

PY2006-2008 Net-to-Gross Ratio: UC/CSU-IOU Energy Efficiency Programs (Retrofit)

Savings Type	% Free Riders	NTGR % (1-%FR)	Relative Precision
kWh	31%	69%	12%
kW	25%	75%	8%
Therms	28%	72%	13%

Source: *Final LGP Evaluation Report, Table 6-20*

For RCx projects, the NTG ratios, disaggregated by IOU, fuel type, and stratum (based on *ex ante* savings) from the statewide RCx study were applied. The NTG ratios applied for

RCx projects are provided in the tables below, which are taken from Tables 18 through 21 of the final RCx evaluation report.

PY2006-2008 Net-to-Gross Ratio: UC/CSU-IOU Energy Efficiency Programs (PG&E/MBCx)

Utility	RCx Projects		Stratum Boundaries Ex Ante Savings ¹ (MMBTU)		NTGR Weighted by...					
	Stratum	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms	
PG&E	1	22	11	264	1,414	0.83	0.57	0.75	0.98	
PG&E	Phase 2 - 1	45	22	78	1,928	0.77	0.78	0.80	0.78	
PG&E	Phase 2 - 2	16	8	1,964	5,885	0.80	0.84	0.83	0.77	
PG&E	Phase 2 - Excl.	14	0	0	61					
PG&E	Phase 2 - 9	5	5	9,944	26,651	0.87	0.89	0.88	0.88	
PG&E	2	25	12	1,444	2,872	0.86	0.82	0.81	0.94	
PG&E	3	12	6	3,044	6,057	0.73	0.72	0.71	0.83	
PG&E	Excluded	2	0	5	55					
PG&E	9	10	9	6,317	17,224	0.88	0.82	0.90	0.87	
PG&E	All Sampled	135	73	0	26,651	0.81	0.76	0.80	0.86	
Statistics										
Standard Error							0.02	0.02	0.01	
90% Confidence Interval							0.03	0.03	0.02	
Relative Precision							0.04	0.03	0.02	

¹ For most of the strata, boundaries were determined using the best estimate of program tracking impacts available at the time the sample was designed rather than the actual claimed savings. Phase 2 strata were drawn when additional RCx projects were revealed at the end of 2008. The final claimed ex ante savings were used in assigning the Phase 2 sample to strata.

Source: Statewide Retro-Commissioning Final Evaluation Report, Table 18

PY2006-2008 Net-to-Gross Ratio: UC/CSU-IOU Energy Efficiency Programs (SCE/MBCx)

Utility	RCx Projects		Stratum Boundaries Ex Ante Savings ¹ (MMBtu)		NTGR Weighted by...				
	Stratum	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms
SCE	1	29	12	83	793	0.82	0.81	0.82	0.89
SCE	2	13	7	800	1,939	0.90	0.64	0.90	0.93
SCE	3	12	6	2,048	3,344	0.86	0.83	0.86	0.93
SCE	Excluded	2	0	5	41				
SCE	Phase 2 - Excl	1	0	2,830	2,830				
SCE	9	4	4	4,290	10,607	0.95	0.93	0.94	0.93
SCE	All Sampled	58	29	5	10,607	0.86	0.78	0.86	0.91
Statistics									
Standard Error							0.01	0.01	
90% Confidence Interval							0.02	0.01	
Relative Precision							0.02	0.01	

¹ For most of the strata, boundaries were determined using the best estimate of program tracking impacts available at the time the sample was designed rather than the actual claimed savings. Phase 2 strata were drawn when additional RCx projects were revealed at the end of 2008. The final claimed ex ante savings were used in assigning the Phase 2 sample to strata.

Source: Statewide Retro-Commissioning Final Evaluation Report, Table 19

PY2006-2008 Net-to-Gross Ratio: UC/CSU-IOU Energy Efficiency Programs (SCG/MBCx)

Utility	RCx Projects		Stratum Boundaries Ex Ante Savings ¹ (MMBTU)		NTGR Weighted by...				
	Stratum	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms
SCG	1	13	5	240	1,744	0.93			0.93
SCG	2	10	5	1,753	3,621	0.90			0.90
SCG	Phase 2 - Excl	7	0	0	2,695				
SCG	9	5	5	4,524	18,147	0.96			0.94
SCG	All Sampled	28	15	240	18,147	0.92			0.92
Statistics									
Standard Error									0.01
90% Confidence Interval									0.01
Relative Precision									0.01

¹ For most of the strata, boundaries were determined using the best estimate of program tracking impacts available at the time the sample was designed rather than the actual claimed savings. Phase 2 strata were drawn when additional RCx projects were revealed at the end of 2008. The final claimed ex ante savings were used in assigning the Phase 2 sample to strata.

Source: Statewide Retro-Commissioning Final Evaluation Report, Table 20

PY2006-2008 Net-to-Gross Ratio: UC/CSU-IOU Energy Efficiency Programs (SDG&E/MBCx)

Utility	RCx Projects			Stratum Boundaries Ex Ante Savings ¹ (MMBTU)		NTGR Weighted by...				
	Stratum	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms	
SDG&E	1	2	1	1,575	2,034	0.98	0.98	0.98	0.98	
SDG&E	Phase 2 - Excl	3	0	1,155	2,123					
SDG&E	9	2	2	4,319	24,959	0.62	0.51	0.51	0.37	
SDG&E	All Sampled	4	3	1,575	24,959	0.80	0.75	0.75	0.68	
Statistics										
Standard Error							0.00	0.00	0.00	0.00
90% Confidence Interval							0.00	0.00	0.00	0.00
Relative Precision							0.00	0.00	0.00	0.00

¹ For most of the strata, boundaries were determined using the best estimate of program tracking impacts available at the time the sample was designed rather than the actual claimed savings. Phase 2 strata were drawn when additional RCx projects were revealed at the end of 2008. The final claimed ex ante savings were used in assigning the Phase 2 sample to strata.

Source: Statewide Retro-Commissioning Final Evaluation Report, Table 21

EUL Update

Where possible, line items were mapped to DEER and the EUL was updated per values in the DEER database. Where such mapping was not possible, EUL values were passed through. It should be noted that in some cases, the EUL was less than 1 (e.g., for a filter with a short lifetime), resulting in total savings from the ERT output being slightly different from total savings as reported in the Standard Program Tracking Database, which does not take EUL into account in its total savings calculation.

UC/CSU ERT QC Errors

This section summarizes the ERT QC errors that are displayed upon import of an ERT input text file.

Summary of QC Errors.

Error	Number of line items	Program
EUL Range	21	PGE2036
No Gas Sector or Gas Profile	32	PGE2036
No Gas Sector or Gas Profile	8	SCE2530
No Gas Sector or Gas Profile	2	SDGE3026

The EUL range error occurs because EUL has been set to 0 by the utility for line items that also have zero savings claimed. This issue was brought to the attention of the DMQC and we were authorized to proceed. The Gas Sector QC errors occur as there are 42 line items that get interactive therms savings (EDUESThermsi), but have blank values for IOUGasSector and IOUGasSavingsProfile. All of these line items are interior lighting measures that the IOU has not claimed any gas savings for and, hence, do not have an IOUGasSector or a IOUGasSavingsProfile.

**Procedures for ERT Update for the California Community Colleges (CCC) Energy
Efficiency Programs
(PGE2018, SCE2526, SCG3518, SDGE3001)**

Contract Group: Local Government Partnership

Programs Included in Input File: PGE2018, SCE2526, SCG3518, SDGE3001

Overview

The Local Government Partnership (LGP) contract group followed the CPUC Energy Division decision framework when updating evaluation parameters in the CCC partnership program. For this program, all project line items were had UES and NTGRs applied based on direct EM&V studies. No results were applied from “Other EM&V” studies and no DEER updates were made to EUL’s, as all projects were “custom” and not able to be directly mapped to a DEER measure.

UES Parameter Update (EDUESkW, EDUESkWh, and EDUESTherms)

The Local Government Partnership (LGP) contract group employed the realization rate (RR) method in its evaluation, which covered all “retrofit” projects in the California Community Colleges programs. Gross realization rates, disaggregated by IOU and fuel type, were multiplied by the *per unit* ex ante savings to calculate the ex post *per unit* savings (e.g., EDUESkW, EDUESkWh, and EDUESTherms), an input to the ERT calculations.

$$EDUES_{(kW, kWh, Therms)} = EDFilledUES_{(kW, kWh, Therms)} * RR_{(kW, kWh, Therms)}$$

The table below, from the LGP Final Evaluation Report (Table 7-15), provides the gross realization rates applied during this update process.

PY2006-2008 Gross Impact Realization Rates for CCC-IOU Energy Efficiency Programs

Type of Savings	Total Gross Claimed Savings	Total <i>ex post</i> Gross Evaluated Savings	Gross Realization Rate	Relative Precision
<i>PG&E – 2018</i>				
kWh	10,616,600	8,351,277	79%	2%
kW	2,475	1,466	59%	15%
Therms	487,280	366,487	74%	16%
<i>SCE – 2526</i>				
kWh	24,551,989	15,267,383	62%	31%
kW	8,327	3,308	40%	18%
<i>SDG&E – 3001</i>				
kWh	4,832,953	1,983,307	41%	38%
kW	910	381	42%	41%
Therms	38,853	32,187	83% ⁷	11%
<i>SCG – 3518</i>				
Therms	355,075	275,681	78%	10%

Source: LGP Final Evaluation Report, Table 7-15

Retro-commissioning (RCx) projects in the CCC programs were updated using the realization rates calculated by the statewide Retro-commissioning contract group (SBW), whose results were directly applicable to the RCx projects in the CCC programs. These realization rates were disaggregated by IOU, fuel type, and stratum (based on ex ante savings) and are provided in the table below, taken from the final Retro-commissioning evaluation report, Table 8. The UES update type was set to “EMV” for line items with RCx realization rates applied.

RCx Gross Impact Realization Rates for CCC-IOU Energy Efficiency Programs

⁷ Note that the gross RR for SDG&E therms differs from that in the final posted LGP Evaluation Report. This issue, and possible avenues for correcting it, have been discussed with J. Tagnipes, CPUC.

Utility	Population	Sample	Gross Savings Realization Rate			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	24	0.31	0.45	0.53	0.51	0.23	0.24
SCE	58	13	2.07	0.94	N/A	0.66	0.17	N/A
SCG	28	10	N/A	N/A	0.93	N/A	N/A	0.23
SDG&E	4	3	2.60	1.23	0.21	0.04	0.06	0.01

Source: Final RCx Evaluation Report, Table 8

Installation Rate Update

First-year realization rates presented above include the effects of installation rate. No additional installation rate updates were necessary. The installation rate was set to 1, and the installation rate type was set to “PassThru” for all records.

Interactive Effects

Standard Program Tracking Database line items were identified for which interactive effects between the measure installed and the air conditioning system operating in the same facility are applicable. For these line items, the EDUES_{i_{kW,kWh,Therm}} values were calculated using the appropriate interactive factor from the final tables provided by ED. For Standard Program Tracking Database line items for which interactive effects are not applicable, the EDUES_i values were set equal to the EDUES_{kW, kWh, Therm} values.

Net-to-Gross Update

For retrofit projects, NTG ratios, disaggregated by fuel type only (i.e., the same NTGR was applied to each of the four IOUs in the CCC program), were updated based on the results provided in Table 7-16 of the final LGP Evaluation Report, which is copied below. The NTG Type was set to “EMV” for all retrofit projects.

PY2006-2008 Net-to-Gross Ratio: CCC-IOU Energy Efficiency Programs

Savings Type	% Free Riders	NTGR % (1-%FR)	Relative Precision
kWh	33%	67%	12%
kW	31%	69%	14%
Therms	33%	67%	24%

Source: Final LGP Evaluation Report, Table 7-16

For RCx projects, the NTG ratios, disaggregated by IOU, fuel type, and stratum (based on *ex ante* savings) from the statewide RCx study were applied, as these results were directly applicable to the RCx projects the CCC programs. The NTG ratios applied for RCx projects are provided in the tables below, which are taken from Table 19 and Table 20 of the final RCx evaluation report.

Utility Stratum	RCx Projects		Stratum Boundaries Ex Ante Savings1 (MMBtu)		NTGR Weighted by...			
	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms
SCE 1	29	12	83	793	.82	.81	.82	.89
SCE 2	13	7	800	1,939	.9	.64	.9	.93
SCE 3	12	6	2,048	3,344	.86	.83	.86	.93
SCE Excluded	2	0	5	41				
SCE Phase 2 - Excl 1		0	2,830	2,830				
SCE 9	4	4	4,290	10,607	.95	.93	.94	.93
SCE All Sampled	58	29	5	10,607	.86	.78	.86	.91
Statistics								
Standard Error							.01	.01
90% Confidence Interval							.02	.01
Relative Precision							.02	.01

Table 20: SCG – NTGR Parameters

Utility Stratum	RCx Projects		Stratum Boundaries Ex Ante Savings1 (MMBtu)		NTGR Weighted by...			
	Population	Sample	Lower	Upper	Case Weight	kW	kWh	Therms
SCG 1	13	5	240	1,744	.93			.93
SCG 2	10	5	1,753	3,621	.9			.9
SCG Phase 2 - Excl 7		0						

Source: Table 19 and Table 20 of the final RCx evaluation report.

EUL Update

All records for program CCC-IOU Energy Efficiency Programs represent custom projects. Ex-ante EUL values were accepted and the EUL Type was set to “PasThru”.

CCC ERT QC Errors

This section summarizes the ERT QC errors that are displayed upon import of an ERT input text file.

Summary of QC Errors.

Error	Number of line items	Program
No Gas sector or gas profile	32	SCE2526

These QC errors occur because there are 32 line items that get interactive therms savings (EDUESThermsi), but have blank values for IOUGasSector and IOUGasSavingsProfile. All these line items are SCE line items that claim electrical savings but do not claim any gas savings. Hence, the IOUGasSector and IOUGasSavingsProfile fields are blank. In these cases, ex post electrical savings is calculated normally. Likewise, ex post therm savings are calculated and reported using interactive effects multipliers, but these therm savings will be negative since the starting value is zero.

Procedures for ERT Update for the Palm Desert Partnership Energy Efficiency Program (SCE2566, SCG3543)

Programs Included in Input File: SCE2566, SCG3543

Overview

The Local Government Partnership (LGP) contract group followed the CPUC Energy Division decision framework when updating evaluation parameters in the Palm Desert Partnership program. Direct EM&V study results were applied wherever possible. Where direct EM&V results were not available, the team considered whether other EM&V study results could reasonably be applied based on similarity in the measure type, customer segment, and delivery mechanism. If no other EM&V results were deemed to be applicable, the team applied DEER parameters if the measure was clearly map-able to DEER. If no DEER mapping was possible, the IOU savings parameters were passed through.

The methods for updating ERT parameters are enumerated below according to major measure category. Sources for all Irate, UES, and NTGR updates may be found by measure and building type in an attached table following the major measure category descriptions. Direct evaluation parameter updates include program-level NTGR, HVAC early retirement UES and Irate, and RCA Irate.

Linear Fluorescent Lamps(LFL)

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Installation Rate Update

For almost all LFL measures, installation rates were applied from Table 4-1 of the Itron HIM study. Installation rates were applied from SCE2511 for direct install measures and SCE2517 for downstream rebate measures. Confidence and precision estimates can be found in Table 3-23. The following measure names did not map to the Itron study and received pass-through I-rates instead:

- 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.
- (2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.
- (3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL
- (4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL

In addition, the following combinations of EDFilledTargetSector and measure did not map to Itron study and received pass-through I-rates instead:

- ALL LFL measures in Hotel_Motel
- 3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL in Medical_Clinic

UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

For almost all LFL measures, UES Parameters were updated from Appendix K of the Itron HIM study and in collaboration with the Itron team that developed those results. UES updates were applied from SCE2511 for direct install measures and SCE2517 for downstream rebate measures. Confidence and precision estimates can be found in Table 3-27. The following measure names did not map to the Itron study and received updates from DEER 2008 instead (version dated 29Mar2008):

- (1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.

- (2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.
- (3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL
- (4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL

In addition to being unmapped to the Itron HIM study, the following measures could not be mapped to DEER 2008 and received a pass-through:

- (2) U-TUBE T-8 WITH ELEC. BAL.
- 2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.
- 2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.

The following combinations of Measure and EDFilledTargetSector could not be mapped to Itron HIM results, but could be mapped to DEER:

- ALL LFL measures in Hotel_Motel
- 3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL in Medical_Clinic

The following combinations of measure and EDFilledTargetSector could not be mapped to the Itron study or DEER 2008 and received a pass-through:

T-8 OR T-5 LAMP AND ELECTRONIC, 4-FOOT LAMP INSTALLED in:

- Hotel_Motel
- Misc._Commercial

Applying DEER 2008:

The following EDFilledTargetSectors had special treatment in the DEER mapping:

- School could not be mapped and received a pass-through.
- Misc. Commercial could not be mapped and received a pass-through.
- Hotel_Motel was mapped to Hotel.

Interactive Effects

For all LFL line items, the EDUES_{ikw,kWh,Therm} values were calculated using the appropriate interactive factor from the final tables provided by ED. The source for HVAC interactive effects factors, based on DEER 2008 methodology, is presented in section x.

Net-to-Gross Update

The Palm Desert program evaluation studied NTG ratios (net of free-ridership) for RCA (res and nonres), HVAC early retirement (res), and all other measures (residential and nonresidential).

For all LFL line items, NTGR updates from Table 8-4 in the LGP report were applied, for Commercial, non-RCA measures.

EUL Update

EUL updates were applied for all LFL measures using updated DEER lifetimes.

Compact Fluorescent Lamps & Fixtures(CFL)

This includes the following ED Measure Groups, in residential and commercial building types:

- CFL FIXTURE
- INTERIOR SCREW LIGHTING
- OUTDOOR SCREW LIGHTING

ERT updates were applied differently in Residential and Commercial applications. A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Residential Installation Rate Update

Neither the upstream lighting nor the residential retrofit results were ultimately applicable. All residential CFL measures were passed through.

Commercial Installation Rate Update

For almost all CFL measures, installation rates were applied from Table 4-2 of the Itron HIM study. Installation rates were applied from SCE2511 for direct install measures and SCE2517 for downstream rebate measures. Confidence and precision can be found in Table 3-25.

Residential UES Parameter Update (EDUESkW, EDUESkWh, and EDUESTherms)

Neither the upstream lighting nor the residential retrofit results were ultimately applicable to residential CFL measures. All residential CFL measures that could be mapped to DEER 2008 were given DEER UES updates. All remaining measures were passed through.

Commercial UES Parameter Update (EDUESkW, EDUESkWh, and EDUESTherms)

For almost all commercial CFL measures, UES Parameters were updated from Appendix K of the Itron HIM study. UES updates were applied from SCE2511 for direct install measures and SCE2517 for downstream rebate measures. Confidence and precision estimates can be found in Table 3-29. For measures that could not be mapped to the Itron HIM Study, DEER 2008 updates were applied in most cases. Any measure that could not be mapped to the Itron study or DEER was passed through.

Residential Interactive Effects

For all residential CFL line items, the $EDUES_{i_{kW,kWh,Therm}}$ values were calculated using the appropriate interactive factor from the final tables provided by ED. The source for HVAC interactive effects factors, based on DEER 2008 methodology, is presented in section x.

Commercial Interactive Effects

For all commercial CFL line items, the $EDUES_{i_{kW,kWh,Therm}}$ values were calculated using the appropriate interactive factor from the final tables provided by ED. The source for HVAC interactive effects factors, based on DEER 2008 methodology, is presented in section x.

Residential Net-to-Gross Update

For all residential CFL line items, NTGR updates from Table 8-4 in the LGP report were applied, for residential, non-RCA measures, non-early retirement measures.

Commercial Net-to-Gross Update

For all commercial CFL line items, NTGR updates from Table 8-4 in the LGP report were applied, for Commercial, non-RCA measures.

Residential EUL Update

EUL updates were applied for all residential CFL measures using updated DEER 2008 lifetimes. These were taken from 'DEER2008 Database Definition – EUL v2.xls', dated 10/23/2008, provided by Paul Reeves.

Commercial EUL Update

EUL updates were applied for all commercial CFL measures using updated DEER lifetimes.

Other Lighting Measures

The following ED Measure groups are included under Other Lighting Measures:

- EXIT SIGN
- HOLIDAY LIGHTS
- NIGHT LIGHT
- OCCUPANCY SENSOR
-

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Installation Rate Update

All Other Lighting Measures were not covered by other HIM groups and were passed through.

UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

All Other Lighting Measures were not covered by other HIM groups and were passed through.

Interactive Effects

No interactive effects were applied to Other Lighting Measures. These are measures such as occupancy sensors, night lights, and other lighting measures that were not available in the interactive effects lookup table.

Net-to-Gross Update

The Palm Desert program evaluation studied NTG ratios (net of free-ridership) for RCA (res and nonres), HVAC early retirement (res), and all other measures (res and nonres).

- For all residential other lighting line items, NTGR updates from Table 8-4 in the LGP report were applied, for residential, non-RCA measures, non-early retirement measures.
- For all commercial other lighting line items, NTGR updates from Table 8-4 in the LGP report were applied, for Commercial, non-RCA measures.

EUL Update

Where mappable, EULs were updated from DEER.

HVAC Equipment

This group includes residential HVAC early retirement, residential HVAC equipment upgrades, and commercial HVAC equipment upgrades found under the following ED Measure Groups:

• Rooftop or Split System	• PTAC/PTHP
• Room AC	• HVAC Unknown
• Furnace	

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Residential Installation Rate Update

All residential HVAC equipment upgrades and early replacements except room AC and furnaces received Irate updates from the LGP report, section 8.5.3. Confidence and precision estimates are found in section 8.3.1. Room AC received an Irate update from the Res Retrofit HIM results, although Palm Desert was not included in the Res Retrofit study design. Confidence and precision can be found in section 12.3. Furnaces were not mappable and were passed through.

Residential UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

All residential HVAC equipment upgrades and early replacements except room AC and furnaces received UES updates from the LGP report, table 8-8. Room AC and Furnace were not mappable to the Res Retrofit HIM results and were passed through.

Commercial Installation Rate Update

All commercial HVAC equipment upgrades received Irate updates from the Specialized HVAC HIM group (although not part of the Spec HVAC HIM study design), except for PTACs, which were passed through. Confidence and precision can be found in section 6.3.

Commercial UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

All commercial HVAC equipment upgrades received UES updates from the Specialized HVAC HIM group, except for PTACs, which were passed through.

Interactive Effects

No interactive effects were applied to HVAC measures.

Net-to-Gross Update

- For all residential HVAC early retirement and equipment upgrades except room AC, NTGR updates from Table 8-4 in the LGP report were applied, for residential early retirement.
- For room AC, NTGR updates from Table 8-4 in the LGP report were applied, for non-RCA, non- early retirement.
- For furnaces, NTGR was passed through.
- For all commercial HVAC equipment line items, NTGR updates from Table 8-4 in the LGP report were applied, for commercial, non-RCA measures.

EUL Update

Where mappable, EULs were updated from DEER.

All other HVAC and Envelope Measures

This group includes the following ED Measure Groups:

<ul style="list-style-type: none">• RCA	<ul style="list-style-type: none">• Duct Sealing and Insulation
<ul style="list-style-type: none">• HVAC Other	<ul style="list-style-type: none">• Insulation
<ul style="list-style-type: none">• Window Film	

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Installation Rate Update

- RCA measures except maintenance contracts (“CENTRAL AC MAINTENANCE”) were updated from the LGP report, Tables 8-11 and 8-13. Confidence and precision are found in section 8.3.1.
- Duct Sealing was updated using Specialized HVAC HIM results. Confidence and precision are found in section 7.3.
- Insulation was updated using Res Retrofit HIM results. Confidence and precision are found in section 10.3.
- All other HVAC non-equipment measures were passed through.

UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

- RCA measure UES' were updated using the Specialized HVAC HIM results, except for maintenance contracts ("CENTRAL AC MAINTENANCE"), which were passed through. Confidence and precision are found in section 5.3.
- All other remaining non-equipment HVAC measures were passed through, except residential window films, which had an obvious error. Residential Window Film received a DEER 05 update.

Interactive Effects

No interactive effects were applied to HVAC measures.

Net-to-Gross Update

- RCA measures except maintenance contracts ("CENTRAL AC MAINTENANCE") were updated from the LGP report, Table 8-4, RCA values for residential and commercial applications.
- Insulation received an update from Res Retrofit HIM results.
- All other residential HVAC non-equipment measures were updated from the LGP report, Table 8-4, for residential non-RCA, non-early retirement measures.
- All other commercial HVAC non-equipment measures were updated from the LGP report, Table 8-4, for commercial non-RCA measures.

EUL Update

Where mappable, EULs were updated from DEER.

Refrigeration Measures

This group includes the following ED Measure Groups:

- Refrigeration Door Gasket
- Refrigeration Strip Curtain

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Installation Rate Update

Where possible, refrigeration measure HIM results from ADM were applied. Confidence and precision are found in section 5.3 and 6.3. Remaining measure combinations were passed through.

UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

Where possible, refrigeration measure HIM results from ADM were extrapolated, although Palm was not part of the ADM study design. Remaining measure combinations were passed through. Confidence and precision are found in sections 5.3 and 6.3.

Interactive Effects

No interactive effects were applied to commercial refrigeration measures.

Net-to-Gross Update

All commercial refrigeration measures were updated from the LGP report, Table 8-4, for commercial non-RCA measures.

EUL Update

Where mappable, EULs were updated from DEER.

All Other Measures

This group includes the following ED Measure Groups:

Food Service	Information Survey	Irrigation	On-Site Audit	Plug Load Sensor	Pool Heater
Pool Pump	Pump	Unknown	Vending Machine Controller	VFD – Non HVAC Pumping	Water Heater

A general outline of the approach taken follows. Please reference the attached master table documenting UES, Irate, and NTGR updates for detailed treatment of combinations of measure name and building type.

Installation Rate Update

Pool pumps were updated using Res Retrofit HIM results. Confidence and precision are found in section 13.3. All other remaining measures were non mapped to HIMs and were passed through.

UES Parameter Update (EDUESkW, EDUESkWH, and EDUESTherms)

Pool pumps were updated using Res Retrofit HIM results. Confidence and precision are found in section 13.3. All other remaining measures were not mappable to HIMs or DEER and were passed through.

Interactive Effects

No interactive effects were applied to the remaining measures.

Net-to-Gross Update

- NTGRs for remaining commercial electric measures were updated from the LGP report, Table 8-4, for commercial non-RCA measures.
- NTGRs for remaining residential electric measures were updated from the LGP report, Table 8-4, for residential non-RCA, non-early retirement measures.
- NTGRs for remaining gas measures (Food Service, Water Heater, Pool Heater) were passed through.

EUL Update

Where mappable, EULs were updated from DEER.

Master Table of Results

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateType	UESType	NTGR Type	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
CFL FIXTURE	HARDWIRED FLOURESCENT FIXTURE, > 90 WATTS(INCANDESCENT BASECASE)	HARDWIRED FLOURESCENT FIXTURE, > 90 WATTS(INCANDESCENT BASECASE)	SMALL_OFFICE	Non Res	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
CFL FIXTURE	HARDWIRED FLUORESCENT FIXTURE, 66-90 WATTS(INCANDESCENT BASECASE)	HARDWIRED FLUORESCENT FIXTURE, 66-90 WATTS(INCANDESCENT BASECASE)	SMALL_OFFICE	Non Res	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
DUCT SEALING AND INSUL	CENTRAL AC DUCT SEAL	CENTRAL AC DUCT SEAL	RESIDENTIAL	Mobile Home	OTHEMV	PASSTHRU	EMV		Used Specialized HVAC Irate.	Specialized HVAC passed duct sealing through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
DUCT SEALING AND INSUL	CENTRAL AC DUCT SEAL	CENTRAL AC DUCT SEAL	RESIDENTIAL	Single Family	OTHEMV	PASSTHRU	EMV		Used Specialized HVAC Irate.	Specialized HVAC passed duct sealing through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
DUCT SEALING AND INSUL	CENTRAL AC DUCT TEST	CENTRAL AC DUCT TEST	RESIDENTIAL	Mobile Home	PassThru	PASSTHRU	EMV		No Savings Claimed.	No Savings Claimed.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
DUCT SEALING AND INSUL	CENTRAL AC DUCT TEST	CENTRAL AC DUCT TEST	RESIDENTIAL	Multi Family	PassThru	PASSTHRU	EMV		No Savings Claimed.	No Savings Claimed.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
DUCT SEALING AND INSUL	CENTRAL AC DUCT TEST	CENTRAL AC DUCT TEST	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		No Savings Claimed.	No Savings Claimed.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
EXIT SIGN	HIGH EFFICIENCY EXIT SIGN - LED	HIGH EFFICIENCY EXIT SIGN - LED	FAST_FOOD_RESTAURANT	Non Res	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDDERI	mpa	ctID	lrate Source Notes	UES Source Notes	NTGR Source Notes
EXIT SIGN	HIGH EFFICIENCY EXIT SIGN - LED	HIGH EFFICIENCY EXIT SIGN - LED	HOTEL_MOTEL	Non Res	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
EXIT SIGN	HIGH EFFICIENCY EXIT SIGN - LED	HIGH EFFICIENCY EXIT SIGN - LED	MISC_COMMERCIAL	Non Res	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
EXIT SIGN	HIGH EFFICIENCY EXIT SIGN - LED	HIGH EFFICIENCY EXIT SIGN - LED	SIT_DOW	Non Res	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
EXIT SIGN	HIGH EFFICIENCY EXIT SIGN - LED	HIGH EFFICIENCY EXIT SIGN - LED	SMALL_OFFICE	Non Res	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
FOOD SERVICE	(blank)	EERCONVECTIONOVEN	MISC_COMMERCIAL	(blank)	PassThru	PASSTHRU	PassThru				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
FURNACE	(blank)	CENTRALGASFURNACE92%AFUE-EARLYREPLACEMENT-MF	RESIDENTIAL	Unknow	PassThru	PASSTHRU	PassThru				No HIM Results for SCG.	No HIM Results for SCG.	No HIM Results for SCG.
FURNACE	(blank)	CENTRALGASFURNACE92%AFUE-EARLYREPLACEMENT-SF	RESIDENTIAL	Office	PassThru	PASSTHRU	PassThru				No HIM Results for SCG.	No HIM Results for SCG.	No HIM Results for SCG.
FURNACE	(blank)	CENTRALGASFURNACE92%AFUE-EARLYREPLACEMENT-SF	RESIDENTIAL	Unknow	PassThru	PASSTHRU	PassThru				No HIM Results for SCG.	No HIM Results for SCG.	No HIM Results for SCG.
HOLIDAY LIGHTS	STRING OF 100 LED HOLIDAY BULBS (4.72 WATTS PER STRING)	STRING OF 100 LED HOLIDAY BULBS (4.72 WATTS PER STRING)	MISC_COMMERCIAL	Single Family	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
HOLIDAY LIGHTS	STRING OF 50 LED HOLIDAY BULBS	STRING OF 50 LED HOLIDAY BULBS	MISC_COMMERCIAL	Single Family	PassThru	PASSTHRU	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGRType	EDDERImpactID	IRate Source Notes	UES Source Notes	NTGR Source Notes
	(3.5 WATTS PER STRING)	(3.5 WATTS PER STRING)	L								RCA measures,
HOLIDAY LIGHTS	STRING OF 70 LED HOLIDAY BULBS (3.8 WATTS PER STRING)	STRING OF 70 LED HOLIDAY BULBS (3.8 WATTS PER STRING)	MISC_COMMERCIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
HVAC OTHER	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 1	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 1	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
HVAC OTHER	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 2	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 2	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
HVAC OTHER	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 3	MULTI ZONE AIR DISTRIBUTION FOR CENTRAL AC SYSTEMS ZONE 3	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
HVAC UNKNOWN	HVAC SYSTEM FIRST QTY	HVAC SYSTEM FIRST QTY	RESIDENTIAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
HVAC UNKNOWN	HVAC SYSTEM FOURTH QTY	HVAC SYSTEM FOURTH QTY	RESIDENTIAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
HVAC UNKNOWN	HVAC SYSTEM SECOND QTY	HVAC SYSTEM SECOND QTY	RESIDENTIAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
HVAC UNKNOWN	HVAC SYSTEM THIRD QTY	HVAC SYSTEM THIRD QTY	RESIDENTIAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDDERI	mpa	ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
INFORMATI ONAL SURVEY	IN HOME SURVEY	SURVEY	RESIDENT IAL	Mobile Home	PassThru	PASSTHR U	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INFORMATI ONAL SURVEY	IN HOME SURVEY	SURVEY	RESIDENT IAL	Multi Family	PassThru	PASSTHR U	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INFORMATI ONAL SURVEY	IN HOME SURVEY	SURVEY	RESIDENT IAL	Single Family	PassThru	PASSTHR U	EMV				Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INSULATIO N	(blank)	WALLINSULATION(BLOWNIN,R-0-R- 13)-SF	RESIDENT IAL	Unknow n	OTHEMV	PASSTHR U	OthE MV				Used Res Retrofit HIM results for SDGE, CZ15.	Units error in Ex ante, passed through.	Used Res Retrofit HIM results for SDGE, CZ15.
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 13W	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM- w15- vSCx -			Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 13W	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15- vSCx -			Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 13W	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -			Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 13W- G25	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM- w15- vSCx -			Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW	INTERIOR SCREW- IN COMPACT	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15-			Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to	LGP Report Table 8-4, NTGR for Res, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	IRate Source Notes	UES Source Notes	NTGR Source Notes
LIGHTING	FLUORESCENT LAMP (CFL) 13W-G25							vSCx-		DEER 06-07.	RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-G25	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-P38	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-P38	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-P38	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R20	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R20	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vSCx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR	INTERIOR SCREW-	CFL (ALL HOME	RESIDENT	Single	PassThru	DEER	EMV	SFM-	Res Retrofit HIM not	Res Retrofit HIM not	LGP Report Table 8-4,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
SCREW LIGHTING	IN COMPACT FLUORESCENT LAMP (CFL) 13W-R20	TYPES)	IAL	Family				w15-vScx-	applicable.	applicable, mapped to DEER 06-07.	NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Rate Source Notes	UES Source Notes	NTGR Source Notes
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-SI	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-SI	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 13W-SI	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-G25	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW	INTERIOR SCREW-IN COMPACT	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to	LGP Report Table 8-4, NTGR for Res, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	IRate Source Notes	UES Source Notes	NTGR Source Notes
LIGHTING	FLUORESCENT LAMP (CFL) 20W- G25							vSCx -		DEER 06-07.	RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- G25	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- P38	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- P38	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 20W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR	INTERIOR SCREW-	CFL (ALL HOME	RESIDENT	Multi	PassThru	DEER	EMV	SFM-	Res Retrofit HIM not	Res Retrofit HIM not	LGP Report Table 8-4,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
SCREW LIGHTING	IN COMPACT FLUORESCENT LAMP (CFL) 20W-R30	TYPES)	IAL	Family				w15-vScx -	applicable.	applicable, mapped to DEER 06-07.	NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 20W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildi ngType	IRateType	UESType	NTGR Type	EDD EERI mpa ctID	IRate Source Notes	UES Source Notes	NTGR Source Notes
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-G25	CFL (ALL HOME TYPES)	RESIDENTIAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-G25	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-G25	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-P38	CFL (ALL HOME TYPES)	RESIDENTIAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW	INTERIOR SCREW-IN COMPACT	CFL (ALL HOME TYPES)	RESIDENTIAL	Single Family	PassThru	DEER	EMV	SFM-w15-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to	LGP Report Table 8-4, NTGR for Res, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	IRate Source Notes	UES Source Notes	NTGR Source Notes
LIGHTING	FLUORESCENT LAMP (CFL) 23W- P38							vSCx -		DEER 06-07.	RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R20	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW- IN COMPACT FLUORESCENT LAMP (CFL) 23W- R30	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM- w15- vSCx -	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
INTERIOR	INTERIOR SCREW-	CFL (ALL HOME	RESIDENT	Mobile	PassThru	DEER	EMV	SFM-	Res Retrofit HIM not	Res Retrofit HIM not	LGP Report Table 8-4,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
SCREW LIGHTING	IN COMPACT FLUORESCENT LAMP (CFL) 23W-R40	TYPES)	IAL	Home				w15-vScx-	applicable.	applicable, mapped to DEER 06-07.	NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-R40	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Multi Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	INTERIOR SCREW-IN COMPACT FLUORESCENT LAMP (CFL) 23W-SI	CFL (ALL HOME TYPES)	RESIDENT IAL	Single Family	PassThru	DEER	EMV	SFM-w15-vScx-	Res Retrofit HIM not applicable.	Res Retrofit HIM not applicable, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	SCREW-IN CFL 13 W EXTERIOR	SCREW-IN CFL 13 W EXTERIOR	MISC._COMMERCIAL	Multi Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDD EERI mpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
INTERIOR SCREW LIGHTING	SCREW-IN CFL 13 W EXTERIOR	SCREW-IN CFL 13 W EXTERIOR	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Res Retrofit HIM not applicable.	Res Retrofit not applicable, exterior CFL not in DEER.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, >=27WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, >=27WATTS	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vScx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	FOOD_STORE	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vScx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	LARGE_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	MEDICAL_CLINIC	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERI mpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCHOOL	Non Res	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS, REFLECTOR LAMP	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW	SCREW-IN COMPACT	SCREW-IN COMPACT	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
LIGHTING	FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP						vScx-		DEER 06-07 for Hotel.	RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	MEDICAL_CLINIC	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SIT_DOWNSURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SMALL_OFFICE	Non Res	PassThru	DEER	EMV	Of-w15-vScx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS REFLECTOR LAMP	SCREW-IN COMPACT FLUORESCENT LAMP, 14-26 WATTS, REFLECTOR LAMP	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vScx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERI mpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	LARGE_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SIT_DOWNSURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
INTERIOR SCREW LIGHTING	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SCREW-IN COMPACT FLUORESCENT LAMP, 5 - 13 WATTS	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
IRRIGATION	BIG HORN GOLF CLUB CHIA WELL 1 & 2 PUMP UPGRADE	BIG HORN GOLF CLUB CHIA WELL 1 & 2 PUMP UPGRADE	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
IRRIGATION	NEW IRRIGATION	NEW IRRIGATION	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	HOTEL_HOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	(1) 96" T-12 TO (2) 48" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	PassThru	DEER	EMV	OfS-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	HOTEL_HOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	SIT_DOWNSURANT	Non Res	PassThru	DEER	EMV	RSD-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	(2) 96" T-12 TO (4) 48" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	PassThru	DEER	EMV	OfS-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERI mpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
									Downstream Rebate		
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	HOTEL_MOTEL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	MEDICAL_CLINIC	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	SIT_DOWNTOWN_RESTAURANT	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(2) U-TUBE T-8 WITH ELEC. BAL.	(2) U-TUBE T-8 WITH ELEC. BAL.	SMALL_OFFICE	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	MEDICAL_CLINIC	Non Res	PassThru	DEER	EMV	Hsp-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
	OUTPUT ELEC. BAL.REFL	ELEC. BAL.REFL							Downstream Rebate		
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SCHOOL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SIT_DOW N_RESTA URANT	Non Res	PassThru	DEER	EMV	RSD- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(3) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SMALL_O FFICE	Non Res	PassThru	DEER	EMV	Ofs- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	FAST_FO OD_REST AURANT	Non Res	PassThru	DEER	EMV	RFF- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	HOTEL_M OTEL	Non Res	PassThru	DEER	EMV	Htl- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	MEDICAL _CLINIC	Non Res	PassThru	DEER	EMV	Hsp- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	MISC_CO MMERCIA	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
NT	WITH HIGH OUTPUT ELEC. BAL.REFL	HIGH OUTPUT ELEC. BAL.REFL	L						Install, SCE2517 for Downstream Rebate		RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SCHOOL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SIT_DOW N_RESTA URANT	Non Res	PassThru	DEER	EMV	RSD- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	(4) 48" T-12 TO (2) 48" T-8 LAMP WITH HIGH OUTPUT ELEC. BAL.REFL	SMALL_O FFICE	Non Res	PassThru	DEER	EMV	Ofs- w15- vScx -	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	FAST_FO OD_REST AURANT	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	HOTEL_M OTEL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	MISC_CO MMERCI AL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 24" T-8 LAMP WITH ELEC. BAL.	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDD EERI mpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
LINEAR FLUORESCENT	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	HOTEL_MOTEL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	2ND GEN. (1) 36" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	MEDICAL_CLINIC	Non Res	PassThru	DEER	EMV	Hsp-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	SIT_DOW_N_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	3RD GEN. (1) 48" T-8 LAMP WITH ELEC. BAL	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct	Itron report, App K, SCE 2511 for Direct	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
NT	ELEC. BAL.	BAL.							Install, SCE2517 for Downstream Rebate	Install, SCE2517 for Downstream Rebate	RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vSCx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	MEDICAL_CLINIC	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	SCHOOL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	SIT_DOWNSURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (2) 48" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	MEDICAL_CLINIC	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
LINEAR FLUORESCENT	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (3) 48" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	HOTEL_MOTEL	Non Res	PassThru	DEER	EMV	Htl-w15-vScx-	Not Mappable to Itron HIM work	Not Mappable to Itron HIM work, mapped to DEER 06-07 for Hotel.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	MEDICAL_CLINIC	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	MISC_COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	SIT_DOWNS RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	3RD GEN. (4) 48" T-8 LAMP WITH ELEC. BAL.	SMALL_OFFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
LINEAR FLUORESCENT	T-8 OR T-5 LAMP AND ELECTRONIC,	T-8 OR T-5 LAMP AND ELECTRONIC,	HOTEL_MOTEL	Non Res	OTHEMV	PASSTHRU	EMV		Itron HIM, Table 4-1, SCE2511 for Direct	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
NT	4-FOOT LAMP INSTALLED	4-FOOT LAMP INSTALLED							Install, SCE2517 for Downstream Rebate		RCA measures,
LINEAR FLUORESC ENT	T-8 OR T-5 LAMP AND ELECTRONIC, 4-FOOT LAMP INSTALLED	T-8 OR T-5 LAMP AND ELECTRONIC, 4-FOOT LAMP INSTALLED	MISC._CO MMERCI AL	Non Res	OTHEMV	PASSTHR U	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
LINEAR FLUORESC ENT	T-8 OR T-5 LAMP AND ELECTRONIC, 4-FOOT LAMP INSTALLED	T-8 OR T-5 LAMP AND ELECTRONIC, 4-FOOT LAMP INSTALLED	SMALL_O FFICE	Non Res	OTHEMV	OTHEMV	EMV		Itron HIM, Table 4-1, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Itron report, App K, SCE 2511 for Direct Install, SCE2517 for Downstream Rebate	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
NIGHT LIGHT	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	MISC._CO MMERCI AL	Mobile Home	PassThru	PASSTHR U	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
NIGHT LIGHT	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	MISC._CO MMERCI AL	Multi Family	PassThru	PASSTHR U	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
NIGHT LIGHT	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	LED PLUG-IN NIGHT LIGHTS (0.3 WATT)	MISC._CO MMERCI AL	Single Family	PassThru	PASSTHR U	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
OCCUPANC Y SENSOR	OCCUPANCY SENSOR WALL MOUNTED	OCCUPANCY SENSOR WALL MOUNTED	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Not Mappable to Itron HIM work	Not Mappable to Itron HIM work	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
OCCUPANC Y SENSOR	WALL OR CEILING MOUNTED LIGHTING SENSOR <500 WATTS CONTROLLED	WALL OR CEILING MOUNTED LIGHTING SENSOR <500 WATTS CONTROLLED	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Not Mappable to Itron HIM work	Not Mappable to Itron HIM work	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
OCCUPANC Y SENSOR	WALL OR CEILING MOUNTED LIGHTING SENSOR >=500 WATTS CONTROLLED	WALL OR CEILING MOUNTED LIGHTING SENSOR >=500 WATTS CONTROLLED	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Not Mappable to Itron HIM work	Not Mappable to Itron HIM work	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
OCCUPANC Y SENSOR	WALLBOX LIGHTING SENSOR	WALLBOX LIGHTING SENSOR	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Not Mappable to Itron HIM work	Not Mappable to Itron HIM work	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildiType	IRateType	UESType	NTGR Type	EDDERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
			L								RCA measures,
ON-SITE AUDIT	COMMERCIAL AUDITS (BEHAVIOR & MORE)	COMMERCIAL AUDITS (BEHAVIOR & MORE)	MISC._COMMERCIAL	Non Res	PassThru	PASSTHRU	EMV		Not an HIM, does not fit into RCX, Pass Through.	Not an HIM, does not fit into RCX, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OTHER	AWNINGS	AWNINGS	RESIDENTIAL	Mobile Home	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
OTHER	AWNINGS	AWNINGS	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
OTHER	SUNSCREENS	SUNSCREENS	RESIDENTIAL	Mobile Home	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
OTHER	SUNSCREENS	SUNSCREENS	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
OUTDOOR SCREW LIGHTING	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	MISC._COMMERCIAL	Mobile Home	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	MISC._COMMERCIAL	Multi Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	ES R30 REFLECTOR CFL 15 WATT EXTERIOR	MISC._COMMERCIAL	Single Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install,	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
									SCE2517 for Downstream Rebate		
OUTDOOR SCREW LIGHTING	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	MISC._COMMERCIAL	Mobile Home	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	MISC._COMMERCIAL	Multi Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	ES R40 REFLECTOR CFL 23 WATT EXTERIOR	MISC._COMMERCIAL	Single Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	SCREW-IN CFL 20 W EXTERIOR	SCREW-IN CFL 20 W EXTERIOR	MISC._COMMERCIAL	Multi Family	OTHEMV	PASSTHRU	EMV		Itron Report, Table 4-2, SCE2511 for Direct Install, SCE2517 for Downstream Rebate	Not Mappable to Itron HIM work or DEER	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
OUTDOOR SCREW LIGHTING	SCREW-IN CFL 20 W EXTERIOR	SCREW-IN CFL 20 W EXTERIOR	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Res Retrofit HIM not applicable.	Res Retrofit not applicable, exterior CFL not in DEER.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
PLUG LOAD SENSOR	PC NETWORK SOFTWARE	PC NETWORK SOFTWARE	K_THRU_12_SCHOOL	Non Res	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
POOL HEATER	(blank)	POOLHEATERUPGRADEEARLYREPLACEMENT	RESIDENTIAL	Unknown	PassThru	PASSTHRU	PassThru		Not an HIM, Pass Through.	Not an HIM, Pass Through.	Not an HIM, Pass Through.
POOL HEATER	(blank)	SINGLEFAMILLYPOOLHEATERUPGRAD	RESIDENTIAL	Office	PassThru	PASSTHRU	PassThru		Not an HIM, Pass Through.	Not an HIM, Pass Through.	Not an HIM, Pass Through.

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
		EEARLYREPLACEMENT									
POOL PUMP	POOL PUMP - VARIABLE SPEED	POOL PUMP - VARIABLE SPEED	RESIDENTIAL	Non Res	OTHEMV	OTHEMV	EMV		Used Res Retrofit SDGE HIM results for UES and Irate.	Used Res Retrofit SDGE HIM results for UES and Irate.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
POOL PUMP	POOL PUMP - VARIABLE SPEED	POOL PUMP - VARIABLE SPEED	RESIDENTIAL	Single Family	OTHEMV	OTHEMV	EMV		Used Res Retrofit SDGE HIM results for UES and Irate.	Used Res Retrofit SDGE HIM results for UES and Irate.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
PTAC/PTHP	PACKAGE TERMINAL AIR CONDITIONERS	PACKAGE TERMINAL AIR CONDITIONERS	MISC_COMMERCIAL	Non Res	PassThru	PASSTHRU	EMV		Specialized Commercial HIM results do not map, pass through.	Specialized Commercial HIM results do not map, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
PUMP	WELL PUMP #1 REPLACEMENT	WELL PUMP #1 REPLACEMENT	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
PUMP	WELL PUMP 5629	WELL PUMP 5629	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
PUMP	WELL PUMP 5631	WELL PUMP 5631	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	CENTRAL AC MAINTENANCE	RESIDENTIAL	Mobile Home	PassThru	PASSTHRU	EMV		Maintenance contract does not map to RCA results, pass through.	Maintenance contract does not map to RCA results, pass through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR	CENTRAL AC MAINTENANCE	RESIDENTIAL	Multi Family	PassThru	PASSTHRU	EMV		Maintenance contract does not map to RCA results, pass through.	Maintenance contract does not map to RCA results, pass through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGRType	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
	FLOW)										
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	CENTRAL AC MAINTENANCE	RESIDENTIAL	Single Family	PassThru	PASSTHRU	EMV		Maintenance contract does not map to RCA results, pass through.	Maintenance contract does not map to RCA results, pass through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	MOBILE HOME CENTRAL AC MAINT.	RESIDENTIAL	Mobile Home	EMV	OTHEMV	EMV		LGP Report Table 8-11.	Specialized HVAC HIM Results used for SCE2502, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	MULTI FAMILY CENTRAL AC MAINT.	RESIDENTIAL	Multi Family	EMV	OTHEMV	EMV		LGP Report Table 8-11.	Specialized HVAC HIM Results used for SCE2502, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	SINGLE FAMILY CENTRAL AC MAINT.	RESIDENTIAL	Mobile Home	EMV	OTHEMV	EMV		LGP Report Table 8-11.	Specialized HVAC HIM Results used for SCE2502, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT REFRIGERANT CHARGE & AIR FLOW)	SINGLE FAMILY CENTRAL AC MAINT.	RESIDENTIAL	Multi Family	EMV	OTHEMV	EMV		LGP Report Table 8-11.	Specialized HVAC HIM Results used for SCE2502, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
RCA	CENTRAL AC MAINTENANCE (CORRECT	SINGLE FAMILY CENTRAL AC MAINT.	RESIDENTIAL	Single Family	EMV	OTHEMV	EMV		LGP Report Table 8-11.	Specialized HVAC HIM Results used for SCE2507, CZ15,	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	IRate Source Notes	UES Source Notes	NTGR Source Notes
	REFRIGERANT CHARGE & AIR FLOW)									building types aggregated.	Retirement measures,
RCA	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	K_THRU_12_SCHOOL	Non Res	EMV	OTHEMV	EMV		LGP Report Table 8-13.	Specialized HVAC HIM Results used for SCE2507, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Com RCA measures,
RCA	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	MISC_COMMERCIAL	Non Res	EMV	OTHEMV	EMV		LGP Report Table 8-13.	Specialized HVAC HIM Results used for SCE2507, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Com RCA measures,
RCA	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	RESTAURANT	Non Res	EMV	OTHEMV	EMV		LGP Report Table 8-13.	Specialized HVAC HIM Results used for SCE2507, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Com RCA measures,
RCA	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	HVAC DIAGNOSTICS AND REPAIR BY THE UNIT OF THE TON	SMALL_OFFICE	Non Res	EMV	OTHEMV	EMV		LGP Report Table 8-13.	Specialized HVAC HIM Results used for SCE2507, CZ15, building types aggregated.	LGP Report Table 8-4, NTGR for Com RCA measures,
REFRIGERATION DOOR GASKET	DOOR GASKETS ON GLASS DOORS	DOOR GASKETS ON GLASS DOORS	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	DOOR GASKETS ON GLASS DOORS	DOOR GASKETS ON GLASS DOORS	SIT_DOWNS RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	DOOR GASKETS ON GLASS FREEZER DOORS	DOOR GASKETS ON GLASS FREEZER DOORS	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	DOOR GASKETS ON GLASS	DOOR GASKETS ON GLASS	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results	Refrigeration HIM measure results	LGP Report Table 8-4, NTGR for Com, Non-

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Rate Source Notes	UES Source Notes	NTGR Source Notes
GASKET	REFRIGERATOR DOORS	REFRIGERATOR DOORS	AURANT						applied.	applied.	RCA measures,
REFRIGERATION DOOR GASKET	DOOR GASKETS ON GLASS REFRIGERATOR DOORS	DOOR GASKETS ON GLASS REFRIGERATOR DOORS	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	GLASS DOOR COOLER/FREEZER GASKETS	GLASS DOOR COOLER/FREEZER GASKETS	GROCERY_STORE	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	MAIN DOOR COOLER DOOR GASKETS (WALK-IN)	MAIN DOOR COOLER DOOR GASKETS (WALK-IN)	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	MAIN DOOR COOLER DOOR GASKETS (WALK-IN)	MAIN DOOR COOLER DOOR GASKETS (WALK-IN)	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	WALKIN DOOR COOLER DOOR GASKETS	WALKIN DOOR COOLER DOOR GASKETS	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION DOOR GASKET	WALKIN DOOR FREEZER DOOR GASKETS	WALKIN DOOR FREEZER DOOR GASKETS	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION STRIP CURTAIN	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	FAST_FOOD_RESTAURANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION STRIP CURTAIN	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	MISC_COMMERCIAL	Non Res	PassThru	PASSTHRU	EMV		Refrigeration HIM measure results not applicable, pass through.	Refrigeration HIM measure results not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
REFRIGERATION STRIP CURTAIN	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	INFILTRATION BARRIER FOR WALK-INS (STRIP CURTAINS)	SIT_DOW N_RESTA URANT	Non Res	OTHEMV	OTHEMV	EMV		Refrigeration HIM measure results applied.	Refrigeration HIM measure results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	IRate Source Notes	UES Source Notes	NTGR Source Notes
	CURTAINS)	CURTAINS)									
REFRIGERA TION STRIP CURTAIN	STRIP CURTAINS, COOLER (RESTAURANT)	STRIP CURTAINS, COOLER (RESTAURANT)	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Refrigeration HIM measure results not applicable, pass through.	Refrigeration HIM measure results not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
REFRIGERA TION STRIP CURTAIN	STRIP CURTAINS, FREEZER (RESTAURANT)	STRIP CURTAINS, FREEZER (RESTAURANT)	MISC._CO MMERCI AL	Non Res	PassThru	PASSTHR U	EMV		Refrigeration HIM measure results not applicable, pass through.	Refrigeration HIM measure results not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
ROOFTOP OR SPLIT SYSTEM	< 5 TONS, THREE PHASE, SEER 12 OR EER 11	< 5 TONS, THREE PHASE, SEER 12 OR EER 11	MISC._CO MMERCI AL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
ROOFTOP OR SPLIT SYSTEM	> 11.25 TONS, EER 10.6	> 11.25 TONS, EER 10.6	MISC._CO MMERCI AL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
ROOFTOP OR SPLIT SYSTEM	> 5 TONS, BUT < 11.25 TONS, EER 11	> 5 TONS, BUT < 11.25 TONS, EER 11	MISC._CO MMERCI AL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
ROOFTOP OR SPLIT SYSTEM	12 EER OR 14 SEER 2 TONS	12 EER OR 14 SEER 2 TONS	HOTEL_M OTEL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	RESIDENT IAL	Mobile Home	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for early retirement portion.	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	RESIDENT IAL	Multi Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for early retirement portion.	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	CENTRAL AC EARLY RETIREMENT (TIER 1 & 2 ADDER)	RESIDENT IAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for early retirement portion.	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP	CENTRAL AC	CENTRAL AC SUPER	RESIDENT	Mobile	EMV	EMV	EMV		LGP Report Section	LGP Report Table 8-8,	LGP Report Table 8-4,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledTargetSector	IOUPrgTrkBuildi	IRateType	UESType	NTGR	EDD EERI mpa ctID	Rate Source Notes	UES Source Notes	NTGR Source Notes
OR SPLIT SYSTEM	SUPER HIGH PERFORMANCE	HIGH PERFORMANCE	IAL	Home					8.5.3, early retirement verification rate	UES for high efficiency equipment	NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC SUPER HIGH PERFORMANCE	CENTRAL AC SUPER HIGH PERFORMANCE	RESIDENT IAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC TIER 1	CENTRAL AC TIER 1	RESIDENT IAL	Mobile Home	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC TIER 1	CENTRAL AC TIER 1	RESIDENT IAL	Multi Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC TIER 1	CENTRAL AC TIER 1	RESIDENT IAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC TIER 2	CENTRAL AC TIER 2	RESIDENT IAL	Mobile Home	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	CENTRAL AC TIER 2	CENTRAL AC TIER 2	RESIDENT IAL	Single Family	EMV	EMV	EMV		LGP Report Section 8.5.3, early retirement verification rate	LGP Report Table 8-8, UES for high efficiency equipment	LGP Report Table 8-4, NTGR for Res Early Retirement
ROOFTOP OR SPLIT SYSTEM	PACKAGE SYSTREM <63.3 TONS 11 EER OR 13 SEER	PACKAGE SYSTREM <63.3 TONS 11 EER OR 13 SEER	MISC._COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
ROOFTOP OR SPLIT SYSTEM	SPLIT SYSTEMS, 12 EER OR 14 SEER	SPLIT SYSTEMS, 12 EER OR 14 SEER	MISC._COMMERCIAL	Non Res	OTHEMV	OTHEMV	EMV		Specialized HVAC HIM results applied.	Specialized HVAC HIM results applied.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaName	EDFilledTargetSector	IOUPrgTrkBuildingType	IRateType	UESType	NTGR Type	EDDERImpactID	Irate Source Notes	UES Source Notes	NTGR Source Notes
ROOM AC	ROOM A/C	ROOM A/C	RESIDENTIAL	Mobile Home	OTHEMV	PASSTHRU	EMV		Used Irate from Res Retrofit HIM study.	Res Retrofit HIM not mappable, pass through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
ROOM AC	ROOM A/C	ROOM A/C	RESIDENTIAL	Single Family	OTHEMV	PASSTHRU	EMV		Used Irate from Res Retrofit HIM study.	Res Retrofit HIM not mappable, pass through.	LGP Report Table 8-4, NTGR for Res, Non-RCA, Non Early Retirement measures,
UNKNOWN	BIGHORN DEV. CANYON BOOSTERS	BIGHORN DEV. CANYON BOOSTERS	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
UNKNOWN	BIGHORN MOUNTAIN COURSE HIGH SIDE C UPGRADE	BIGHORN MOUNTAIN COURSE HIGH SIDE C UPGRADE	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
UNKNOWN	COACHELLA VALLEY WATER DEPARTMENT - WELL 5624	COACHELLA VALLEY WATER DEPARTMENT - WELL 5624	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
UNKNOWN	THE LAKES COUNTRY CLUB - LAKE 13 BST-2,3 STATION 14	THE LAKES COUNTRY CLUB - LAKE 13 BST-2,3 STATION 14	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
UNKNOWN	WOODHAVEN COUNTRY CLUB	WOODHAVEN COUNTRY CLUB	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
VENDING MACHINE CONTROLLER	VENDING MACHINE CONTROLLER	VENDING MACHINE CONTROLLER	MISC_COMMERCIAL	Non Res	PassThru	PASSTHRU	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,
VFD - NON HVAC PUMPING	CANYON STATION #1 BOOSTER #3 & MOUNTAIN COURSE HIGH	CANYON STATION #1 BOOSTER #3 & MOUNTAIN COURSE HIGH ZONE	AGRICULTURAL	Non Res	PassThru	PASSTHRU	EMV		HIM Results of Itron SCIA not applicable, pass through.	HIM Results of Itron SCIA not applicable, pass through.	LGP Report Table 8-4, NTGR for Com, Non-RCA measures,

EDMeaGroup	IOUPrgTrkE3MeaCategory	IOUPrgTrkMeaNam	EDFilledT argetSector	IOUPrgT rkBuildi ngType	IRateTyp e	UESType	NTGR Type	EDD EERI mpa ctID	Irate Source Notes	UES Source Notes	NTGR Source Notes
	ZONE VFD	VFD									
WATER HEATER	(blank)	GASSTORAGEWATE RHEATER(EF>=0.62) - EARLYREPLACEMEN T	RESIDENT IAL	Unknow n	PassThru	PASSTHR U	PassT hru		HIM Results from res retrofit not applicable, pass through.	HIM Results from res retrofit not applicable, pass through.	HIM Results from res retrofit not applicable, pass through.
WINDOW FILM	REFLECTIVE WINDOW FILM - DESERT	REFLECTIVE WINDOW FILM - DESERT	LARGE_O FFICE	Non Res	PassThru	PASSTHR U	EMV		Not an HIM, Pass Through.	Not an HIM, Pass Through.	LGP Report Table 8-4, NTGR for Com, Non- RCA measures,
WINDOW FILM	WINDOW FILM ON SINGLE PANE CLEAR GLASS	WINDOW FILM ON SINGLE PANE CLEAR GLASS	RESIDENT IAL	Mobile Home	PassThru	DEER	EMV	RSF m15 75RS GSF	Not an HIM, Pass Through.	Error found in ex ante application of DEER05 UES, corrected with DEER UES for referenced DEERID.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,
WINDOW FILM	WINDOW FILM ON SINGLE PANE CLEAR GLASS	WINDOW FILM ON SINGLE PANE CLEAR GLASS	RESIDENT IAL	Single Family	PassThru	DEER	EMV	RSF m15 75RS GSF	Not an HIM, Pass Through.	Error found in ex ante application of DEER05 UES, corrected with DEER UES for referenced DEERID.	LGP Report Table 8-4, NTGR for Res, Non- RCA, Non Early Retirement measures,

4. COMMERCIAL FACILITIES

Contract Group: Commercial Facilities

Program(s) provided with update values: PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020, SCE2517, PGE2016, and SCE2566

Correction for the Final Report: HVAC interactive effects were incorrectly applied to some exterior lighting measures in programs PGE2036 and 2080, resulting in an over-estimation of the kW and kWh savings by 38 kW and 62,242 kWh, and an under-estimation of the therm savings by 7,164 therms, representing 0.01%, 0.02% and -0.3% of the total PG&E ex-post net kW, kWh and therm savings respectively. Holiday lights were incorrectly assigned to the Exterior Lighting Other measure group. HVAC interactive effects were appropriately applied to that measure.

Procedures for ERT Updates for Strip Curtain and Door Gasket Gross and Net Impacts Installation Rate

The Commercial Facilities contract group (ADM) did not provide particular install rate values for strip curtains and door gaskets as it is already included in the gross realization rate.

UES

The Commercial Facilities contract group (ADM) provided UES update values for the door gaskets and strip curtains records in programs PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020, SCE2517, PGE2016, and SCE2566 as they were part of their study design and sample frame.

Strip Curtains

The energy savings attributable to strip curtains depend on factors such as the amount of time that a walk-in door is open per day, the temperature differential between the refrigerated and infiltrating airs, and whether infiltration barriers were extant on a particular doorway prior to the installation of the strip curtains. The evaluation of strip curtains evaluated seven “domains of study” in which the aforementioned characteristics manifest in markedly different patterns. The ex-post per-unit energy savings, along with the achieved precision at the 90% confidence level are listed for each domain of study in the second through fifth columns of the table below.

Walk-In Type\Business Type	Supermarkets	Convenience Stores and Small Grocers	Restaurants	Refrigerated Warehouses
Unit Energy Savings for Coolers (kWh/ft ²)	159 ±33	14 ±6	18 ±5	
Unit Energy Savings for Freezers (kWh/ft ²)	409 ±146	16 ±7	77 ±57	177 ±56

The ex-post energy savings for each entry in the program tracking data are determined by mapping the measure onto one of the seven categories above. The last column of the table represents an unweighted average of the energy savings for the four business types. If it is not possible to map a business type onto one of the first four business

types, the energy savings, demand reduction, and NTGR are “passed thru”. The mapping of the energy savings for the appropriate domains of study to the entries in the program tracking data has two components: Firstly, the business type must be determined from the program tracking data. Secondly, it should be determined whether the walk-in unit is a cooler or a freezer.

The determination of business type is possible through (1) examination of North American Industry Classification System (NAICS) descriptions in the tracking data, (2) examination of the facility square footage and square footage of curtains installed as reported in the program tracking data (3) examination of facility name as reported in the program tracking data (some programs targeted major supermarkets), and (4) examination of the business type as defined in the field EDFilledMeaElecEndUseShape.

The NAICS descriptions alone are sufficient for classification purposes with the following exception: the descriptions fail to differentiate between chain supermarkets and small independent grocers. The evaluation findings suggest that larger facilities (e.g., above 15,000 ft²) tend to have much more frequent and lengthier accesses to the walk-in units. In comparison, the daily “door-open times” for small grocers (e.g., 5,000 ft² to 10,000 ft²) were an order of magnitude shorter than those for larger facilities. Therefore, if a facility is initially identified as a “grocery” through its NAICS description, it is recast as a supermarket if the sales floor or facility square footage is listed and is above 15,000 ft², or if the facility had at least 75 ft² of strip curtains replaced. According to our field experience, these two traits are consistent with businesses with operations that require frequent and lengthy accesses to the walk-in units. The typical small grocer encountered in our evaluation is akin to an overgrown convenience store and tends to have one beverage cooler and perhaps one small meat freezer.

The determination of walk-in type is possible for SCE data. SCE’s ex-ante framework assigns different per-unit energy savings for strip curtains installed in freezers and coolers. The ex-ante energy savings depend on the climate zone and on the broad business type (restaurant or grocery). In this framework, strip curtains on freezers save more than 176 kWh/ft², while strip curtains on coolers save less than 176 kWh/ft². Thus, the walk-in type can be determined for SCE programs through examination of the ex-ante per unit savings. PG&E and SDG&E apply one ex-ante per-unit energy savings to all business types and walk-in types. As such, it is not possible to determine the walk-in type by examination of the ex-ante savings claims. For PG&E and SDG&E, we use weighted averages of freezers and coolers for each particular business type, as determined from our fieldwork. These averages, along with the weights of freezers and coolers for each business type, are listed in the table below. In the development of ex-ante work papers, PG&E and SDG&E assumed a mix of 20% freezers and 80% coolers. Our evaluation generally found a higher percentage of freezers than 20%, as listed in the table below.

Walk-In Type\Business Type	Convenience			Refrigerated Warehouses
	Supermarkets	Stores and Small Grocers	Restaurants	
Percent Coolers	59%	79%	52%	
Percent Freezers	41%	21%	48%	177 ±53
Unit Energy Savings (kWh/ft ²)	262 ±63	15 ±6	46 ±22	

Door Gaskets

There are two domains of study for door gaskets: freezers and coolers. The energy savings for door gaskets are not well correlated with business type location. The evaluation effort for door gaskets determined the leakage of baseline gaskets as a fraction of the leakage that would occur if the gaskets were removed entirely. This, along with monitored data of sales floor and freezer temperatures were used to create a model that predicts the energy savings door gaskets for coolers and freezers for each climate zone (the climate zone influences the energy savings primarily through the efficiency of the refrigeration system). The results are listed in the table below. The relative precision for the gasket energy savings at the 90% confidence limit is 154%.

Climate Zone	Unit Energy Savings for Freezers (kWh/ft)	Unit Energy Savings for Coolers (kWh/ft)
1	3.4	0.5
2	3.5	0.5
3	3.5	0.5
4	3.6	0.5
5	3.5	0.5
6	3.7	0.5
7	3.7	0.5
8	3.7	0.5
9	3.7	0.5
10	3.7	0.5
11	3.6	0.5
12	3.5	0.5
13	3.6	0.5
14	3.5	0.5
15	3.6	0.4
16	3.3	0.5

The energy savings from the table above are readily mapped onto SCE tracking data because the SCE ex-ante framework specifies different per-unit savings by climate zone and case-type (low or medium temperature). For PG&E and SDG&E, we applied a weighted average per-unit energy savings of 2.94 kWh/ft. This average is weighted 80% toward freezers, 20% toward coolers. This mix is slightly higher than the SCE weights of 73%/27% (freezer/cooler) because PG&E tended to have large programs that focused on major supermarkets that had a higher density of low-temperature cases.

Demand Savings for Strip Curtains and Gaskets:

The demand savings for door gaskets are determined with a kWh to kW multiplier. The multiplier is the ratio of the average energy savings during the peak nine-hour period (2 PM to 5 PM on weekdays during heat wave) to the annual energy savings. The ratio is 0.000167 for door gaskets. For strip curtains, the ratio is multiplied by a “demand coincidence factor” which represents the likelihood that the refrigeration system would be removing the infiltration heat load during the peak nine hours. On average, this likelihood is 15%. The kWh to kW multiplier for strip curtains is 0.000025.

NTGR

The net to gross ratios for strip curtains in various IOU programs are listed below. Only SCE2511 and PGE2080 have enough statistics to warrant a program-specific NTGR. All other programs are assigned the statewide average NTGR for strip curtains.

Program Number	Mean	N	Std Dev	Std Error
PGE2020	0.49	16	0.19	0.05
PGE2029	0.23	1	.	.
PGE2051	0.59	2	0.07	0.05
PGE2063	0.35	4	0.32	0.16
PGE2066	0.57	6	0.20	0.08
PGE2080	0.40	21	0.21	0.04
SCE2511	0.37	39	0.25	0.04
SDGE3020	0.43	9	0.30	0.10
Total	0.41	98	0.24	0.02

Door Gaskets (PGE2021, PGE2080, SCE2511, SDGE3012, SDGE3020, SCE2517, and SCE2566)

The net to gross ratios for door gaskets in various IOU programs are listed below. No program has enough statistics to warrant a program-specific NTGR. All programs are assigned the statewide average NTGR for door gaskets.

Program Number	Mean	N	Std Dev	Std Error
PGE2020	-	2	-	-
PGE2051	-	3	-	-
PGE2063	0.15	3	0.26	0.15
PGE2066	0.47	6	0.33	0.13
PGE2080	0.15	16	0.24	0.06
SCE2511	0.19	25	0.24	0.05
SDGE3012	-	2	-	-
SDGE3020	0.31	14	0.27	0.07
Total	0.21	71	0.26	0.03

EUL

ADM did not provide any updated values for EULs, and therefore should have been passed through.

Procedures for ERT Update for PG&E High-Tech Program Gross and Net Impacts

ERT Input File Name: ERTInput_ADM_PGE2005

Program(s) Included in Input File: PGE2005

The Commercial Facilities Contract Group performed evaluation activities for the majority of the PGE2005 High-Tech Program. This memo outlines the protocols followed to populate the SPT database with the evaluated energy savings for the PGE2005 Program entries pulling together results from other evaluators whose population frame overlapped with Commercial Facilities. The PGE2005, High-Tech Program provided assistance to operators of Hi-Tech facilities to improve energy efficiency and reduce peak kW demand. The targeted customers included owners and operators of datacenters, clean room facilities and others in the hi-tech market segment where capital expansion, capital renewal, and/or operations and maintenance are driven by first-cost concerns. The objective of the PGE2005 program M&V effort was to evaluate the gross and net impacts on energy savings (kWh), demand reductions (kW), and natural gas savings due to participation in the program. The sample strata were defined by applying the Dalenius-Hodges stratification procedure to the data on ex-ante kWh savings. The efficacy of different allocations of sample points across strata was examined by considering the precision with which total kWh savings could be estimated at the 90% confidence level, with 10% precision being the target.

The overall PGE2005, High-Tech Program was divided between two evaluation contract groups: ADM Associates and SBW with ADM taking all records, including new construction, except those associated with retrocommissioning. The final ERT input file is a compilation of 227 projects in the ADM Associates population and 5 projects in the SBW sample. Nine unevaluated projects under the PGE2005 were deemed as PassThru due to their delayed addition to the STP database. These unevaluated projects were assigned direct ex-ante values as claimed by the IOU.

UES Update

The Standard Tracking Database developed by ED specifies per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms,) as well as an installation quantity (EDFilledUESQuantity) for each record. The IOU-claimed ex-ante energy savings can be calculated as the product between the installed quantity and the per-unit ex-ante energy savings (kW, kWh and Therms, respectively.)

Savings = EDFilledUESQuantity * EDFilledUES

The Commercial Facilities contract group employed the realization rate method in its evaluation. The per-unit ex-post energy savings (EDUESkW, EDUESkWh and EDUESTherms) were then calculated as the product between the per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms) and the corresponding first-year realization rates from the evaluation:

EDUES = EDFilledUES * RR (similar calculations for the kWh and kW fields.)

The UESType was set to "EMV" for all records, meaning this update is based on evaluation results from the 2006-2008 program cycle.

Installation Rate Update

First-year realization rates presented above include installation rate updates. No additional Installation Rate updates were necessary. The Installation Rate was set to 1, and the Installation Rate Type was set to "PassThru" for all records.

Interactive Effects

ADM calculated the interactive effects for measures in the PGE2005 program within the site-level evaluations and analyses. Accordingly, the gross realization rate (unit energy savings factors) include the impact of interactive effects and no additional modification of the unit energy savings because of interactive effects is required at the ERT level, therefore; the interactive effects factor is 1.0. When a whole building modeling and simulation tool such as eQuest was used as the primary analytical tool the interactive effects are included implicitly and were reported in the site reports accordingly. When the use of a whole building tool was not justified and a spreadsheet-based engineering

approach was used, then the interactive effects were calculated using interactive effects factors. ADM determined interactive effect factors based upon an eQuest simulation of a prototypical building model of the same occupancy type and overall building characteristics as the evaluated building.

Net-to-Gross Update

The Net to Gross Ratio for kW, kWh and Therms were assigned based upon telephone survey results on decision makers.⁸ Consistent with the evaluation approach, the Net-to-Gross ratios were applied to the Standard Program Tracking Database as shown in the following tables:

Table 1: CF Net to Gross Ratio for kW, kWh and Therms

CF Results: PGE2005	NTGR		
	kW	kWh	Therms
PG&E High-Tech Program	0.47	0.47	0.47

Table 2: RCx Net to Gross Ratio for kW, kWh and Therms

RCx Results: PGE2005	NTGR		
	kW	kWh	Therms
PG&E High-Tech Program	0.76	0.8	0.86

EUL Update

All records for the PGE2005, High Tech Program represent custom projects. Ex-ante EUL values were accepted and the EUL Type was set to “PasThru”.

PG&E 2005 Results

The Gross Realization Ratio for kW, kWh and Therms were assigned based upon a site level evaluation of the sample projects.⁹

Table 3: CF Gross Realization Ratio for kW, kWh and Therms

CF Results: PGE2005	kWh	kW	Therms
Weighted RR	0.446	0.589	0.127
Error at 90 % CI	±6.3%	±13.5%	±19.6%
n Projects in Sample	41	41	41

⁸ ADM Associates, Inc., Innovologie LLC, Marketing Excellence, Inc., C. J. Brown Energy, P.C., David Claridge, Ph.D. “Commercial Facilities Contract Group Direct Impact Evaluation Final Report.” *California Public Utilities Commission Energy Division*. (2010): Page 21

⁹ ADM Associates, Inc., Innovologie LLC, Marketing Excellence, Inc., C. J. Brown Energy, P.C., David Claridge, Ph.D. “Commercial Facilities Contract Group Direct Impact Evaluation Final Report.” *California Public Utilities Commission Energy Division*. (2010): Page 21

Table 4: RCx Gross Realization Ratio for kW, kWh and Therms

RCx Results: PGE2005	kWh	kW	Therms
Weighted RR	0.45	0.31	0.5
Error at 90 % CI	±23%	±51%	±25%
n Projects in Sample	24	24	24

Procedures for ERT Update for PG&E Large Commercial Program Gross and Net Impacts

ERT Input File Name: ERTInput_ADM_PGE2007

Program(s) Included in Input File: PGE2007

Correction for the final Report: False flags in the ERT were corrected for PGE2007. Out of 593 records evaluated, 5 (0.84%) had a FALSE flag generated by the E3 calculator. All of these FALSE flags were due to one Target Sector-End Use Shape combination, Commercial:Unknown.

The Commercial Facilities Contract Group performed evaluation activities for the PGE2007 Large Commercial Program. This memo outlines the protocols followed to populate the SPT database with the evaluated energy savings for the PGE2007 Program entries pulling together results from other evaluators whose population frame overlapped with Commercial Facilities. The objective of the PGE2007 program was to provide cost effective and comprehensive portfolio of program elements for targeted customers in order to improve energy efficiency and reduce peak demand. The targeted customers included large buildings where capital expansion, capital renewal, and/or operations and maintenance products and services are procured through contracts with manufacturers and/or distributors. The objective of the PGE2007 program M&V effort was to evaluate the gross and net impacts on energy savings (kWh), demand reductions (kW), and natural gas savings and due to participation in the program. The sample strata were defined by applying the Dalenius-Hodges stratification procedure to the data on ex-ante kWh savings. The efficacy of different allocations of sample points across strata was examined by considering the precision with which total kWh savings could be estimated at the 90% confidence level, with 10% precision being the target. The evaluation of PGE2007 Large Commercial Program was divided amongst three contract groups: ADM Associates, KEMA and SBW. The final ERT input file is a compilation of 443 projects conducted by ADM Associates, 84 projects submitted by KEMA and 51 projects submitted by SBW. Fifteen unevaluated projects under the PGE2005 were deemed as PassThru due to their delayed addition to the STP database. These unevaluated projects were assigned direct ex-ante values as claimed by the IOU.

UES Update

The Standard Tracking Database developed by ED specifies per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms,) as well as an installation quantity (EDFilledUESQuantity) for each record. The IOU-claimed ex-ante energy savings can be calculated as the product between the installed quantity and the per-unit ex-ante energy savings (kW, kWh and Therms, respectively.)

$$\text{Savings} = \text{EDFilledUESQuantity} * \text{EDFilledUES}$$

The Commercial Facilities contract group employed the realization rate method in its evaluation. The per-unit ex-post energy savings (EDUESkW, EDUESkWh and EDUESTherms) were then calculated as the product between the per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms) and the corresponding first-year realization rates from the evaluation:

$$\text{EDUES} = \text{EDFilledUES} * \text{RR} \text{ (similar calculations for the kWh and kW fields.)}$$

The UESType was set to “EMV” for all records, meaning this update is based on evaluation results from the 2006-2008 program cycle.

Installation Rate Update

First-year realization rates presented above include installation rate updates. No additional Installation Rate updates were necessary. The Installation Rate was set to 1, and the Installation Rate Type was set to “PassThru” for all records.

Interactive Effects

ADM calculated the interactive effects for measures in the PGE2007 program within the site-level evaluations and analyses. Accordingly, the gross realization rate (unit energy savings factors) include the impact of interactive effects and no additional modification of the unit energy savings because of interactive effects is required at the ERT level, therefore; the interactive effects factor is 1.0. When a whole building modeling and simulation tool such as eQuest was used as the primary analytical tool the interactive effects are included implicitly and were reported in the site reports accordingly. When the use of a whole building tool was not justified and a spreadsheet-based engineering approach was used, then the interactive effects were calculated using interactive effects factors. ADM determined interactive effect factors based upon an eQuest simulation of a prototypical building model of the same occupancy type and overall building characteristics as the evaluated building.

Net-to-Gross Update

The Net to Gross Ratio for kW, kWh and Therms were assigned based upon telephone survey results on decision makers.¹⁰ Consistent with the evaluation approach, the Net-to-Gross ratios were applied to the Standard Program Tracking Database as shown in the following tables:

Table 5: CF Net to Gross Ratio for kW, kWh and Therms

CF Results: PGE2007	NTGR		
	kW	kWh	Therms
PG&E Large Commercial Program	0.60	0.60	0.60

Table 6: RCx Net to Gross Ratio for kW, kWh and Therms

RCx Results: PGE2007	NTGR		
	kW	kWh	Therms
PG&E Large Commercial Program	0.76	0.8	0.86

Table 7: NRNC Net to Gross Ratio for kW, kWh and Therms

NRNC Results: PGE2007	NTGR		
	kW	kWh	Therms
PG&E Large Commercial Program	0.59	0.63	0.82

Table 8: NRNC Net to Gross Ratio for kW, kWh and Therms

Overall Results: PGE2007	NTGR		
	kW	kWh	Therms
PG&E Large Commercial Program	0.61	0.63	0.66

EUL Update

All records for the PGE2007, Large Commercial Program represent custom projects. Ex-ante EUL values were accepted and the EUL Type was set to "PassThru".

PG&E 2007 Results

The Gross Realization Ratio for kW, kWh and Therms were assigned based upon a site level evaluation of the sample projects.¹¹

Table 9: CF Gross Realization Ratio for kW, kWh and Therms

Overall PGE2007	kWh	kW	Therms
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¹⁰ ADM Associates, Inc., Innovologie LLC, Marketing Excellence, Inc., C. J. Brown Energy, P.C., David Claridge, Ph.D. "Commercial Facilities Contract Group Direct Impact Evaluation Final Report." *California Public Utilities Commission Energy Division*. (2010): Page 33

¹¹ ADM Associates, Inc., Innovologie LLC, Marketing Excellence, Inc., C. J. Brown Energy, P.C., David Claridge, Ph.D. "Commercial Facilities Contract Group Direct Impact Evaluation Final Report." *California Public Utilities Commission Energy Division*. (2010): Page 33

Weighted RR	0.795	0.845	0.210
90 % CI	±12.2%	±68.8%	±33.8%
n Projects in Sample	46	46	46

Table 10: RCx Gross Realization Ratio for kW, kWh and Therms

RCx Results: PGE2007	kWh	kW	Therms
Weighted RR	0.45	0.31	0.5
Error at 90 % CI	±23%	±51%	±25%
n Projects in Sample	24	24	24

Table 11: NRNC Gross Realization Ratio for kW, kWh and Therms¹²

	kWh	kW	Therms
Weighted RR	0.822	0.566	1.2
90 Percent CI	0.74 to 0.90	0.51 to 0.62	0.46 to 1.94
Relative Precision	10.0%	18.1%	62.0%
n projects in sample	57	57	57
N projects in population	279	279	279
ER	0.42	0.58	-

The overall effect of the results provided by the three evaluation teams is as follows.

Table 12: Overall Gross Realization Ratio for kW, kWh and Therms

Overall Results:	kWh	kW	Therms
PGE2007			
Weighted RR	0.76	0.75	0.68

¹² Precision estimates for gross and net savings types for fuel types are presented in Chapter 3 of the NRNC report

Contract Group: Commercial Facilities

ERT Input File Name: ERTInput_ADM_PGE2002

ERTInput_ADM_PGE2050

ERTInput_ADM_PGE2008

ERTInput_ADM_PGE2077

Program(s) Included in Input File: PGE2002, PGE2050, PGE2008, and PGE2077

Procedures for ERT Update for PGE2002, PGE2050, PGE2008, and PGE2077

Programs: PGE2002, PGE2050, PGE2008, and PGE2077 were deemed pass through.

ADM HIM programs consisted of door gaskets, strip curtains, and site level evaluations which did not pertain to these programs. These unevaluated programs were assigned direct ex-ante values as claimed by the IOUs.

5. SPECIALIZED COMMERCIAL

Contract Group: Specialized Commercial HVAC

ERT Input File Name: ERTInput_SPComm_PGE2068.txt,
ERTInput_SpComm_SCE2504.txt, ERTInput_SpComm_SCE2537.txt,
ERTInput_SpComm_SCE2561.txt, ERTInput_SpComm_SDGE3029.txt,
ERTInput_SpComm_SDGE3043.txt

Programs included in ERT input file: PGE2068,SCE2504, SCE2537, SCE2561, SDGE3029,
SDGE3043

Corrections in Final Report:

In the Integrated School-Based Program (SCE2504), the evaluated UES included an installation rate, and yet the ERT also applies an installation rate less than 1.0. Green Schools/Green Campus, we did apply a realization rate on top of the installation rate SCE had already incorporated into their estimates. The corrected savings are: 306 MWh and 27 kW for Green Campus and 876 MWh and 77 kW for Green Schools. This error has been corrected in the final version.

Demand Control Ventilation measures in the EE for Entertainment Centers Program (SCE2561), had their savings changed from the per project value to the per ton value, but their unit count remained at one. The unit energy and demand savings are presented per ton, but the quantity is presented per unit. The ERT units were amended to reflect the tonnage of the unit rather than unit quantity (which is always =1). The tonnage for each record is available in the Standard Program tracking database.

Overview

The parameters were updated using evaluation data were the IRate, UES (unit energy savings) and NTGRs (net-to-gross ratios) for HVAC HIMs and Non-HIMs with M&V as outlined in the Specialized Commercial and HVAC HIM Report. For the other parameters, the ex-ante values from the IOU tracking systems were passed through.

For programs without any M&V, IOU assumptions were passed through for all ERT parameters. These programs were not evaluated directly because they comprised a very small portion of savings for IOU's overall 2006-2008 portfolio. Some information on these programs is contained in the Specialized Commercial and HVAC HIM Report Appendix.

HIM Installation Rates

Installation rates were developed separately from UES for RCA and Duct Sealing measures in the estimated gross realization rates. Installation rates (EDIRate) were set to 1.0 for AC replacement and the installation rate type (IRateType) was set to "EMV" for all HIM measures. Measures not updated had IRate set to 1.0 and type set to "PassThru" for those records.

HIM Net-to-Gross Ratios (NTGRs)

If an evaluated measure is comparable to measures in other programs in terms of the delivery strategy and incentive level, Net to Gross (NTG) and Install Rate (Irate) was applied. To determine NTGR, a vendor survey was completed for non-residential sites that indicated a high level of vendor influence in the decision to implement the energy-efficient measure. For those sites that indicated the vendor was very influential in decision making, the vendor survey results entered directly into the NTG scoring. Vendors were queried on the program’s significance in their decision to recommend the energy-efficient measures and on their likelihood to have recommended the same measure in the absence of the program. The vendors contacted as part of this study were generally contractors, design engineers, distributors, and installers.

For other programs, NTGRs were set equal to the ex-ante NTGR (IOUPrgTrkNTG), and the NTGRType was set to “PassThru” for those records.

UES, NTG, or IRate were not extrapolated if a non-HIM measure had rebate levels or claimed savings (for non-weather sensitize measures) that differed substantially from the evaluated HIM.

Table 5-63 and 6-45: NTG and Install Rates for PGE2068, SDGE3043, and SDGE3029*

Program	NTG	Irate
PGE2068	0.54	0.68
SDGE3043	0.7	0.67
SDGE3029	0.53	1.0

*The above table is a combination of data from Table 5-63: Commercial RCA ex-post Gross Annual Energy Savings (p.89) and Table 6-45: AC Replacement Energy Savings Summary (p.154).

HIM Unit Energy Savings (UES)

The EMV UES estimates were developed through onsite metering of air conditioners and analyzed to be applicable to programs at the climate zone level on a per ton basis. These results provide improvements to program-level ex-ante estimates by introducing direct measurement and analysis activities that were applied to a statistically representative sample of projects. The measurement and analyses take into account actual, as-built equipment configuration and operating conditions whereas the ex-ante estimates were based on forecasts of what savings the energy efficiency measures would provide.

The UES Type was set to “EMV” for RCA and AC replacement records as well as those non-HIM measures with M&V.

Table 5-59:PGE2068 C&I RCA ex-post UES and Total Savings (p.87)

Climate Zone	A kW/unit	B kWh/unit	C Therms/unit	D Number of Units	E Total kW [Column A * Column D]	F Total kWh [Column B * Column D]
CZ Unknown	0.514	517.94	0.000	1,312	674.2	679,534
Z01	0.202	174.22	0.000	3	0.6	523
Z02	0.615	553.06	0.000	214	131.7	118,355
Z03	0.384	306.19	0.000	468	179.8	143,295
Z04	0.549	596.77	0.000	983	539.8	586,629
Z05	0.472	344.85	0.000	41	19.4	14,139
Z11	0.695	920.70	0.000	105	73.0	96,673
Z12	0.717	621.18	0.000	437	313.5	271,457
Z13	0.605	896.20	0.000	292	176.6	261,689

Note that the total number of units is 3,855 in the report for PGE 2068 as shown above in Table 5-59 with 1,312 units in unknown climate zones. The total number of units in the final SPT is 5,212 with no unknown climate zones. The total ex-ante and ex-post savings for C&I RCA measures shown in the tables below. The gross realization rate for energy dropped to 0.42 from 0.45. The gross realization rate for kW is much higher primarily due to the lower ex-ante UES found in the final SPT and secondarily due to the increased quantity.

		A HIM Ex-ante Gross kWh Savings	B HIM Ex-post Gross kWh Savings	C HIM Gross kWh Realization Rate [Column B/Column A]	D HIM Install Rate	E HIM Installed Ex- post Gross kWh Savings [Column B * Column D]	F HIM NTGR	G HIM Ex-post Net kWh Savings [Column E * Column F]	H HIM Net kWh Realization Rate [Column E/Column A]
C&I RCA	PGE2068	4,818,552	2,172,294	45%	68%	1,485,849	0.54	802,358	31%
C&I RCA	PGE2068	9,317,283	3,873,452	42%	68%	2,649,441	0.54	1,430,698	28%

		A Peak Ex- ante Gross kW Savings	B Peak Ex- post Gross kW Savings	C HIM Gross kW Realization Rate [Column B/Column A]	D Install Rate	E Peak Installed Ex-post Gross kW Savings	F NTGR	G Peak Ex- post Net kW Savings
C&I RCA	PGE2068	1,923	2,108	110%	68%	1,442	0.54	779
C&I RCA	PGE2068	453	3,674	811%	68%	2,513	0.54	1,357

The additional report tables used to populate the ERT records are shown below.

Table 5-62: SDGE3043 C&I RCA ex-post UES and Total Savings (p.88)

	A	B	C
Climate Zone	kWh/ton	Tons	Total kWh [Column A * Column B]
CZ07	35.68	9,388	334,922
CZ10	55.14	5,163	284,676

Table 6-31: SDGE3029 Commercial Energy Savings Results (p.138)

		A	B	C	D	E	F
Climate Zone	Replace Type	IOU Claimed		Evaluated UES	IOU Claimed	Evaluated [Col. B * Col C]	Realization Rate [Col E / Col D]
		Units	Tons	kWh/yr/ton	kWh/yr	kWh/yr	kWh
7	Burnout	311	2,628	81	706,601	211,886	30%
7	Early	645	4,289	201	1,251,553	861,963	69%
10	Burnout	131	977	161	345,988	157,241	45%
10	Early	277	2787	356	922,553	991,676	107%
	TOTALS	1,364	10,681		3,226,695	2,222,766	69%

Table 6-32: SDGE3029 Commercial Demand Savings Results (p.139)

		A	B	C	D	E	F
Climate Zone	Replace Type	IOU Claimed		Evaluated UES	IOU Claimed	Evaluated [Col. B * Col C]	Realization Rate [Col E / Col D]
		Units	Tons	kW/ton	kW	kW	kW
7	Burnout	311	2,628	0.069	456	182	40%
7	Early	645	4,289	0.166	797	710	89%
10	Burnout	131	977	0.184	244	180	74%
10	Early	277	2787	0.355	687	988	144%
	TOTALS	1,364	10,681		2,185	2,061	94%

For the other programs and measures UESs were set equal to the EDFilledUESs, which are based on the ex-ante savings and installed units, and the UESType was set to "PassThru" for those records.

PGE2068 Sum Table

sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPassThru	sumThermsPass Thru
3,673.57	3,873,451.60	-	-	16,726,006.73	55,205.60

SCE2504, SCE2537, SCE2561, and SDGE3029 Sum Table

SCE2504	sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPassThru	sumThermsPass Thru
	670.33	5,041,267.00	-	-	-	-
SCE2537	sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPassThru	sumThermsPass Thru
	0.00	18.82	-	4,986.30	17,668,071.85	-
SCE2561	sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPassThru	sumThermsPass Thru
	37.56	45,985.00	-	108.57	467,780.50	-
SDGE3029	sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPassThru	sumThermsPass Thru
	1,569.25	1,486,683.71	913.87	2,241.36	3,268,261.82	4.60

SDGE3043 Sum Table

sumkWEMV	sumkWhEMV	sumTherms EMV	sumkWPass Thru	sumkWhPass Thru	sumThermsPass Thru
1,165.86	1,432,555.86	-	2,027.22	3,783,077.66	13,150.67

HIM Effective Useful Life (EUL)

EUL's were based on DEER 2008 data. If no updates were deemed necessary for the ex-ante EUL estimates and ex-ante UES values were utilized the EULType was set to "PassThru".

The EUL for RCA and Duct Sealing was set to 10 years and AC Replacement EUL was set to 15 years.

Non-HIM: IRate, UES, NTGR, Effective Useful Life (EUL)

The EUL for Non-HIM programs were based on DEER 2008.

Table 8-14: SCE2537 MAP-CO Sensor (CO) Energy Savings Summary (p.196)

Program Name	Measure Ex-ante Gross kWh Savings	Measure Ex-post Gross kWh Savings	Install Rate	Measure Installed Ex-post Gross kWh Savings	Measure NTG	Measure Ex-post Net kWh Savings
MAP SCE 2537 CO Sensors	5,787,836	4,688,147	100%	4,688,147	0.87	4,078,688

Table 8-15: SCE2537 MAP-CO Sensor (CO) Demand Savings Summary (p.196)

Program Name	Measure Ex-ante Gross kW Savings	Measure Ex-post Gross kW Savings	Install Rate	Measure Installed Ex-post Gross kW Savings	Measure NTG	Measure Ex-post Net kW Savings
MAP SCE 2537 CO Sensors	820	906	100%	906	0.84	761.04

Table 8-21: SCE2537 MAP- Turbocor Oil-Free Compressor Energy Savings Summary (p.224)

Program Name	Measure Ex-ante Gross kWh Savings	Measure Ex-post Gross kWh Savings	Install Rate	Measure Installed Ex-post Gross kWh Savings	Measure NTG	Measure Ex-post Net kWh Savings
MAP SCE 2537 Turbocor	7,019,603	7,019,603	100%	7,019,603	0.8	5,615,682

Table 8-22: SCE2537 MAP- Turbocor Oil-Free Compressor Demand Savings Summary (p.224)

Program Name	Measure Ex-ante Gross kW Savings	Measure Ex-post Gross kW Savings	Install Rate	Measure Installed Ex-post Gross kW Savings	Measure NTG	Measure Ex-post Net kW Savings
MAP SCE 2537 Turbocor	2,369	2,369	100%	2,369	0.8	1895.2

Table 9-18: SCE2561 MAP- Entertainment Centers (DCV) Energy Savings Summary (p.252)

Measure	Program with Measure	Measure Ex-ante Gross kWh Savings	Measure Ex-post Gross kWh Savings	Measure Install Rate	Measure Installed Ex-post Gross kWh Savings	Measure NTGR	Measure Ex-post Net kWh Savings
DCV	SCE2561	978,667	569,437	100%	569,437	0.938	534,132

Table 9-19: SCE2561 MAP- Entertainment Centers (DCV) Demand Savings Summary (p.252)

Measure	Program with Measure	Measure Ex-ante Gross Peak kW Savings	Measure Ex-post Gross Peak kW Savings	Measure Install Rate	Measure Installed Ex-post Gross Peak kW Savings	Measure NTGR	Measure Ex-post Net Peak kW Savings
DCV	SCE2561	496	497	100%	497	0.946	470

Table M-16: SCE2504 LivingWise, Green Schools, and Green Campus Energy Savings Summary (Appendix)

Program Name	A	B	C	D	E	F
	Measure Ex-Ante Gross kWh Savings	Measure Ex-Post Gross kWh Savings	Install Rate	Measure Installed Ex-Post Gross kWh Savings [Col B * Col C]	Measure NTG	Measure Ex-Post Net kWh Savings [Col D * Col E]
Integrated Schools: Green Campus	401,580	401,580	68%	274,681	0.8	219,745
Integrated Schools: Green Schools	1,227,925	1,227,925	77%	939,363	0.8	751,490
Integrated Schools: LivingWise Screw-in CFL 14 Watt	1,156,847	1,639,069	67%	1,098,176	0.8	878,541
Integrated Schools: LivingWise Screw-in CFL 23 Watt	1,901,940	1,708,985	68%	1,162,110	0.8	929,688
Integrated Schools: LivingWise Showerhead	101,542	14,047,778	45%	6,321,500	0.8	5,057,200
Integrated Schools: LivingWise Faucet Aerators, Kitchen	76,157	4,760,256	39%	1,856,500	0.8	1,485,200
Integrated Schools: LivingWise Faucet Aerators, Bathroom	76,157	3,834,211	38%	1,457,000	0.8	1,165,600
Integrated Schools: LivingWise Air Filter Alarm	574,045	2,191,650	30%	657,495	0.8	525,996
Integrated Schools: LivingWise LED Night Light	977,033	1,062,224	42%	446,134	0.8	356,907

Table M-17: SCE2504 LivingWise, Green Schools, and Green Campus Demand Savings Summary (Appendix)

Program Name	A	B	C	D	E	F
	Measure Ex-Ante Gross kW Savings	Measure Ex-Post Gross kW Savings	Install Rate	Measure Installed Ex-Post Gross kW Savings [Col B * Col C]	Measure NTG	Measure Ex-Post Net kW Savings [Col D * Col E]
Integrated Schools: Green Campus	42	42	68%	29	0.8	23.2
Integrated Schools: Green Schools	108	108	77%	82	0.8	65.6
Integrated Schools: LivingWise Screw-in CFL 14 Watt	101.58	101.58	67%	68.06	0.8	54.45
Integrated Schools: LivingWise Screw-in CFL 23 Watt	167.01	167.01	68%	113.57	0.8	90.85
Integrated Schools: LivingWise Showerhead	22.34	604.4	45%	271.98	0.8	217.59
Integrated Schools: LivingWise Faucet Aerators, Kitchen	16.75	453.3	39%	176.79	0.8	141.43
Integrated Schools: LivingWise Faucet Aerators, Bathroom	16.75	453.3	38%	172.25	0.8	137.8
Integrated Schools: LivingWise Air Filter Alarm	195.89	195.89	30%	58.77	0.8	47.01
Integrated Schools: LivingWise LED Night Light	0	0	42%		0.8	

6. RESIDENTIAL RETROFIT

The Cadmus Group is the CPUC EM&V contract group responsible for all programs discussed in this document. The two analysts responsible for submitting the input files and providing this documentation are Noah Lieb and Scott Davis; Scott Dimetrosky contributed to the development of this document. All input file names submitted to the CPUC are consistently named by the following convention: Cadmus_ProgramID_ERT.txt, where "ProgramID" represents the actual program that was analyzed. All input files have only one program included in each individual file.

This document details both the logic and the source of updated parameters applied to each Cadmus-assigned program. The parameters that received updated values include Net-to-Gross (NTGR), Install Rate (IRate), Unit Energy Savings (UES) for kW, kWh, and therms, and Expected Useful Life (EUL).

A measure must represent over 1% of expected savings for one utility to be deemed a high impact measure (HIM), and thus received full M&V as an HIM. These "HIM's" received direct EM&V updated parameters; the logic is reviewed in the following "Direct EM&V Updates" section. The logic that applies to any other non-HIM's that received updated parameters is reviewed in the "Other EM&V Updates" section. The "Detailed Program Updates" section of this document provides tables outlining the source of updated parameters applied to each program.

Review of Logic Used to Update ERT Parameters

Direct EM&V Updates

The source, applicability, and reliability for each parameter for every HIM listed in the direct EM&V tables are provided in the CPUC Residential Retrofit Evaluation Report (RREP). Additionally, the confidence intervals and precision for all HIM's listed in this document can be found in the Residential Retrofit Evaluation Report (RREP) as well. Because there were so many measures and programs evaluated, the tables included in the final section of this documentation serve as the lookup guide to the RREP and the associated detail provided therein.

Both EM&V-based HIM's and other EM&V-based non-HIM's listed in this document received updated EUL values, and DEER 2008 data served as the source for all updated EUL's. HVAC Interactive effects were also based on DEER 2008 data, where Refrigerator Recycling along with Upstream- and Downstream Lighting-based CFL's were the only

measures to receive HVAC interactive effects. In the case when evaluated savings were found for a measure that did not claim savings, a NTGR was based on a savings parameter that did have savings (e.g. Clothes Washers NTGR weighted by therms was used as the NTGR for kW and kWh).

Other EM&V Updates

As outlined in the Energy Division Evaluation Framework Document (12/2/09), a hierarchical, decision-tree approach was used to update key parameters necessary for estimating program and portfolio impacts for the 2006-2008 program cycle.

In general, for measure parameters with direct evaluation measurements, those results were applied to the ERT. Key measure parameters without direct measurement typically received one of two options:

- Option 1. Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; and
- Option 2. Accept reported savings values for programs that do not receive impact evaluation.

Option 1 was considered for a number of measures that represented over 1% of expected savings for one utility, and thus received full M&V as a HIM, and yet for another utility the same measure did not meet this threshold and thus was not evaluated. For these measures, Cadmus used a rules-based system to determine whether or not the program measures were comparable to allow extrapolation.

As an initial step, measures were compared across a number of key parameters, including:

- **Measure type:** Program measures were compared in terms of technology and efficiency levels, and if these were similar the measures were considered comparable.
- **Rebate as a percent of incremental costs:** The rebate levels can play a key role in determining NTG ratios, and thus were compared. For example, a measure with a lower rebate as a percent of incremental cost is actually more likely to have higher free ridership, because the incentive may not be high enough to motivate

people to purchase a measure that they wouldn't have already purchased in absence of any incentive.

- **Delivery mechanism:** Even for comparable technologies, efficiency levels, and rebates, program delivery strategies could vary widely. For example, one program might select an end-use customer rebate, while another program could use a direct installation strategy for an identical measure. Different delivery mechanisms could lead to vastly different NTGR and IRates, and thus were closely compared before any extrapolation process.
- **Household type:** The ERT tracks key parameters by different housing types (e.g., single family vs. multifamily). However, even if the previous parameters (measure type, rebate levels, and delivery mechanism) were comparable, NTGR and IRate could vary between housing segments (e.g., multifamily customers may have a different propensity to purchase or not purchase a comparable measure).

Based on the comparison, the following rules were then applied to the extrapolation process.

- If an evaluated measure is comparable to measures in other programs in terms of measure type, rebate level, delivery mechanism, and household type, then apply NTGR and/or IRate. Examples include:
 - NTGR from SDGE Pool Pump measures was used as the NTGR for PGE Pool Pump measures.
 - NTGR from PGE2000 gas furnace rebate for SF was applied to SCG3517 gas furnace rebate for SF. The NTGR was not applied to PGE2000 gas furnace rebate for MF.
- If an evaluated measure is comparable to measures for the same IOU, apply realization rate of unit energy savings (UES).
 - Realization rate = evaluated UES / ex-ante UES.
- Single Family (SF) to multifamily (MF) is comparable for UES realization rates because it is assumed that the same measure in a different household type will have a comparable percent increase or decrease in claimed savings to evaluated savings.
 - For example, the UES realization rate from PGE2000 gas furnace rebate for SF was applied to PGE2000 gas furnace rebate for MF.
- Do not apply UES realization rates to other IOUs, unless it can be proven that the measures are comparable across all the key parameters (rebate, measures type, delivery mechanism, household type).

- Do not extrapolate the UES, NTGR, or IRate if a non-HIM measure has rebate levels or claimed savings (for non-weather sensitive measures) that differ substantially from the evaluated HIM.

The basic rules (without specific measure caveats) are summarized in Table 62 below.

Table 62 - Other EM&V Rule Based Logic

Parameter to Apply:	UES % Change from ex ante to ex post	NTGR	IRate
When to Apply:	Same measure, Any rebate level, Any delivery mechanism, Different household type (SF/MF), Same IOU	Same measure, Same rebate level, Same delivery mechanism, Same household type (SF/MF), Any IOU	Same measure, Same rebate level, Same deliver mechanism, Same household type (SF/MF), Any IOU

Detailed Program Updates

PGE2000

Direct EMV-based Updates

All EMV-based updated parameters (including source) for PGE2000 HIM's are listed in Table 78 and Table 79 below. Details regarding HVAC-based parameters (RCA and Duct Test & Seal) are provided in a separate document titled "HVAC Documentation".

Table 63 - PGE2000 Direct EM&V Updates for Non-Lighting Measures

Measure Group	Refrigerator Recycling	Clothes Washers Downstream SF	Gas Furnace SF	Insulation SF	Room AC	Gas Water Heater
ED NTGR kW	Eval Pg Table 136, pg 153	Based on EDNTGR Therms	N/A	Eval Report Table 85, pg 101	Eval Report Table 144, pg 164	Eval Report Table 61, pg 70
ED NTGR kWh	Eval Report Table 136, pg 153 Error! Bookmark not defined.	Based on EDNTGR Therms	N/A	Eval Report Table 85, pg 101	Eval Report Table 144, pg 164	Eval Report Table 61, pg 70
ED NTGR Therms	Based on EDNTGR kWh	Eval Report Table 45, pg 49	Eval Report Table 9, pg 16	Eval Report Table 85, pg 101	N/A	Eval Report Table 61, pg 70
ED UES kW	Eval Report Table 129, pg 145 ¹³	Eval Report Table 45, pg 49	N/A	N/A	N/A	N/A
ED UES kWh	Eval Report Table 126, pg 143 13	Eval Report Table 43, pg 48	N/A	N/A	N/A	N/A
ED UES Therms	N/A	Eval Report Table 43, pg 48	Eval Report Table 11, pg 19	N/A	N/A	DEER 2008
ED IRate	Eval Report Table 136, pg 153 Error! Bookmark not defined.	Eval Report Table 26, pg 39	Eval Report Table 13, pg 23	Eval Report Table 84, pg 101	Eval Report Table 142, pg 163	Eval Report Table 60, pg 70
ED EUL	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	DEER 2008	N/A	N/A	N/A	N/A	N/A
Confidence	Eval Report Section 11.3, pg 128-129; Appendix K	Eval Report Section 6.3, pg 33; Appendix K	Eval Report Section 5.3, pg 13; Appendix K	Eval Report Section 10.3, pg 99; Appendix K	Eval Report Section 12.3, pg 162; Appendix K	Eval Report Section 8.3, pg 69; Appendix K

¹³ System Climate Zone value based on weighted average of all climate zone values.

Table 64 - PGE2000 Direct EM&V Updates for Lighting Measures

Measure Group	Downstream Lighting	Upstream Lighting - CFLS	Upstream Lighting - LEDs	Upstream Lighting - Fixtures
ED NTGR kW	Based on EDNTGR kWh	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED NTGR kWh	Eval Report Table 183, pg 197	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED NTGR Therms	Based on EDNTGR kWh	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED UES kW	Eval Report Table 195, pg 202	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED UES kWh	Eval Report Table 195, pg 202	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED UES Therms	N/A	N/A	N/A	N/A
ED IRate	Eval Report Table 181, pg 196	Eval Report Table 26, pg 57-58 (with data from Table 12, pg 36)	Eval Report Table 34, pg 68-69 (with data from Table 12, pg 36)	Eval Report Table 30, pg 63-64 (with data from Table 12, pg 36)
ED EUL	DEER 2008	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	DEER 2008	DEER 2008	N/A	N/A
Confidence	Eval Report Section 14.3, pg 194-195; Appendix K	Section 8.2.2, Appendix B	Section 8.2.2, Appendix B	Section 8.2.2, Appendix B

Other EM&V Updates

All non-HIM updated parameters (including source) for PGE2000 are listed in Table 65 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 65 - PGE2000 Other EM&V Updates

Measure Group	Freezer Recycling	Room AC Recycling	Clothes Washers Upstream & MF	Gas Furnace MF	Electric Water Heater	Dishwasher	Pool Pump
ED NTGR	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation	N/A	N/A	Extrapolated from Gas Water Heater	Eval Report Table 50, pg 58	Extrapolated from SDGE3024 Pool Pump
ED UES	N/A	N/A	Realization Rate of Clothes Washers SF	Realization Rate of Gas Furnace SF	N/A	N/A	N/A
ED IRate	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation	N/A	N/A	Extrapolated from Gas Water Heater	Eval Report Table 49, pg 57	N/A
ED EUL	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SDGE3024

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SDGE3024 are listed in Table 66 below.

Table 66 - SDGE3024 Direct EM&V Updates

Measure Group	Dishwashers	Insulation	Pool Pumps Single Speed	Pool Pumps Multi Speed	Pool Pumps Reset Agreement	Room AC	Water Heater
EDNTGRkW	Weighted values not listed in report	Eval Report Table 85, pg 101	Eval Report Table 168, pg 183	Eval Report Table 168, pg 183	Eval Report Table 168, pg 183	Eval Report Table 144, pg 164	Weighted values not listed in report
EDNTGRkWh	Weighted values not listed in report	Eval Report Table 85, pg 101	Eval Report Table 168, pg 183	Eval Report Table 168, pg 183	Eval Report Table 168, pg 183	Eval Report Table 144, pg 164	Weighted values not listed in report
EDNTGRTherms	Eval Report Table 50, pg 58	Eval Report Table 85, pg 101	N/A	N/A	N/A	N/A	Eval Report Table 61, pg 70
EDUESkW	N/A	N/A	Eval Report Table 173, pg 187	Eval Report Table 174, pg 187	Eval Report Table 175, pg 188	Eval Report Table 156, pg 174	N/A
EDUESkWh	Weighted values from Eval Report Table 54, pg 60	N/A	Eval Report Table 173, pg 187	Eval Report Table 174, pg 187	Eval Report Table 175, pg 188	Eval Report Table 156, pg 174	N/A
EDUESTherms	Weighted values from Eval Report Table 54, pg 60	Eval Report Table 91, pg 111	N/A	N/A	N/A	N/A	Eval Report Table 66, pg 7414
EDIRate	Eval Report Table 49, pg 57	Factored into UES so value for ERT is 100%	Eval Report Table 161 and 163, pg 181	Eval Report Table 162 and 163, pg 181	Eval Report Table 175, pg 188	Eval Report Table 142, pg 163	Eval Report Table 60, pg 70
EDEUL	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Confidence	Eval Report Section 7.3, pg 56; Appendix Kz	Eval Report Section 10.3, pg 99; Appendix K	Eval Report Section 13.3, pg 180; Appendix K	Eval Report Section 13.3, pg 180; Appendix K	Eval Report Section 13.3, pg 180; Appendix K	Eval Report Section 12.3, pg 162; Appendix K	Eval Report Section 8.3, pg 69; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SDGE3024 are listed in Table 67 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

¹⁴ System climate zone value is weighted average of all climate zones.

Table 67 - SDGE3024 Other EM&V Updates

Measure Group	Low Flow Showerhead Self Install
ED NTGR	Extrapolated from SCG3517
ED UES	N/A
ED IRate	Extrapolated from SCG3517
ED EUL	DEER 2008
ED UES Interactive	N/A
Confidence	Eval Report Section 9.3, pg 80; Appendix K

SCE2501

Corrections for Final Results:

There were two updates made to the SCE2501 ERT input file. The first update made to the SCE2501 program was to change 538 records that were assigned a EDClimate Zone of "System", EDTargetSector of "Residential", and EDEndUseShape of "Outdoor-Lt"; specifically, the only update made was to EDUndUseShape which was changed to "CFL-RC". All 538 records are no longer FALSE and all scenarios run through v5_3_5 without any additional issues. This error was due to upstream lighting records changed designation from Misc._Commercial to residential for these 538 records. The issue was previously known but assumed would be addressed by the ED team within the E3 calculator "valid" climatezone/targetsector/enduseshape lookup.

The second update made to the SCE2501 ERT input file was for the Room AC measure. The UES values for Room AC's with climate zones 13, 14, 15, and 16 were originally passed through, but now received realization rates applied to their UES based on the other climate zones that received onsite evaluation metering and ultimately direct UES updates.

False Flags for SCE 2501 were corrected in the ERT. For SCE2501, out of the 207,463 lines evaluated there were 538 (0.23%) where the E3 generated a FALSE flag. All of these FALSE flags were due to one Target Sector-End Use Shape combination, Residential:Outdoor Lt.

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SCE2501 are listed in Table 68 below.

Table 68 - SCE2501 Direct EM&V Updates

Measure Group	Room AC	Downstream Lighting	Lightwise	Upstream Lighting CFLS	Upstream Lighting LEDs	Upstream Lighting Fixtures
EDNTGRkW	Eval Report, Table 144, pg 164	Eval Report, Table 184, pg 197	N/A	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
EDNTGRkWh	Eval Report, Table 144, pg 164	Eval Report, Table 184, pg 197	N/A	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
EDNTGRTherms	N/A	N/A	N/A	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
EDUESkW	Eval Report, Table 155, pg 173	Eval Report, Table 198, pg 203	E3 ¹⁵	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64

¹⁵ Values used to apply interactive effect multipliers.

Measure Group	Room AC	Downstream Lighting	Lightwise	Upstream Lighting CFLS	Upstream Lighting LEDs	Upstream Lighting Fixtures
EDUESkWh	Eval Report, Table 155, pg 173	Eval Report, Table 198, pg 203	E3 ¹⁵	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
EDUESTherms	N/A	N/A	N/A	N/A	N/A	N/A
EDIRate	Eval Report, Table 142, pg 163	Eval Report, Table 202, pg 206	N/A	Eval Report Table 26, pg 57-58 (with data from Table 12, pg 36)	Eval Report Table 34, pg 68-69 (with data from Table 12, pg 36)	Eval Report Table 30, pg 63-64 (with data from Table 12, pg 36)
EDEUL	DEER 2008	DEER 2008	N/A	DEER 2008	DEER 2008	DEER 2008
EDUES Interactive	DEER 2008	N/A	DEER 2008	DEER 2008	N/A	N/A
Confidence	Eval Report Section 12.3, pg 162; Appendix K	Eval Report Section 14.3, pg 194-195; Appendix K		Section 8.2.2, Appendix B	Section 8.2.2, Appendix B	Section 8.2.2, Appendix B

Other EM&V Updates

All non-HIM updated parameters (including source) for SCE2501 are listed in Table 69 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 69 - SCE2501 Other EM&V Updates

Measure Group	Insulation	Pool Pump	Water Heater
ED NTGR	Extrapolated from SCG3517, SDGE3024, and PGE2000 Insulation evaluations	Extrapolated from SDGE3024 Pool Pump evaluation	Extrapolation from PGE2000 SF and SDGE3024 Water Heater evaluation.
ED UES	N/A	N/A	N/A
ED IRate	Extrapolated from SCG3517, SDGE3024, and PGE2000 Insulation evaluations	N/A	Extrapolation from PGE2000 SF and SDGE3024 Water Heater evaluations
ED EUL	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A	N/A

SDGE3016

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SDGE3016 are listed in Table 70 below. There was no extrapolation ("Other EM&V updates") applied to this program.

Table 70 - SDGE3016 Direct EM&V Updates

Measure Group	Upstream Lighting CFLs	Upstream Lighting LEDs	Upstream Lighting Fixtures
ED NTGR kW	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED NTGR kWh	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED NTGR Therms	Based on ED NTGR kWh	N/A	N/A
ED UES kW	.	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED UES kWh	Eval Report Table 26, pg 57-58	Eval Report Table 34, pg 68-69	Eval Report Table 30, pg 63-64
ED UES Therms	N/A	N/A	N/A
ED IRate	Eval Report Table 26, pg 57-58 (with data from Table 12, pg 36)	Eval Report Table 34, pg 68-69 (with data from Table 12, pg 36)	Eval Report Table 30, pg 63-64 (with data from Table 12, pg 36)
ED EUL	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	DEER 2008	N/A	N/A
Confidence	Section 8.2.2, Appendix B	Section 8.2.2, Appendix B	Section 8.2.2, Appendix B

SCE2502

Corrections for Final Report:

The linear fluorescent measures for the SCE2502 program had originally received an incorrect NTG value of 81% (which was the PGE-based LF NTG value). These measures now received the correct 77% NTG value as reported in the residential evaluation report.

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SCE2502 are listed in Table 71 below. Details regarding HVAC-based parameters (AC Tune Up and Duct Test & Seal) are provided in a separate document titled "HVAC Documentation".

Table 71 - SCE2502 Direct EM&V Updates

Measure Group	Downstream Lighting
EDNTGRkW	Eval Report Table 200, pg 205
EDNTGRkWh	Eval Report Table 200, pg 205
EDNTGRTherms	Average from ED NTGR kW and ED NTGR kWh
EDUESkW	Eval Report Table 200, pg 205
EDUESkWh	Eval Report Table 200, pg 205
EDUESTherms	N/A
EDIRate	Eval Report Table 200, pg 205
EDEUL	DEER 2008
EDUES Interactive	DEER 2008
Confidence	Eval Report Section 14.3, pg 194-195; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SCE2502 are listed in Table 72 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 72 - SCE2502 Other EM&V Updates

Measure Group	Room AC
ED NTGR	N/A
ED UES	Realization Rate from SCE2501 Room AC evaluation
ED IRate	N/A
ED EUL	DEER 2008
ED UES Interactive	N/A

SCG3517

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SCG3517 are listed in Table 73 below.

Table 73 - SCG3517 Direct EM&V Updates

Measure Group	Faucets	Clothes Washers	Insulation
EDNTGRkW	N/A	N/A	Eval Report Table 85, pg 101
EDNTGRkWh	N/A	N/A	Eval Report Table 85, pg 101
EDNTGRTherms	Eval Report Table 74, pg 83	Eval Report Table 27, pg 39	Eval Report Table 85, pg 101
EDUESkW	N/A	N/A	N/A
EDUESkWh	N/A	N/A	N/A
EDUESTherms	N/A	Eval Report Table 43, pg 48	Eval Report Table 91, pg 111
ED IRate	Eval Report Table 73, pg 82	Eval Report Table 26, pg 39	Eval Report Table 84, pg 101
ED EUL	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A	N/A
Confidence	Eval Report Section 9.3, pg 80; Appendix K	Eval Report Section 6.3, pg 33; Appendix K	Eval Report Section 10.3, pg 99; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SCG3517 are listed in Table 74 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 74 - SCG3517 Other EM&V Updates

Measure Group	Gas Furnace	Water Heater	Dishwasher
ED NTGR	Extrapolation of PGE2000 SF Gas Furnace evaluation	Eval Report Table 61, pg70	Eval Report Table 50, pg 58
ED UES	Realization Rate from PGE2000 and SCG3517 Furnace evaluation	N/A	N/A
ED IRate	Extrapolation of PGE2000 SF Gas Furnace evaluation	Extrapolation from PGE2000 SF and SDGE3024 Water Heater evaluation	Eval Report Table 49, pg 57
ED EUL	DEER 2008	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A	N/A

SDGE3035

Direct EMV-based Updates

All updated parameters (including source) for SDGE3035 are listed in Table 75 below. Details regarding HVAC-based parameters (AC Tune Up and Duct Test & Seal) are provided in a separate document titled "HVAC Documentation". There was no extrapolation (other EM&V updates) applied to this program.

Table 75 - SDGE3035 Direct EM&V Updates

Measure Group	Faucets	Mobile Home Lighting
EDNTGRkW	N/A	N/A
EDNTGRkWh	N/A	N/A
EDNTGRTherms	Eval Report Table 74, pg 83	N/A
EDUESkW	N/A	N/A
EDUESkWh	N/A	E3 (Used for interactive effects)
EDUESTherms	Eval Report Table 78, pg 88	N/A
EDIRate	Eval Report Table 73, pg 82	N/A
EDEUL	DEER 2008	N/A
ED UES Interactive	N/A	DEER 2008
Confidence	Eval Report Section 9.3, pg 80; Appendix K	Eval Report Section 14.3, pg 194-195; Appendix K

All other non-HIM measures associated with the SDGE3035 program received IOU-based assumptions and were “passed through” as claimed.

SDGE3017

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SDGE3017 are listed in Table 76 below.

Table 76 - SDGE3017 Direct EM&V Updates

Measure Group	Downstream Lighting	Faucets
EDNTGRkW	Eval Report Table 199, pg 204	N/A
EDNTGRkWh	Eval Report Table 199, pg 204	N/A
EDNTGRTherms	Based on NTGR kWh	Eval Report Table 74, pg 83
EDUESkW	Eval Report Table 199, pg 204	N/A
EDUESkWh	Eval Report Table 199, pg 204	N/A
EDUESTherms	N/A	Eval Report Table 78, pg 88
EDIRate	Eval Report Table 199, pg 204	Eval Report Table 72, pg 82
EDEUL	DEER 2008	DEER 2008
EDUES Interactive	DEER 2008	N/A
Confidence	Eval Report Section 14.3, pg 194-195; Appendix K	Eval Report Section 9.3, pg 80; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SDGE3017 are listed in Table 77 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 77 - SDGE3017 Other EM&V Updates

Measure Group	Attic Insulation	Room AC
ED NTGR	N/A	N/A

ED UES	Realization Rate from SDGE3024 Attic Insulation evaluation	Realization Rate from SDGE3024 Room AC evaluation
ED IRate	N/A	N/A
ED EUL	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A
Confidence	Eval Report Section 10.3, pg 99; Appendix K	Eval Report Section 12.3, pg 162; Appendix K

SDGE3006

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SDGE3006 are listed in Table 78 below. All other non-HIM measures associated with the SDGE3006 program received IOU-based assumptions and were “passed through” as claimed. No extrapolation or interactive effects were applied to this program.

Table 78 - SDGE3006 Direct EM&V Updates

Measure Group	Downstream Lighting
EDNTGRkW	Eval Report Table 184, pg 197
EDNTGRkWh	Eval Report Table 184, pg 197
EDNTGRTherms	N/A
EDUESkW	Eval Report Table 198, pg 203
EDUESkWh	Eval Report Table 198, pg 203
EDUESTherms	N/A
EDIRate	Eval Report Table 182, pg 197
EDEUL	DEER 2008
ED UES Interactive	N/A
Confidence	Eval Report Section 14.3, pg 194-195; Appendix K

SDGE3023

Direct EMV-based Updates

All updated parameters (including source) for SDGE3023 are listed in Table 79 below. All other non-HIM measures associated with the SDGE3023 program received IOU-based assumptions and were “passed through” as claimed.

Table 79 - SDGE3023 Direct EM&V Updates

Measure Group	Clothes Washer
EDNTGRkW	N/A
EDNTGRkWh	Based on ED NTGR Therms
EDNTGRTherms	Eval Report Table 27, pg 39
EDUESkW	N/A
EDUESkWh	Eval Report Table 45, pg 49
EDUESTherms	Eval Report Table 45, pg 49
EDIRate	Eval Report Table 26, pg 39
EDEUL	DEER 2008
ED UES Interactive	N/A
Confidence	Eval Report Section 6.3, pg 33; Appendix K

SCE2500

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SCE2500 are listed in Table 80 below.

Table 80 - SCE2500 Direct EM&V Updates

Measure Group	Refrigerator Recycling
EDNTGRkW	Eval Report Table 134, pg 150
EDNTGRkWh	Eval Report Table 134, pg 150
EDNTGRTherms	Extrapolated from EDNTGRkWh
EDUESkW	Eval Report Table 129, pg 145
EDUESkWh	Eval Report Table 125, pg 143
EDUESTherms	N/A
EDIRate	Eval Report Table 136, pg 153 ¹⁶
EDEUL	DEER 2008
ED UES Interactive	DEER 2008
Confidence	Eval Report Section 11.3, pg 128-129; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SCE2500 are listed in Table 81 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 81 - SCE2500 Other EM&V Updates

Measure Group	Freezer Recycling	Room AC Recycling
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¹⁶ System Climate Zone value based on weighted average of all climate zone values.

ED NTGR	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation
ED UES	Realization Rate of Refrigerator Recycling	N/A
ED IRate	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation
ED EUL	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A

SDGE3028

Direct EMV-based Updates

All EMV-based updated parameters (including source) for SDGE3028 are listed in Table 82 below.

Table 82 - SDGE3028 Direct EM&V Updates

Measure Group	Refrigerator Recycling
EDNTGRkW	Eval Report Table 134, pg 150
EDNTGRkWh	Eval Report Table 134, pg 150
EDNTGRTherms	Based on ED NTGR kWh
EDUESkW	Eval Report Table 136, pg 153
EDUESkWh	Eval Report Table 136, pg 153
EDUESTherms	N/A
EDIRate	Eval Report Table 110, pg 131
EDEUL	DEER 2008
ED EUS Interactive	DEER 2008
Confidence	Eval Report Section 11.3, pg 128-129; Appendix K

Other EM&V Updates

All non-HIM updated parameters (including source) for SDGE3028 are listed in Table 83 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 83 - SDGE3028 Other EM&V Updates

Measure Group	Room AC Recycling	Freezer Recycling
ED NTGR	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation
ED UES	N/A	Extrapolated from Refrigerator Recycling evaluation

ED IRate	Extrapolated from ARP evaluation	Extrapolated from ARP evaluation
ED EUL	DEER 2008	DEER 2008
ED UES Interactive	N/A	N/A

SCG3510

Other EM&V Updates

The SCG3510 program did not have any HIM's and contains only programs which received extrapolated parameters from other evaluations. All non-HIM updated parameters (including source) for SCG3510 are listed in Table 84 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 84 - SCG3510 Other EM&V Updates

Measure Group	Gas Furnace	Clothes Washers	Insulation
EDNTGRkW	N/A	N/A	N/A
EDNTGRkWh	N/A	N/A	N/A
EDNTGRTherms	N/A	N/A	N/A
EDUESkW	N/A	N/A	N/A
EDUESkWh	N/A	N/A	N/A
EDUESTherms	Realization Rate from SCG3517 Gas Furnace evaluation	Realization Rate from SCG3517 Clothes Washer evaluation	Realization Rate from SCG3517 Insulation evaluation
EDIRate	N/A	N/A	N/A
EDEUL	DEER 2008	DEER 2008	DEER 2008
EDUES Interactive	N/A	N/A	N/A
Confidence	Eval Report Section 5.3, pg 13; Appendix K	Eval Report Section 6.3, pg 33; Appendix K	Eval Report Section 10.3, pg 99; Appendix K

SDGE3015

Other EM&V Updates

The SDGE3015 program did not have any HIM's and contains only programs which received extrapolated parameters from other evaluations. All non-HIM updated parameters (including source) for SDGE3015 are listed in Table 85 below. The rules-based logic with which the measures and parameters were updated in the table below are detailed in the "Other EM&V Updates" section of this document.

Table 85 - SDGE3015 Other EM&V Updates

Measure Group	Refrigerator Recycling
ED NTGR	Extrapolation of PGE2000, SCE2500, and SDGE3028 Refrigerator Recycling evaluation
ED UES	Realization rate from SDGE3028 Refrigerator Recycling evaluation
ED IRate	Extrapolation of PGE2000, SCE2500, and SDGE3028 Refrigerator Recycling evaluation
ED EUL	DEER 2008
ED UES Interactive	DEER 2008
Confidence	Eval Report Section 11.3, pg 128-129; Appendix K

7. SCE INDUSTRIAL AND AGRICULTURAL

ERT Input File Name: ERTInput_SCEIndAg_SCE2509_02_22_10.txt

Program Included in Input File: SCE2509

Procedures for ERT Update for the SCE Industrial Energy Efficiency (SCE2509) Program UES Update

The Standard Program Tracking Database developed by ED specifies per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms,) as well as an installation quantity (EDFilledUESQuantity) for each record. The IOU-claimed ex-ante energy savings can be calculated as the product between the installed quantity and the per-unit ex-ante energy savings (kW, kWh and Therms, respectively.)

$$\text{Savings} = \text{EDFilledUESQuantity} * \text{EDFilledUES}$$

The SoCal Industrial-Agricultural (SCIA) contract group employed the realization rate method in its evaluation. Consequently, the first-year realization rates from the evaluation were applied to the tracking database by strata as follows (table title is the same as in the Final Report). Note that kWh realization rates were weighted using kWh weights, and kW realization rates were weighted using kW rates.¹⁷

Table 7-1: PY2006-2008 Gross Impact Realization Rates for SCE2509 Industrial Sample

Sampling Strata	RR	
	kWh	kW
1	0.70	0.58
2	0.68	0.72
3	0.64	0.54
4	0.81	0.73
5	0.73	0.66
Weighted RR	0.72	0.65
90 Percent CI	0.49 to 0.953	0.463 to 0.838
Relative precision	0.321	0.288
N measures in sample	31	29
N measures in population	264	259
ER	1.16	1.00

The per-unit ex-post energy savings (EDUESkW, EDUESkWh and EDUESTherms) were then calculated as the product between the per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms) and the corresponding first-year realization rates from the evaluation:

$$\text{EDUES} = \text{EDFilledUES} * \text{RR} \text{ (similar calculations for the kWh and kW fields.)}$$

¹⁷ Please refer to the “2006-2008 Evaluation Report for the Southern California Industrial and Agricultural Contract Group” report for details.

The UESType was set to “EMV” for all records, meaning this update is based on evaluation results from the 2006-2008 program cycle.

Installation Rate Update

First-year realization rates presented above include installation rate updates. No additional Installation Rate updates were necessary. The Installation Rate was set to 1, and the Installation Rate Type was set to “PassThru” for all records.

Interactive Effects

First-year realization rates presented above capture any interactive effects between the measure installed and the air conditioning system operating in the same facility. No additional interactive effect corrections are needed. The UES_i values were set equal to the UES values for all records.

Net-to-Gross Update

Consistent with the evaluation approach, the Net-to-Gross ratios were applied to the Standard Program Tracking Database as shown in the following table (table title is the same as in the Final Report):

Table 7-2: PY2006-2008 Net-to-Gross Ratio: SCE2509 Industrial Projects

Sampling Strata	NTGR*	
	kWh	kW
1	0.77	0.81
2	0.60	0.60
3	0.56	0.57
4	0.57	0.57
5	0.59	0.61
Weighted NTGR	0.63	0.65
90 Percent Confidence Interval	0.595 to 0.671	0.612 to 0.685
Relative Precision	0.059	0.057
N measures in sample	43	43
N measures in population	264	255
Error Ratio	0.26	0.25

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

The NTG Type was set to “EMV” for all records, meaning this update is based on evaluation results from this program cycle.

EUL Update

All records for program SCE2509 represent custom projects. Ex-ante EUL values from E3 filings were reviewed and found in agreement with Appendix F of the “Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs.” Ex-ante EUL values were accepted and the EUL Type was set to “PassThru”.

Results

The following results were published in the Final Report (table title is the same as in the Final Report):

Table 7-3: Comparison of First-Year Evaluation-Based Net Savings with the Final Program-Claimed Net Savings: SCE2509 Industrial Projects

	Electric Savings	
	kWh/year	Avg. peak kW
Tracking		
a. Claimed Gross Savings	145,467,578	16,776
b. Claimed Realization Rate	0.89	0.89
c. Claimed Adjusted Gross Savings (c = a x b)	129,466,144	14,931
d. Claimed NTG Ratio	0.80	0.80
e. Claimed Net Savings (d = c x d)	103,572,915	11,945
Evaluation		
f. Evaluation Gross Realization Rate	0.72	0.65
g. Evaluated Gross Results (g = c x f)	93,438,719	9,710
h. Evaluation NTG Ratio*	0.63	0.65
i. Evaluated Net Results (i = g x h)	59,149,486	6,299
j. Evaluation Net Realization Rate (h = d x f)	0.46	0.42
k. Evaluated Net Savings as a Fraction of Claimed Net Savings (k = i / e)	0.57	0.53

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

The ERT runs conducted for program SCE2509 produced the following results for the "All" Scenario. These results match those published in the Final Report (and shown above in Table 1-5.)

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
SCE2509	6,299	59,149,486	0

ERT Input File Name: ERTInput_SCEIndAg_SCE2510_02_22_10.txt

Program Included in Input File: SCE2510

Procedures for ERT Update for SCE Agricultural Energy Efficiency Program SCE2510

Program SCE2510 has two components – a program that offers free pump tests to agricultural customers (PT) and a traditional DSM program that offers incentives to agricultural customers for the installation of energy efficiency measures (AG). These components were evaluated independently from each other, and the ERT updates to program SCE2510 will also be described separately.

SCE2510 Ag Program

The SCE2510 Ag program evaluation included all but five strip curtain records, which were evaluated separately by the Commercial Facilities contract group. The SoCal

Industrial-Ag contract group intended to use the realization rate approach in its evaluation of the SCE2510 Ag Program, and in March 2008 it selected a preliminary sample of 10 projects for impact evaluation. Then the emphasis of the 2006-2008 evaluation was switched from programs to High Impact Measures (HIMs), and no additional impact sample for SCE2510 Ag program could be drawn. The SCE2510 program posted significant savings in 2008, mostly from custom measures; the preliminary impact sample of 10 points was deemed insufficient to estimate realization rates at program level through the end of the 2006-2008 program cycle. The gross impacts are therefore passed through. However, the SoCal Industrial-Ag evaluation did estimate a Net-to-Gross Ratio for program SCE2510 Ag, and the evaluation ratios are used in the ERT update for this program.

UES Update

The Standard Tracking Database developed by ED specifies per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms,) as well as an installation quantity (EDFilledUESQuantity) for each record. The IOU-claimed ex-ante energy savings can be calculated as the product between the installed quantity and the per-unit ex-ante energy savings (kW, kWh and Therms, respectively.)

$$\text{Savings} = \text{EDFilledUESQuantity} * \text{EDFilledUES}$$

As specified above, gross ex-ante impacts were passed through for program SCE2510 Ag. Per-unit ex-post energy savings (EDUESkW, EDUESkWh and EDUESTherms) were set equal to the ex-ante energy savings. The UESType was set to “PassThru” for all records.

Installation Rate Update

Since the ex-ante gross impacts were accepted, the Installation Rate was set to 1 and the Installation Rate Type was set to “PassThru” for all records.

Interactive Effects

Since the ex-ante gross impacts were accepted, the UESi values were set equal to the UES values for all records.

Net-to-Gross Update

Consistent with the evaluation approach, the Net-to-Gross ratios were applied to the Standard Program Tracking Database as shown in the following table (table title is the same as in the Final Report):

Table 7-4: PY2006-2008 Net-To-Gross Ratio: SCE2510 Agricultural Projects

Sampling Strata	NTGR*	
	kWh	kW
1	0.46	0.56
2	0.49	0.62
3	0.59	0.66
4	0.65	0.58
5	0.71	0.67
Weighted NTGR	0.59	0.63
90 Percent CI	0.521 to 0.667	0.56 to 0.7
Relative Precision	0.123	0.111
N measures in sample	39	36
N measures in population	1,128	1,054
ER	0.47	0.41

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

* Claimed results exclusive of the 5 Strip Curtain records that were included in the Commercial Facilities HIM evaluation.

The NTG Type was set to “EMV” for all records, meaning this update is based on evaluation results from this program cycle.

EUL Update

Custom measures provide the vast majority of savings for program SCE2510. Ex-ante EUL values from the E3 filings were reviewed and found in agreement with Appendix F of the “Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs.” Ex-ante EUL values were accepted and the EUL Type was set to “PassThru”.

Procedures for ERT Update for HIM Strip Curtains

Program SCE2510 Ag included five strip curtain records that were included in the Commercial Facilities (CF) Strip Curtain HIM evaluation. Strip curtains were evaluated statewide, across all IOU programs through which they were installed. The per-unit ex-post energy savings that resulted from the statewide evaluation were then applied to any strip curtain records in individual IOU programs. This approach was necessary as there were not enough sites sampled in any one given program to allow the estimate of an overall realization rate by program with satisfactory statistical significance.

The energy savings attributable to strip curtains depend on factors such as the amount of time that a walk-in door is open per day, the temperature differential between the refrigerated and infiltrating airs, and whether infiltration barriers were extant on a particular doorway prior to the installation of the strip curtains. The evaluation of strip curtains evaluated seven “domains of study” in which the aforementioned characteristics manifest in markedly different patterns. The ex-post per-unit energy

savings, along with the achieved precision at the 90% confidence level are listed for each domain of study in the second through fifth columns of the table below.

Walk-In Type\Business Type	Supermarkets	Convenience Stores and Small Grocers	Restaurants	Refrigerated Warehouses
Unit Energy Savings for Coolers (kWh/ft²)	159 +/- 33	14 +/- 6	18 +/- 5	177 +/- 56
Unit Energy Savings for Freezers (kWh/ft²)	409 +/- 146	16 +/- 7	77 +/- 57	

The ex-post energy savings for each record in the Standard Program Tracking Database are estimated by mapping the measure onto one of the seven categories above. The last column of the table represents an unweighted average of the energy savings for the four business types. If it is not possible to map a business type onto one of the first four business types, the energy savings, demand reduction, and NTGR are “passed thru”. The mapping of the energy savings for the appropriate domains of study to the entries in the program tracking data has two components: first, the business type must be determined from the program tracking data. Second, the walk-in unit is classified as a cooler or a freezer.

The determination of business type is possible through (1) examination of North American Industry Classification System (NAICS) descriptions in the tracking data and, (2) examination of the facility square footage and square footage of curtains installed as reported in the program tracking data. The NAICS codes are sufficient for classification purposes with the following exception: the descriptions fail to differentiate between chain supermarkets and small independent grocers. The evaluation findings suggest that larger facilities (e.g. above 15,000 ft²) tend to have much more frequent and lengthier accesses to the walk-in units. In comparison, the daily “door-open times” for small grocers (e.g. 5,000 ft² to 10,000 ft²) were an order of magnitude shorter than those for larger facilities. Therefore, if a facility is initially identified as a “grocery” through its NAICS description, it is recast as a supermarket if the sales floor or facility square footage is listed and is above 15,000 ft², or if the facility had at least 75 ft² of strip curtains replaced. Field experience supports the assumption these two traits are consistent with businesses with operations that require frequent and lengthy accesses to the walk-in units. Field experience also shows that the typical small grocer is similar to an overgrown convenience store and tends to have one beverage cooler and perhaps one small meat freezer.

The determination of walk-in type is possible for SCE data. SCE’s ex-ante framework assigns different per-unit energy savings for strip curtains installed in freezers and coolers. The ex-ante energy savings depend on the climate zone and on the broad business type (restaurant or grocery). In this framework, strip curtains on freezers save more than 176 kWh/ft² while strip curtains on coolers save less than 176 kWh/ft². Thus, the walk-in type can be determined for SCE programs through examination of the ex-ante per unit savings.

Demand Savings for Strip Curtains

The demand savings for strip curtains are determined with a kWh to kW multiplier. The multiplier is the ratio of the average energy savings during the peak 9-hour period (2 PM to 5 PM on weekdays during heat wave) to the annual energy savings. For strip curtains, the ratio is multiplied by a “demand coincidence factor” which represents the likelihood that the refrigeration system would be removing the infiltration heat load during the peak nine hours. On average, this likelihood is 15%. The kW to kW multiplier for strip curtains is 0.000025.

Net to Gross Ratio for Strip Curtains

The net to gross ratios for strip curtains in various IOU programs are listed below. Only programs SCE2511 and PGE2080 have enough statistics to warrant a program-specific NTGR. For ERT update purposes all other programs are assigned the statewide average NTGR for strip curtains.

Program ID	Mean NTGR	N Sample	Std Dev	Std Error
PGE2020	0.49	16	0.19	0.05
PGE2029	0.23	1	.	.
PGE2051	0.59	2	0.07	0.05
PGE2063	0.35	4	0.32	0.16
PGE2066	0.57	6	0.20	0.08
PGE2080	0.40	21	0.21	0.04
SCE2511	0.37	39	0.25	0.04
SDGE3020	0.43	9	0.30	0.10
Total	0.41	98	0.24	0.02

Interactive Effects for Strip Curtains

The CF Strip Curtain HIM evaluation captures interactive effects of associated with air exchange between conditioned and refrigerated spaces. These interactive effects are represented in the ex-post savings numbers, and additional corrections are not necessary.

ERT Updates for Strip Curtains in Program SCE2510 Ag

The five strip curtain SCE2510 Ag records included in the CF evaluation were updated as follows.

SCE2510 Ag was a special case in that the Standard Tracking Database set the EDFilledUESQuantity to "1" for each of the five records. In other words, the quantity field for the strip curtain measure is set to the "project" rather than the "number of square feet of strip curtain." To estimate the number of square feet of strip curtain for each record, the Commercial Facilities group divided the rebate amount by \$6, which was the rebate amount per square foot paid by SCE. EDUES was then calculated by multiplying the per-square foot results from the CF evaluation with the number of square feet for each record.

The Commercial Facilities group provided the following EDUES and NTGR values for ERT Update purposes:

	Record ID	EDUES		NTGR	
		kW	kWh	kW	kWh
ComFac Evaluation	106	1.79	71,245.51	0.41	0.41
	132	0.23	8,950.00		
	851	2.01	79,752.44		
	897	0.36	14,178.21		
	939	1.78	70,891.06		

Other settings:

- UES Type was set to "EMV"
- UESi values were set equal to UES values
- IRate was set to 1 and IRate Type was set to "PassThru"
- NTG Type was set to "EMV"
- EUL was set to the ex-ante value, and EUL Type was set to "PassThru."

SCE2510 Ag Results

The following results can be derived by applying the evaluation NTGR to the Standard Tracking Database (table not published in the Final Report):

	Electric Savings	
	kWh/year	Avg. peak kW
Tracking		
a. Claimed Gross Savings	70,446,080	14,615
b. Claimed Realization Rate	0.92	0.92
c. Claimed Adjusted Gross Savings (c = a x b)	64,539,063	13,471
d. Claimed NTG Ratio	0.76	0.76
e. Claimed Net Savings (d = c x d)	49,069,153	10,232
Evaluation		
f. Evaluation Gross Realization Rate	N/A	N/A
g. Evaluated Gross Results (g = c x f)	64,539,063	13,471
h. Evaluation NTG Ratio*	0.59	0.63
i. Evaluated Net Results (i = g x h)	38,321,787	8,492
j. Evaluation Net Realization Rate (h = d x f)	0.59	0.63
k. Evaluated Net Savings as a Fraction of Claimed Net Savings (k = i / e)	0.78	0.83

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

* Claimed results exclusive of the 5 Strip Curtain records that were included in the Commercial Facilities HIM evaluation.

The ERT runs conducted only for program SCE2510 AG produce the following results for the “All” scenario:

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
SCE2510 Ag	8,492	38,321,787	0
SCE2510 Ag Com Fac	3	101,623	0
SCE2510 Ag only	8,494	38,423,410	0

The ERT results for the records included in the SoCal Industrial-Ag evaluation match perfectly the results shown in the previous table.

The ERT results for the five strip curtain records included in the CF evaluation match the input file parameters (UES, NTGR) provided by the CF group for these records.

SCE2510 Pump Testing Program

According to the Workpapers for the SCE2510 Pump Testing program, the energy savings claims for this program are based on the following assumptions:

- Only 50% of the pumps tested are in need of repair.
- Only 29% of the pumps in need of repair are actually repaired.
- 50% of all pumps repaired receive incentives under a different program (and savings cannot be claimed under program SCE2510 Pump Testing.)
- The average pump in need of repair has a potential annual energy savings of 34,092 kWh/year and a potential demand reduction of 11.34 kW.
- The net-to-gross ratio for the program is 75%.

In other words, on average, each pump test will yield 50% * 29% * 50% = 7.25% pump repairs, and the average pump repair will save 34,092 kWh/year and 11.34 kW coincident peak demand.

The objective of the evaluation of the SCE2510 Pump Testing program was to update both the assumptions underlying the gross impacts, and the net-to-gross ratio for the program.

Section 5.5 of the final “2006-2008 Evaluation Report for the Southern California Industrial and Agricultural Contract Group” states the following:

- The percent of pump tests that result in a non-incented pump repair is estimated to be 8.00 (+/- 1.39). In other words, 8 out of every 100 pump tests result in a repair and some associated level of impact.
- The gross per-pump test kWh impact is calculated as 8 percent * 23,392 kWh and kW impact is calculated as 8 percent * 10.5 kW. The resulting gross impact per test is 0.84 kW (+/- 0.24) and 1,872 kWh (+/- 645).
- The net impact is calculated as the gross savings * the NTG ratio (0.63). The resulting net impact per test is 0.53 kW (+/- 0.16) and 1,182 kWh (+/- 410).

These results are also reported in the, Table 1-4 (highlights in red are for the purpose of this documentation only):

Table 7-5 Excerpt: Evaluation Findings vs. Work Paper Assumptions

Savings Measurement	SCE Work Papers	Evaluation Findings
Gross kW/unit repaired (UES)	11.34	10.52
Gross kW/test	0.82	0.84
Net kW/test	0.62	0.53
Gross kWh/unit repaired (UES)	34,092	23,392
Gross kWh/test	2,472	1,872
Net kWh/test	1,854	1,182
Percent of tested pumps that result in non-incented repairs	7.25%	8.00%
Installation Rate for ERT		1.10
NTG	0.75	0.63
Participant Population PY 06-08	13,149	13,149
Total Program Gross kW	10,810	11,067
Total Program Gross kWh	32,499,989	24,619,025
Total Program Net kW	8,108	6,988
Total Program Net kWh	24,374,992	15,545,927

UES Update

UES values of 23,392 kWh and 10.52 kW were used in the ERT input file, updating the SCE Workpaper UES values of 34,092 kWh and 11.34 kW. The UES Type was set to “EMV” for all records.

Installation Rate Update

An Installation rate of $8\%/7.25\% = 1.1$ was applied to each record. The Installation Rate Type was set to “EMV”, meaning this update is based on evaluation results from this program cycle.

Interactive Effects

There are no interactive effects associated with agricultural pumping. The UESi values were set equal to the UES values for all records.

Net-to-Gross Update

A Net-to-Gross ratio of 0.63 was applied to all records, updating the SCE Workpaper value of 0.75. The NTG Type was set to “EMV”, meaning this update is based on evaluation results from this program cycle.

EUL Update

Ex-ante EUL values from E3 filings were reviewed and found in agreement with Appendix F of the “Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs.” Ex-ante EUL values were accepted and the EUL Type was set to “PasThru”.

SCE2510 Pump Testing Results

The ERT runs conducted only for program SCE2510 PT produce the following results for the “All” scenario. These results match the net ex-post savings shown above in Table 1-4.

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
SCE2510 Pump Test	6,988	15,545,927	0

Overall SCE2510 Results

The ERT runs conducted for all measures included in program SCE2510 produced the following overall results for the “All” Scenario:

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
SCE2510 Ag	8,492	38,321,787	0
SCE2510 Ag Com Fac	3	101,623	0
SCE2510 Pump Test	6,988	15,545,927	0
SCE2510 All	15,483	53,969,337	0

8. COMMERCIAL RETRO-COMMISSIONING

This section provides an overview of the Evaluation Reporting Tool (ERT) input files submitted by the Commercial Retro-commissioning (RCx) contract group.

ERT Input File Name

RCx programs are included in the file “ERTInput_SBW_Multi_RCx_Programs.txt.”

Programs Included in ERT Input File

The input file provides evaluation summaries for the following 16 programs.

- PGE2006
- PGE2015
- PGE2025
- PGE2035
- PGE2052
- PGE2056
- PGE2070
- PGE2071
- PGE2072
- PGE2088
- PGE2090
- PGE2091
- PGE2094
- SCE2508
- SCE2528
- SCG3527

Procedures for ERT Updates

The following seven programs were evaluated essentially in their entirety by the RCx contract group. Other programs included in the ERT input file include varying numbers of RCx measures.

- PGE2056
- PGE2070
- PGE2071
- PGE2072
- PGE2088
- PGE2091
- SCE2508

Four measures in the PGE2006 program were evaluated as part of the Non-Residential New Construction (NRNC) study undertaken by KEMA. These measures were updated based on the EM&V results from that study.

Certain measures in all programs were updated where appropriate with values from the Database for Energy Efficiency Resources (DEER). Measures which were updated were “deemed” measures – measures with prescriptive rebates and energy savings in the IOU programs. Deemed measures were updated where a match could be made between the Standard Program Tracking (SPT) measure information (derived from IOU program tracking data) and the DEER measure information. Custom measures did not receive updates from DEER.

The following sections document decision made about four types of updates modeled with the ERT.

- Irate. Installation Rate
- UES. Unit Energy Savings
- NTGR. Net-To-Gross Ratio.
- EUL. Effective Useful Life.

Four sources of update values were considered and applied as deemed appropriate. These sources are listed below in priority order. Update values were applied from the highest priority applicable source.

- EMV. Updates based on evaluation of a sample directly representative of the subject program or some portion of the program defined by program element or measure group.
- OthEMV. Updates based on the results of evaluation study of measures sampled from other 2006-08 programs that are determined to be similar to the subject program or some portion of the program defined by program element or measure group.
- DEER. Updates based on the similarity of a measure or program to the assumed characteristics of measures and program delivery methods as defined by DEER.
- PassThru. This indicates that the value associated with a record's E3 line item has been used, i.e., the value claimed by the IOU.

Unit Energy Savings (UES) Updates

Directly Evaluated Measures

Measures identified as RCx measures in the 16 programs received EMV updates to the energy savings values (kW, kWh, and therms)¹⁸. Measures were stratified within IOU-wide sampling frames according to ex-ante savings (kWh or therms). Based on EM&V site work, a strata-weighted realization rate (RR) was calculated (where possible) as the ratio of ex-post to ex-ante savings. The RR for a frame was extrapolated to measures within the frame that were not directly studied, and ex-post savings were calculated as, $ex\text{-}post_svgs = ex\text{-}ante_svgs \times RR$.

¹⁸ For details, see the RCx report, *Final_0608_RCx_Evaluation_Report_021010*, available at <http://www.energydataweb.com/cpuc/home.aspx>

The realization rate could not be used in cases where the ex-ante savings were zero. This occurred where savings were found in a fuel domain not claimed by the IOU, e.g., where gas savings were found in an SCE measure. Ex-post savings were assigned in these cases using the UES method. A strata-weighted average measure savings value was calculated based on EM&V results. Units for this average savings were either kWh per therm, or therms per kWh. This average became the UES for every measure in the frame.

Interactive Effects

Interactive effects were considered as part of the original M&V work, and interactive UES values are identical to non-interactive values.

The following tables show the sample sizes and relative precisions for RR and UES directly updated measures.

Table 6: Directly Evaluated Gross Savings Realization Rates

Utility	Population	Sample	Gross Savings Realization Rate			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	24	0.31	0.45	0.53	0.51	0.23	0.24
SCE	58	13	2.07	0.94	N/A	0.66	0.17	N/A
SCG	28	10	N/A	N/A	0.93	N/A	N/A	0.23
SDG&E	4	3	2.60	1.23	0.21	0.04	0.06	0.01

Table 7: Directly Evaluated Gross Ex Post Unit Energy Savings

Utility	Population	Sample	Gross Ex Post Unit Energy Savings			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	24	13	178,355	7,334	0.51	0.23	0.24
SCE	58	13	30	383,712	462	0.66	0.17	1.56
SCG	28	10	6	28,781	23,735	0.00	0.00	0.23
SDG&E	4	3	129	606,849	11,454	0.04	0.06	0.01

Application of Other Studies to RCx Programs

Four measures in PGE2006 were updated with UES results from the NRNC study conducted by KEMA. Two of the measures were part of the “Whole building – new construction” HIM. The table below shows the sample size and relative precision for the IOU-level RR applied to these measures.

Table 8: Other Studies Gross Savings Realization Rates

Utility	Contract Group	Population	Sample	Gross Savings Realization Rate			90% Relative Precision		
				kW	kWh	Therms	kW	kWh	Therms
PG&E	NRNC	279	57	0.566	0.822	1.20	18.1%	10.-	62.-

Distribution of UESType within Programs

The table below shows the SPT records associated with each combination of program, program element, EMV study, and source of UES updates. For each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 9: UES Updates

EDPrgID	ProgramElement	EMV_Study	UESType	RecordCount	PctkW	PctkWh	PctTherms
PGE2006	NRNC	KEMA_NRNC	EMV	4	8%	3%	-
PGE2006	Other		PassThru	39	90%	90%	93%
PGE2006	Other	SBW_RCx	EMV	3	1%	7%	7%
PGE2015			PassThru	809	96%	87%	70%
PGE2015		SBW_RCx	EMV	19	4%	13%	30%
PGE2025			PassThru	5,245	99%	98%	97%
PGE2025		SBW_RCx	EMV	3	1%	2%	3%
PGE2035			PassThru	178	80%	75%	94%
PGE2035		SBW_RCx	EMV	6	20%	25%	6%
PGE2052			PassThru	964	95%	83%	18%
PGE2052		SBW_RCx	EMV	9	5%	17%	82%
PGE2056		SBW_RCx	EMV	9	100%	100%	100%
PGE2070		SBW_RCx	EMV	11	100%	100%	-
PGE2071		SBW_RCx	EMV	9	100%	100%	100%
PGE2072		SBW_RCx	EMV	12	100%	100%	100%
PGE2088		SBW_RCx	EMV	6	100%	100%	100%
PGE2090		SBW_RCx	EMV	2	100%	100%	100%
PGE2091		SBW_RCx	EMV	21	100%	99%	100%
PGE2091		SBW_RCx	PassThru	2	-	1%	-
PGE2094			PassThru	38	71%	54%	-
PGE2094		SBW_RCx	EMV	22	29%	46%	-
SCE2508		SBW_RCx	EMV	63	99%	100%	-
SCE2508		SBW_RCx	PassThru	3	1%	-	-
SCE2528			PassThru	182	82%	84%	-
SCE2528		SBW_RCx	EMV	27	18%	14%	-
SCE2528		SBW_RCx	PassThru	1	-	1%	-
SCG3527			PassThru	7	-	-	39%
SCG3527		SBW_RCx	EMV	22	-	-	61%

EDPrgID	ProgramElement	EMV_Study	UESType	RecordCount	PctkW	PctkWh	PctTherms
SCG3527		SBW_RCx	PassThru	3	-	-	-

The following table explains the UES update decisions made for records in the RCx input file.

Table 10: UES Update Decisions

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
PGE2006	NRNC	KEMA_NRNC	EMV	Update values provided by KEMA NRNC impact evaluation.
PGE2006	Other		PassThru	4 records fell within the scope of studied HIMs but their EDDeemedFlag was false so no update was applied. The remaining records did not fall within any studied HIM.
PGE2006	Other	SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2015			PassThru	1 Pipe and Tank Insulation record but EDDeemedFlag was false so no update was applied. 3 Steam Trap records but target sector and building type were not specific enough to apply a HIM update. Remaining records did not fall within any studied HIM.
PGE2015		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2025			PassThru	Records for downstream residential Interior Screw Lighting had program-average as their building type so no EMV updates applied. Savings for other HIM measures, with EDDeemedFlag equal true, was too small to warrant matching for updates. 1 record for Rooftop/Split system HIM had EDDeemed flag of false, thus not updated. Remaining records did not fall within a studied HIM.
PGE2025		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2035			PassThru	3 Linear Fluorescent and 5 Rooftop/Split System records had DeemedFlag of false, thus no update applied. Remaining records did not fall within a studied HIM.
PGE2035		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2052			PassThru	Interior Screw Lighting records were not updated as the HIM contractor (ITRON) did not feel the records were sufficiently comparable to those sampled for that HIM study.
PGE2052		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2056		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2070		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2071		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2072		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2088		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2090		SBW_RCx	EMV	Update values provided by SBW RCx study.

EDPrgID	ProgramElement	EMV_Study	UESType	Update Decision
PGE2091		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2091		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
PGE2094			PassThru	13 Linear Fluorescent records were not updated as the HIM contractor (ITRON) did not feel the records were sufficiently comparable to those sampled for that HIM study.
PGE2094		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2508		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2508		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
SCE2528			PassThru	Records did not fall within a studied HIM.
SCE2528		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2528		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
SCG3527			PassThru	Records did not fall within a studied HIM.
SCG3527		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCG3527		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame as they were indentified after the sample was selected, thus no update value was applied.

Installation Rate Updates (IRate)

In all cases EDIrate was set to one. For evaluated measures, all energy savings were accounted for in the UES values. For evaluated measures, the IrateType was set to "EMV."

Net-To-Gross Ratio (NTGR) Updates

Directly Evaluated Programs

RCx projects were evaluated for net savings at the IOU level by the RCx contract group. The net savings samples were supersets of the gross savings samples. The following table shows sample sizes and relative precisions for NTGR findings.

Table 11: Directly Studied Measures Net Impact Relative Precision

IOU	Population	Sample	Net to Gross Ratios			90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PG&E	135	73	0.76	0.80	0.86	0.04	0.03	0.02
SCE	58	29	0.78	0.86	0.91	N/A	0.02	0.01
SDG&E	4	3	0.75	0.75	0.68	0.00	0.00	0.00
SCG	28	15	N/A	N/A	0.92	N/A	N/A	0.01

Application of Other Studies to RCx Programs

The NRNC measures were evaluated for net savings at the IOU level. KEMA did not report separate error statistics for NTGR, but instead reported relative precisions for net savings, which are shown below.

Table 12: NRNC Net Impact Relative Precision

IOU	Population	Sample	Net to Gross Ratios			Net Savings 90% Relative Precision		
			kW	kWh	Therms	kW	kWh	Therms
PGE	279	51	59.1%	63.4%	81.8%	20.4%	15.1%	N/A

Distribution of NTGRType within Programs

The table below shows the SPT records associated with each combination of program, program element, EMV study and source of NTGR updates. For each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 13: NTGR Updates

EDPrgID	ProgramElement	EMV_Study	NTGRType	RecordCount	PctkW	PctkWh	PctTherms
PGE2006	NRNC	KEMA_NRNC	EMV	4	8%	3%	-
PGE2006	Other		PassThru	39	90%	90%	93%
PGE2006	Other	SBW_RCx	EMV	3	1%	7%	7%
PGE2015			PassThru	809	96%	87%	70%
PGE2015		SBW_RCx	EMV	19	4%	13%	30%
PGE2025			PassThru	5,245	99%	98%	97%
PGE2025		SBW_RCx	EMV	3	1%	2%	3%
PGE2035			PassThru	178	80%	75%	94%
PGE2035		SBW_RCx	EMV	6	20%	25%	6%
PGE2052			PassThru	964	95%	83%	18%
PGE2052		SBW_RCx	EMV	9	5%	17%	82%
PGE2056		SBW_RCx	EMV	9	100%	100%	100%
PGE2070		SBW_RCx	EMV	11	100%	100%	-

EDPrgID	ProgramElement	EMV_Study	NTGRType	RecordCount	PctkW	PctkWh	PctTherms
PGE2071		SBW_RCx	EMV	9	100%	100%	100%
PGE2072		SBW_RCx	EMV	12	100%	100%	100%
PGE2088		SBW_RCx	EMV	6	100%	100%	100%
PGE2090		SBW_RCx	EMV	2	100%	100%	100%
PGE2091		SBW_RCx	EMV	21	100%	99%	100%
PGE2091		SBW_RCx	PassThru	2	-	1%	-
PGE2094			PassThru	38	71%	54%	-
PGE2094		SBW_RCx	EMV	22	29%	46%	-
SCE2508		SBW_RCx	EMV	63	99%	100%	-
SCE2508		SBW_RCx	PassThru	3	1%	-	-
SCE2528			PassThru	182	82%	84%	-
SCE2528		SBW_RCx	EMV	27	18%	14%	-
SCE2528		SBW_RCx	PassThru	1	-	1%	-
SCG3527			PassThru	7	-	-	39%
SCG3527		SBW_RCx	EMV	22	-	-	61%
SCG3527		SBW_RCx	PassThru	3	-	-	-

The following table explains the decisions made with respect to NTGR updates.

Table 14: NTGR Update Decisions

EDPrgID	ProgramElement	EMV_Study	NTGRType	Update Decision
PGE2006	NRNC	KEMA_NRNC	EMV	Update values provided by KEMA NRNC impact evaluation.
PGE2006	Other		PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2006	Other	SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2015			PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2015		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2025			PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2025		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2035			PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2035		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2052			PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2052		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2056		SBW_RCx	EMV	Update values provided by SBW RCx study.

EDPrgID	ProgramElement	EMV_Study	NTGRType	Update Decision
PGE2070		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2071		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2072		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2088		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2090		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2091		SBW_RCx	EMV	Update values provided by SBW RCx study.
PGE2091		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
PGE2094			PassThru	No match for DEER technology and delivery mechanism thus no update.
PGE2094		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2508		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2508		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
SCE2528			PassThru	No match for DEER technology and delivery mechanism thus no update.
SCE2528		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCE2528		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame due to their small savings, thus no update value was applied.
SCG3527			PassThru	No match for DEER technology and delivery mechanism thus no update.
SCG3527		SBW_RCx	EMV	Update values provided by SBW RCx study.
SCG3527		SBW_RCx	PassThru	This group of measures was excluded from the SBW RCx sample frame as they were identified after the sample was selected, thus no update value was applied.

Effective Useful Life (EUL) Updates

In general, EUL values were passed through from the IOU-claimed values. The RCx contract group studied the EUL of RCx measures, but did not recommend changing the ex-ante values. For deemed measures in all programs, an attempt was made to map measures to DEER EULs¹⁹. A mapping required a match on measure description and, in the case of lighting measures, a match on building type. Programs where matches were found are shown below.

The table below shows the SPT records associated with each combination of program, program element, EMV study, and source of EUL updates. For each of these groups of records the table shows the percent of kW, kWh and Therms savings claimed by the

¹⁹ DEER2008 Database Definition - EUL v2.xls

IOU. This table provides a guide to the significance of each specific update in terms of its impact on the overall claim for each program.

Table 15: EUL Updates

EDPrgID	ProgramElement	EMV_Study	EULType	RecordCount	PctkW	PctkWh	PctTherms
PGE2006	NRNC	KEMA_NRNC	PassThru	4	8%	3%	-
PGE2006	Other		PassThru	39	90%	90%	93%
PGE2006	Other	SBW_RCx	PassThru	3	1%	7%	7%
PGE2015			DEER	104	8%	8%	4%
PGE2015			PassThru	705	87%	79%	66%
PGE2015		SBW_RCx	PassThru	19	4%	13%	30%
PGE2025			DEER	5,153	15%	28%	15%
PGE2025			PassThru	92	84%	71%	82%
PGE2025		SBW_RCx	PassThru	3	1%	2%	3%
PGE2035			PassThru	178	80%	75%	94%
PGE2035		SBW_RCx	PassThru	6	20%	25%	6%
PGE2052			DEER	284	-	2%	10%
PGE2052			PassThru	680	95%	81%	8%
PGE2052		SBW_RCx	PassThru	9	5%	17%	82%
PGE2056		SBW_RCx	PassThru	9	100%	100%	100%
PGE2070		SBW_RCx	PassThru	11	100%	100%	-
PGE2071		SBW_RCx	PassThru	9	100%	100%	100%
PGE2072		SBW_RCx	PassThru	12	100%	100%	100%
PGE2088		SBW_RCx	PassThru	6	100%	100%	100%
PGE2090		SBW_RCx	PassThru	2	100%	100%	100%
PGE2091		SBW_RCx	PassThru	23	100%	100%	100%
PGE2094			PassThru	38	71%	54%	-
PGE2094		SBW_RCx	PassThru	22	29%	46%	-
SCE2508		SBW_RCx	PassThru	66	100%	100%	-
SCE2528			DEER	1	-	-	-
SCE2528			PassThru	181	82%	84%	-
SCE2528		SBW_RCx	PassThru	28	18%	16%	-
SCG3527			PassThru	7	-	-	39%
SCG3527		SBW_RCx	PassThru	25	-	-	61%

The following table explains the decisions made with respect to EUL updates.

Table 16: EUL Update Decisions

EDPrgID	ProgramElement	EMV_Study	EULType	Update Decision
PGE2006	NRNC	KEMA_NRNC	PassThru	Could not be matched to DEER technology.
PGE2006	Other		PassThru	Not studied, thus no update.
PGE2006	Other	SBW_RCx	PassThru	Could not be matched to DEER technology.

EDPrgID	ProgramElement	EMV_Study	EULType	Update Decision
PGE2015			DEER	DEER value used as measures could reliably be mapped to a DEER technology.
PGE2015			PassThru	Could not be matched to DEER technology.
PGE2015		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2025			DEER	DEER value used as measures could reliably be mapped to a DEER technology.
PGE2025			PassThru	Could not be matched to DEER technology.
PGE2025		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2035			PassThru	Could not be matched to DEER technology.
PGE2035		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2052			DEER	DEER value used as measures could reliably be mapped to a DEER technology.
PGE2052			PassThru	Could not be matched to DEER technology.
PGE2052		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2056		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2070		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2071		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2072		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2088		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2090		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2091		SBW_RCx	PassThru	Could not be matched to DEER technology.
PGE2094			PassThru	Could not be matched to DEER technology.
PGE2094		SBW_RCx	PassThru	Could not be matched to DEER technology.
SCE2508		SBW_RCx	PassThru	Could not be matched to DEER technology.
SCE2528			DEER	DEER value used as measures could reliably be mapped to a DEER technology.
SCE2528			PassThru	Could not be matched to DEER technology.
SCE2528		SBW_RCx	PassThru	Could not be matched to DEER technology.
SCG3527			PassThru	Could not be matched to DEER technology.
SCG3527		SBW_RCx	PassThru	Could not be matched to DEER technology.

9. PGE FABRICATION AND MANUFACTURING

Contract Group: PG&E Fabrication, Process and Manufacturing

ERT Input File Name: *ERTInput_PGEInd_Multi_02_22_10.txt*

Programs included in ERT input File: PGE2004, PGE2042, PGE2046, PGE2058, PGE2062, PGE2064, PGE2081, PGE2084 and PGE2087

Procedures for ERT Update for PGE Industrial Programs

With the exception of 58 new construction records from program PGE2004, which were analyzed as part of the New Construction and Codes and Standards evaluation, the PGE Industrial contract group conducted a global evaluation of all programs in the group (PGE2004, PGE2042, PGE2046, PGE2058, PGE2062, PGE2064, PGE2081, PGE2084 and PGE2087)²⁰. The tracking records were divided into three distinct categories, and evaluation was conducted for the three categories separately: Pump-Off Controllers (POCs), electric measures other than POCs, and gas measures. Realization rates and net-to-gross ratios were estimated for each category. As a result of this approach, all records in the PGE Industrial contract group were updated at the same time using the same RR and NTG parameters.

UES Update

The Standard Program Tracking Database developed by ED specifies per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms,) as well as an installation quantity (EDFilledUESQuantity) for each record. The IOU-claimed ex-ante energy savings can be calculated as the product between the installed quantity and the per-unit ex-ante energy savings. Similar calculations can be conducted for kW and Therm savings, respectively.

$$\text{Savings} = \text{EDFilledUESQuantity} * \text{EDFilledUES}$$

The PGE Industrial contract group employed the realization rate method in its evaluation. Consequently, the first-year program-weighted realization rates from the evaluation were applied to the tracking database by strata and by domain (POC, Electric non-POC, and Gas) as shown in the following tables (table titles are the same as in the Final Report). Note that kWh realization rates were weighted using kWh weights, kW realization rates were weighted using kW rates, and Therm realization rates were weighted using Therm weights.¹

Table 9-1: PY2006-2008 First-Year Gross Impact Realization Rates for Pump-Off Controller Projects

²⁰ Please refer to the “2006-2008 Evaluation Report for PG&E Fabrication, Process and Manufacturing Contract Group” report for details.

Sampling Strata	RR	
	kWh	kW
1	0.50	0.50
2	0.53	0.53
3	0.39	0.41
4	0.48	0.49
5		
Weighted RR	0.46	0.47
90 Percent CI	0.418 to 0.502	0.428 to 0.514
Relative Precision	0.091	0.092
N measures in sample	41	41
N measures in population	656	655
ER	0.37	0.37

Table 9-2: PY2006-2008 First-Year Gross Impact Realization Rates for Electric Non-POC Projects

Sampling Strata	RR	
	kWh	kW
1	0.33	0.25
2	0.66	0.71
3	0.66	0.60
4	0.33	0.29
5	1.08	1.26
Weighted RR	0.53	0.51
90 Percent CI	0.437 to 0.615	0.375 to 0.637
Relative Precision	0.170	0.258
N measures in sample	63	58
N measures in population	756	670
ER	0.85	1.25

Table 9-3: PY2006-2008 First-Year Gross Impact Realization Rates for Gas Projects

Sampling Strata	RR
	Therms
1	0.41
2	0.92
3	
4	1.76
5	0.93
Weighted RR	0.68
90 Percent CI	0.621 to 0.733
Relative Precision	0.083
N measures in sample	29
N measures in population	152
ER	0.30

The per-unit ex-post energy savings (EDUESkW, EDUESkWh and EDFUESTherms) were then calculated as the product between the per-unit ex-ante energy savings (EDFilledUESkW, EDFilledUESkWh and EDFilledUESTherms) and the corresponding first-year realization rates from the evaluation:

EDUES = EDFilledUES * RR (similar calculations for the kWh, kW and Therm UES fields.)

The UESType was set to "EMV" for all records, meaning this update is based on evaluation results from the 2006-2008 program cycle.

Installation Rate Update

First-year realization rates presented above include installation rate updates. No additional Installation Rate updates were necessary. The Installation Rate was set to 1, and the Installation Rate Type was set to “PassThru” for all records.

Interactive Effects

First-year realization rates presented above capture any interactive effects between the measure installed and the air conditioning system operating in the same facility. No additional interactive effect corrections are needed. The UES_i values were set equal to the UES values for all records.

Net-to-Gross Update

Consistent with the evaluation approach, the Net-to-Gross ratios were applied to the Standard Program Tracking Database by domain (POC, Electric non-POC, and Gas) as shown in the following tables (table titles are the same as in the Final Report):

Table 9-4: PY2006-2008 Net-to-Gross Ratio: Pump-Off Controller Projects

Sampling Strata	NTGR*	
	kWh	kW
1	0.49	0.49
2	0.58	0.58
3	0.50	0.51
4	0.54	0.54
5	0.05	0.05
Weighted NTGR	0.45	0.44
90 Percent Confidence Interval	0.432 to 0.458	0.428 to 0.454
Relative Precision	0.030	0.030
N measures in sample	250	250
N measures in population	656	655
Error Ratio	0.36	0.36

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

Table 9-5: PY2006-2008 Net-to-Gross Ratio: Electric Non-POC Projects

Sampling Strata	NTGR*	
	kWh	kW
1	0.53	0.45
2	0.52	0.57
3	0.68	0.69
4	0.57	0.60
5	0.69	0.68
Weighted NTGR	0.60	0.59
90 Percent CI	0.561 to 0.639	0.544 to 0.633
Relative Precision	0.065	0.075
N measures in sample	219	199
N measures in population	756	670
ER	0.70	0.77

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

Table 9-6 Excerpt: PY2006-2008 Net-to-Gross Ratio: All Projects

Sampling Strata	NTGR*
	Therms
1	0.20
2	0.26
3	
4	0.34
5	0.66
Weighted NTGR	0.31
90 Percent CI	0.277 to 0.334
Relative Precision	0.09
N measures in sample	41
N measures in population	152
ER	0.42

* Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

The NTG Type was set to “EMV” for all records, meaning this update is based on evaluation results from this program cycle.

EUL Update

The PG&E tracking system includes Pump-Off Controllers (POCs) from different PG&E programs (SPC, Nonresidential Retrofit, and Savings By Design) as well as third-party programs (Global Energy Partners’ “EE for Oil Production” program.) Some programs estimated 15 year EULs while others estimated 20 years EULs for POCs. The PG&E Industrial contract group estimates a 15 year EUL for all POC measures (please refer to section 5.5.2, page 5-13 of the final “2006-2008 Evaluation Report for the PG&E Fabrication, Process and Manufacturing Contract Group”,) and this value was applied consistently to all POC records in the tracking system.

All other records are custom projects; information provided in the tracking database is insufficient to allow measure-specific EUL updates.

The EUL Type was set to “EMV” for POC records for which the ex-ante EUL value had been set to 20 years and was updated to 15 years by the evaluation. EUL Type was set to “Pass Thru” for all other records.

New Construction and Codes and Standards Updates

The NCCS Non-Residential New Construction (NRNC) evaluation was designed at IOU level with samples selected based on kWh savings (the sample was based on Therms savings for SCG.) The number of 279 projects listed in the following table represents all PG&E NRNC projects across all of the programs contained within the NRNC evaluation, PGE2001 through PGE2008, with the exception of PGE2005 which was evaluated exclusively by the Commercial Facilities contract group. Of the 279 projects in the PG&E NRNC population, 57 were included in the impact sample.

Gross realization rates and associated precision are reported in chapter 3.4 of the NRNC report and in the following table:

	kWh	kW	Therms
Weighted RR	0.822	0.566	1.2
90 Percent CI	0.74 to 0.90	0.51 to 0.62	0.46 to 1.94
Relative Precision	10.0%	18.1%	62.0%
n projects in sample	57	57	57
N projects in population	279	279	279
ER	0.42	0.58	-

NCCS NTG results for PG&E are presented in Chapter 1 of the NRNC report, and in the table below. Precision estimates were calculated for both the gross and net savings types by fuel type and are contained in Chapter 3 of the report. A separate precision estimate was not calculated for the net to gross ratio for the NRNC report.

	NTGR		
	kW	kWh	Therms
NRNC	0.59	0.63	0.82

Since the New Construction and Codes and Standards evaluation also used the realization rate approach, the 58 PGE2004 records included in the NCCS evaluation were updated in a similar manner to the PGE Industrial Group records:

- EDUES was populated with the product between the EDFilledUES and the appropriate NCCS realization rate
- UES Type was set to “EMV”
- Interactive effects are included in the realization rates. EDUESi fields were set equal to EDUES.
- Install rates are included in the realization rates. IRate was set to 1 and IRate Type was set to “PassThru”
- EUL was set to the ex-ante value, and EUL Type was set to “PassThru.”

- The NTG ratios from the NCCS evaluation were used to populate the NTGR fields, and the NTGR Type was set to “EMV.”

The analysis results listed in the NRNC report for PG&E are based on the paid savings claims for all projects. They do not match up identically with the savings listed in the E3 report and the SPTdb, which may use the paid or claimed savings value depending on when the check was issued. The total ex-ante savings for the NRNC report, which were based on the paid claims, are within 2% of the E3 reported total ex-ante savings for all fuel types.

Results

The following results were published in the final “2006-2008 Evaluation Report for the PG&E Fabrication, Process and Manufacturing Contract Group” (table titles are the same as in the report):

Table 9-7: Comparison of Evaluation-Estimated Net Savings with the Final Program-Claimed Net Savings: Pump-Off Controller Projects

	Electric Savings	
	kWh/year	Avg. peak kW
Tracking		
a. Claimed Gross Savings	163,650,384	16,661
b. Claimed NTG Ratio	0.80	0.80
c. Claimed Net Savings (c = a x b)	130,358,878	13,346
Evaluation		
d. Evaluation Gross Realization Rate	0.46	0.47
e. Evaluated Gross Results (e = a x d)	75,349,452	7,842
f. Evaluation NTG Ratio**	0.45	0.44
g. Evaluated Net Results (g = e x f)	33,542,611	3,458
h. Evaluation Net Realization Rate (h = d x f)	0.20	0.21
i. Evaluated Net Savings as a Fraction of Claimed Net Savings (i = g / c)	0.26	0.26

* Claimed results exclusive of the 58 PGE2004 records that were included in the New Construction Codes and Standards evaluation.

** Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

Table 9-8: Comparison of Evaluation-Estimated Net Savings with the Final Program-Claimed Net Savings: Electric Non-POC Projects

	Electric Savings	
	kWh/year	Avg. peak kW
Tracking		
a. Claimed Gross Savings	318,924,279	42,672
b. Claimed NTG Ratio	0.78	0.78
c. Claimed Net Savings (c = a x b)	249,298,171	33,331
Evaluation		
d. Evaluation Gross Realization Rate	0.53	0.51
e. Evaluated Gross Results (e = a x d)	167,824,526	21,583
f. Evaluation NTG Ratio**	0.60	0.59
g. Evaluated Net Results (g = e x f)	100,680,800	12,703
h. Evaluation Net Realization Rate (h = d x f)	0.32	0.30
i. Evaluated Net Savings as a Fraction of Claimed Net Savings (i = g / c)	0.40	0.38

* Claimed results exclusive of the 58 PGE2004 records that were included in the New Construction Codes and Standards evaluation.

** Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

Table 9-9: Comparison of Evaluation-Estimated Net Savings with the Final Program-Claimed Net Savings: Gas Projects

	Gas Savings
	Therms/Year
Tracking	
a. Claimed Gross Savings	40,144,380
b. Claimed NTG Ratio	0.76
c. Claimed Net Savings (c = a x b)	30,325,098
Evaluation	
d. Evaluation Gross Realization Rate	0.68
e. Evaluated Gross Results (e = a x d)	27,169,773
f. Evaluation NTG Ratio**	0.31
g. Evaluated Net Results (g = e x f)	8,302,483
h. Evaluation Net Realization Rate (h = d x f)	0.21
i. Evaluated Net Savings as a Fraction of Claimed Net Savings (i = g / c)	0.27

* Claimed results exclusive of the 58 PGE2004 records that were included in the New Construction Codes and Standards evaluation.

** Consistent with current CPUC policy, the Net-to-Gross ratios in this evaluation reflect the effect of free ridership only and exclude any consideration of spillover.

The ERT runs conducted using only the records from the PG&E Industrial evaluation produced the following results for the "All" Scenario. These results match the sum of POC, Electric Non-POC and Gas results published in the Final Report (and shown above)

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
PGE2004 in PGE_Ind	8,286	64,689,936	6,135,894
PGE2042	2,462	19,718,894	1,109,791
PGE2046	394	4,871,471	311,868
PGE2058	3,111	30,494,472	0
PGE2062	88	843,036	0
PGE2064	269	2,894,778	0
PGE2081	443	4,055,688	0
PGE2084	932	5,966,890	0
PGE2087	177	688,247	744,929
PGE_Ind Evaluation	16,161	134,223,412	8,302,483

After incorporating the 58 PGE2004 records that were included in the NCCS evaluation, the ERT run produced the following “All” scenario results for program PGE2004:

Program ID	"All" Scenario		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
PGE2004 Ind	8,285.86	64,689,936.34	6,135,894.35
PGE2004 NCCS	687.82	5,991,658.46	95,652.38
PGE2004 All	8,973.68	70,681,594.80	6,231,546.73

The NCCS evaluation analyzed only records from program PGE2004 (along with records from programs PGE2001 through PGE2008); it did not analyze records from any of the third-party programs included in the PG&E Industrial contract group. The ERT results for those programs remain the same as shown above:

Program ID	"All Scenario"		
	Net Ex-post kW	Net Ex-post kWh	Net Ex-post Therms
PGE2042	2,462	19,718,894	1,109,791
PGE2046	394	4,871,471	311,868
PGE2058	3,111	30,494,472	0
PGE2062	88	843,036	0
PGE2064	269	2,894,778	0
PGE2081	443	4,055,688	0
PGE2084	932	5,966,890	0
PGE2087	177	688,247	744,929

10. PGE AGRICULTURE AND FOOD PROCESSING

Contract Group: PGEAg

ERT Input File Name: ERTInput_PGEAg_Multi.txt

Programs included in ERT input file: PGE2001, PGE2045, PGE2049, PGE2065, PGE2079

Overview

Only parameters for PGE2001 were updated using direct evaluation results. The parameters updated using evaluation data were the UES (unit energy savings) and NTGRs (net-to-gross ratios). For the other parameters, the ex-ante values from the IOU tracking systems were passed through.

Evaluation data for PGE2001 came from two sources: 994 records were updated using data from the PG&E Agricultural and Food Processing (Ag-Food) evaluation, and 68 records were updated using data from the New Construction Codes and Standards (NCCS) evaluation. PGE2001 records associated with the NCCS evaluation were identified using two fields from the SPTdb:

- IOUPrgTrkPrgElement="NRNC" and
- IOUPrgTrkSectorCode="COM"

For the other programs (PGE2045, PGE2049, PGE2065, and PGE2079) IOU assumptions were passed through for all ERT parameters. These programs were not evaluated directly because they comprised a very small portion of savings for PG&E's overall 2006-2008 portfolio.

Installation Rates

For both the Ag-Food and the NCCS evaluations, installation rates are included in the estimated gross realization rates that were used to develop unit energy consumption (UEC). Therefore, installation rates (EDIRate) were set to 1.0 and the installation rate type (IRateType) was set to "PassThru" for all PGE2001 records.

For the other programs (PGE2045, PGE2049, PGE2065, and PGE2079) installation rates were set to 1.0 and the IRateType was set to "PassThru" for all records.

Unit Energy Savings (UES)

For PGE2001, UES were calculated for each record using the following formulas:

$$\text{UES} = (\text{Included Savings} + \text{Omitted Savings}) / (\text{EDQuantity} * \text{EDIRate})$$

Where:

$$\text{Included Savings} = \text{Ex ante savings} * \text{Gross Realization Rate}$$

$$\text{Omitted Savings} = \text{Total Omitted Savings} / \text{Records Associated with Omitted Savings}$$

Note that omitted savings are savings at the project level (as defined by the PG&E Application Code) where ex-post savings were estimated for a given fuel type but ex-ante savings were set at zero. (For example, if the evaluation found electric savings associated with a project that the ex-ante estimates showed only gas savings, then these electric savings were defined as omitted savings.) Omitted savings could not utilize a realization rate approach for assigning record-specific impacts because there were no ex-ante savings to apply the realization rates to. Omitted savings were applied to a total of 78 electric records and 683 gas records.

For the UES calculation above, the EDQuantity was set equal to the EDFilledExAnteQuantity from the SPTdb. The EDFilledExAnteQuantity equals the IOUPrgTrkExAnteQuantity except where the IOUPrgTrkExAnteQuantity was zero or missing, in which cases the EDFilledExAnteQuantity was set to 1.0.

The following table (from the final Ag-Food report²¹) summarizes the Ag-Food gross realization rates used for the calculations.

Table 10: PG&E Ag-Food Program Realization Rate and Precision Estimates

Result	kWh	kW	Therms
Realization Rate	0.68	0.52	1.07
Standard Error	0.070	0.096	0.160
Error Bound - 90% Confidence Level	0.115	0.158	0.264
Relative Precision	16.9%	30.4%	24.6%
Error Ratio	0.78	0.99	1.40

The following table (developed from tables in the final NCCS report²²) summarizes the NCCS gross realization rates used for the calculations. Note that this table summarizes results presented in Tables 3-15, 3-20, and 3-25 of the NCCS report.

²¹ *Evaluation Report: PG&E Agricultural and Food Processing Program; Greenhouse Heat Curtain and Infrared Film Measures*, February 10, 2010

²² *Non Residential New Construction (NRNC) Programs Impact Evaluation Volume II*, February 8, 2010

	kWh	kW	Therms
Weighted RR	0.822	0.566	1.2
90 Percent CI	0.74 to 0.90	0.51 to 0.62	0.46 to 1.94
Relative Precision	10.0%	18.1%	62.0%
n projects in sample	57	57	57
N projects in population	279	279	279
ER	0.42	0.58	-

Note: data extracted from Tables 3-15, 3-20, and 3-25 of the NCCS report.

The following table, extracted from the Ag-Food evaluation shows the omitted savings utilized in the calculations. Note that the omitted impacts are shown in the middle set of numbers in the table.

Table 11: PG&E Ag-Food Program-Level Gross Impacts

Impact Type	Result	kWh	kW	Therms
Included	Ex-Ante Savings	120,778,653	19,504	9,229,753
Impacts	Realization Rate	0.68	0.52	1.07
	Ex-Post Savings	82,194,017	10,141	9,896,878
	Relative Precision	16.9%	30.4%	24.6%
	Lower Bound, 90% Confidence Interval	68,331,455	7,058	7,461,866
	Upper Bound, 90% Confidence Interval	96,056,579	13,225	12,331,889
	Omitted	Number of Projects	76	76
Impacts	Mean Use	25,418	2	-48
	Ex-Post Savings	1,931,740	121	-31,270
	Relative Precision	110.-	148.7%	-164.5%
	Lower Bound, 90% Confidence Interval	-192,226	-59	-82,710
	Upper Bound, 90% Confidence Interval	4,055,705	301	20,169
	Combined	Ex-Post Savings	84,125,757	10,262
Impacts	Relative Precision	19.-	31.8%	25.2%
	Lower Bound, 90% Confidence Interval	68,139,230	6,999	7,379,157
	Upper Bound, 90% Confidence Interval	100,112,284	13,526	12,352,058

The realization rate and total omitted savings estimates were applied at the evaluation level (i.e. they were not applied at the strata level). These results provide improvements to program-level ex-ante estimates by introducing direct measurement and analysis activities that were applied to a statistically representative sample of projects. The measurement and analyses take into account actual, as-built equipment configuration and operating conditions whereas the ex-ante estimates were based on forecasts of what savings the energy efficiency project would provide.

The UESType was set to "EMV" for all PGE2001 records.

For the other programs (PGE2045, PGE2049, PGE2065, and PGE2079) UESs were set equal to the EDFilledUESs, which are based on the ex-ante savings and installed units, and the UESType was set to “PassThru” for all records.

Interactive Effects

Any interactive effects for PGE2001 were captured in the gross realization rates developed in the Ag-Food and NCCS evaluations. Therefore, interactive UES’s were set equal to the base UES’s.

For the other programs (PGE2045, PGE2049, PGE2065, and PGE2079) ex-ante interactive affects, in any, were incorporated into the ex-ante UES estimates, and interactive UES’s were set equal to the base UES’s.

Net-to-Gross Ratios (NTGRs)

NTGRs estimated by the Ag-Food and NCCS evaluations were applied to the tracking database at the evaluation level. The following table, extracted from the Ag-Food final report, shows the Ag-Food NTGRs that were utilized:

Table 12: PG&E Ag-Food Program Net-to-Gross Ratios and Precision Estimates

Result	kWh	kW	Therms
Net-to-Gross Ratio	0.70	0.78	0.69
Standard Error	0.062	0.067	0.067
Error Bound - 90% Confidence Level	0.102	0.110	0.111
Relative Precision	14.6%	14.1%	16.1%

The following table, developed from the NCCS analysis shows NCCS NTGRs that were utilized:

	NTGR		
	kW	kWh	Therms
NRNC	0.59	0.63	0.82

The NTG results are presented in Chapter 1 of the NCCS report. Precision estimates were calculated for both the gross and net savings types by fuel type, which are contained in Chapter 3 of the report. Precisions were not reported for the NTG in the NCCS report.

These NTGRs, from both the Ag-Food and NCCS studies, reflect aggregated, project-specific NTGRs from a statistically representative sample of projects. They provide

improvements over the ex-ante, generalized NTGR assumptions because they incorporate customer-reported data that were used to assess the likelihood that each sampled project delivered net savings.

The NTGRType was set to “EMV” for all PGE2001 records.

For the other programs (PGE2045, PGE2049, PGE2065, and PGE2079) NTGRs were set equal to the ex-ante NTGR (IOUPrgTrkNTG), and the NTGRType was set to “PassThru” for all records.

Effective Useful Life (EUL)

No updates were deemed necessary for the ex-ante EUL estimates and ex-ante values were utilized. The EULType was set to “PassThru”.

11. NEW CONSTRUCTION

Non Residential New Construction

Contract Group: NCCS

ERT Input File Name: ERTInput_NRNC_SCE2512.txt,
ERTInput_NRNC_SCG3542.txt
ERTInput_NRNC_SDGE3018.txt

Programs included in ERT input file: SCE2512, SCG3542, SDGE3018

Overview

Only the UES (unit energy savings) and NTGR (net-to-gross ratio) parameters for SCE2512, SCG3542, and SDGE3018 were updated using direct evaluation results. For the other parameters, the ex-ante values from the IOU tracking systems were passed through. A total of 425 records were updated for the SCE2512 program, 58 records for the SCG3542 program, and 400 records for the SDGE3018 program.

For SDGE there were 4 records that were originally in the utility tracking database as part of the Savings By Design/Sustainable Communities program (SDGE3045) but were changed to be included in the Savings By Design (SDGE3018) in the SPTdb. The 4 records had very small savings relative to the SBD program and because they were not included in the evaluation population pass thru savings were used for all values.

Installation Rates

For all three of the NCCS evaluations, installation rates were set to 1.0 and the IRateType was set to "PassThru" for all records.

Unit Energy Savings (UES)

For SCE2512, UES were calculated for each record using the following formula:

$$\text{UES} = (\text{Ex ante savings}) * \text{Gross Realization Rate}$$

Note that for the SCE2512 EDfilledExAnteQuantity is set to 1 for all line items in the standard program tracking database (SPTdb) and the ex-ante savings are the aggregated savings of all measures within that line item. Therefore the "unit" of the UES might be a single HVAC unit or multiple units aggregated to a single line item.

For SDG&E3018 and SCG3542, UES were calculated for each record using the following formula:

$$\text{UES} = (\text{Ex ante savings} * \text{EDfilledExAnteQuantity}) * \text{Gross Realization Rate}$$

For SDG&E3018 and SCG3542 the IOU tracking quantity field was set to the total savings of a measure line item and the fuel savings was set to 0 or 1 for kWh or therms and a fraction of 1

for the kW. For example, if an electric measure had 80,000 kwh savings, the units would be set to 80,000, kWh would be equal to 1, and kW would be equal to .026 or some fraction of 1. The EDFilledQuantity in the input file was set equal to the IOU’s tracking quantity.

The following gross realization rates estimates were used in the analysis and are documented in the NRNC evaluation report in Chapter 3.4 along with the associated precisions:

Evaluation	Parameter Type	kW	kW RP	kWh	kWh RP	Therms	Therms RP
SCE2512	RR	1.12	10.8%	1.07	8.4%	N/A	N/A
SDGE3018	RR	0.57	7.1%	0.83	4.1%	0.67	47.2%
SCG3542	RR	N/A	N/A	N/A	N/A	0.70	83.1%

SCG did not claim any electric savings in the SPTdb and also did not have any evaluated measures with interactive effects that would produce electric savings, therefore UES for kW and kWh were set to 0 for SCG.

For all UES other than SCE2512 therms and SCG3542 kW/kWh, realization rates were applied at the evaluation level (i.e. they were not applied at the strata level). These results provide improvements to program-level ex-ante estimates by introducing direct measurement and analysis activities that were applied to a statistically representative sample of projects. The measurement and analyses take into account actual, as-built equipment configuration and operating conditions whereas the ex-ante estimates were based on forecasts of what savings the energy efficiency project would provide.

Note that SCE did not claim ex-ante gross savings for therms. UES estimates for SCE2512 therms were calculated by measure type using the following formulas:

$$\text{MeasureSavings} = \text{TotalSavings} * \text{MeasurePercentage}$$

- TotalSavings - the total therms savings of the SCE SBD program,
- MeasurePercentage - the amount of savings from a particular measure type (HVAC/motors, Shell, or WB) divided by TotalSavings.

$$\text{Measure_UES} = \text{MeasureSavings}/\text{MeasureUnits}$$

- MeasureUnits - the sum of the EdFilledQuantity for a particular measure type.

The UES values were calculated for SCE2512 therms by taking the total evaluated ex-post gross savings and attributing those savings proportionally among the measure types that had interactive effects: HVAC/motors, Shell, and Whole Building (WB). Of the 59,419 ex post gross therms savings, 50% came from HVAC/motor measures, 30% came from Shell measures, and 20% came from WB measures. These MeasurePercentages were then applied to the TotalSavings of 59,419 therms to determine the savings by measure type (MeasureSavings). Once the MeasureSavings were calculated, the savings for each measure type were divided by the number of units of that measure type in the SPTdb to come up with the unit energy savings for each measure type.

The UESType was set to “EMV” for all NCCS records.

Interactive Effects

Any interactive effects for all NRNC records were captured in the gross realization rates developed in the NRNC evaluation. Therefore, interactive UES's were set equal to the base UES's.

Net-to-Gross Ratios (NTGRs)

NTGRs estimated by the NCCS evaluations were applied to the tracking database at the evaluation level: The NTGR results are presented in the Chapter 1 of the NRNC report.

Evaluation	Net-to-Gross Ratio		
	kW	kWh	Therms
SCE2512	0.65	0.63	0.82
SDGE3018	0.58	0.64	1.22
SCG3542	N/A	N/A	0.70

These NTGRs reflect aggregated, project-specific NTGRs from a statistically representative sample of projects. They provide improvements over the ex-ante, generalized NTGR assumptions because they incorporate customer-reported data that were used to assess the likelihood that each sampled project delivered net savings.

The NTGRType was set to "EMV" for all NRNC records.

Effective Useful Life (EUL)

No updates were deemed necessary for the ex-ante EUL estimates and ex-ante values were utilized. The EULType was set to "PassThru".

Residential New Construction

Contract Group: NCCS

ERT Input File Name: ERTInput_NRNC_PGE2009.txt
ERTInput_NRNC_SCE2505.txt,
ERTInput_NRNC_SCG3502.txt
ERTInput_NRNC_SDGE3007.txt

Programs included in ERT input file: PGE2009, SCE2505, SCG3502, SDGE3007

Overview

The savings associated with the IOU RNC programs can be categorized into four categories: Whole House savings in single family homes, Whole House savings in multifamily homes, Compliance-Modeled Prescriptive measures (includes quality installed insulation, duct

testing/sealing, and HVAC right sizing), and Non-Modeled Prescriptive Measures (includes primarily lighting and appliances). The table below summarizes the total savings for each of the RNC Programs for each of these four categories.

The purpose of the Evaluation Reporting Tool (ERT) is to assign the ex-post results found during the EM&V studies to the IOU tracking database and E3 records. The first priority is to update the records that were directly evaluated by the EM&V contractors; for the RNC Programs this includes only the single family Whole House savings. The next step is for the EM&V contractors to work closely with the CPUC ED and use the decision tree developed to decide if and how to update the other records in the program tracking databases for use in the E3 runs. Other records could be updated using other 06-08 EM&V studies that evaluated the same measures or with DEER values if there were no other studies that evaluated the measure. If the measure is either not in DEER or the measure is in DEER but is not directly applicable, then the CPUC ED and the EM&V contractor may decide to pass through the ex-ante values for the measure.

The RNC evaluation developed ex-post results for the Whole House savings in single family homes. These results will be used to populate the ERT. The multifamily Whole House records and the Micropas modeled new construction measures were not evaluated by other EM&V studies and are also not in DEER. Therefore, these records will be passed through the ERT with their ex-ante values.

The last group of measures, the non-modeled prescriptive measures, is a combination of measures that may or may not be able to be updated using the results of the Residential Retrofit Evaluation (ResRetro). Lighting measures, for example, were evaluated under ResRetro, but it is unclear how the distribution of where the lamps installed under the RNC programs. Therefore the hours of operation found in that study may not be applicable to the lighting installed under the RNC programs. The NCCS team proposes that the lighting records in the RNC programs not be updated using the ResRetro results. Further, the total ex-ante savings from the non-modeled prescriptive measures as a percentage of each IOUs portfolio savings does not exceed 0.007% for kWh and kW and ranges from only 0.03% to 0.10% for therms. Due to these extremely small savings and questionable applicability, the NCCS team proposes to pass through all ex-ante values for the non-modeled prescriptive records.

	SCE2505	PGE2009	SCG3502	SDGE3007
kWh				
Prescriptive Measures – Not Modeled	110,500	203,758		-
Prescriptive Measures – Micropas	1,869	60,098		260,086
Whole House - MF	54,958	67,241		-
Whole House - SF	120,158	1,863,245		-
Total Program Savings	287,485	2,194,341		260,086
Adjusted in ERT (% of Program)	42%	85%		0%
Not Adj as part of ERT (% of Portfolio)	0.004%	0.006%		0.031%
kW				
Prescriptive Measures – Not Modeled	21	60		-
Prescriptive Measures – Micropas	3	58		285
Whole House - MF	54	63		-
Whole House - SF	185	1,733		-
Total Program Savings	262	1,913		285
Adjusted in ERT (% of Program)	70%	91%		0%
Not Adj as part of ERT (% of Portfolio)	0.011%	0.021%		0.188%
Therms				
Prescriptive Measures – Not Modeled		21,147	40,597	7,713
Prescriptive Measures – Micropas		7,242	88,014	13,008
Whole House - MF		36,526	2,182	-
Whole House - SF		449,158	11,268	-
Total Program Savings		514,072	142,062	20,721
Adjusted in ERT (% of Program)		87%	8%	0%
Not Adj as part of ERT (% of Portfolio)		0.096%	0.210%	0.270%

Only the UES (unit energy savings) and NTGR (net-to-gross ratio) parameters for Whole House measures in the NCCS Residential New Construction (RNC) were updated using direct evaluation results. For the other parameters of Whole House measures, the ex-ante values from the IOU tracking systems were passed through. For non-Whole House measures, all of the ex-ante values were passed through. SDGE3007 did not rebate any Whole House measures, so all ex-ante parameters were passed thru. A total of 2,804 records were contained in the ERT input file for the PGE2009 program (1796 Single Family Whole House Measures), 57 records were for the SCE2502 program (25 Single Family Whole House Measures), 3017 records for the SCG3502 program (7 Single Family Whole House Measures), and 210 records for the SDGE3007 program (0 Single Family Whole House Measures).

Installation Rates

Installation rates were set to 1.0 and the IRateType was set to “PassThru” for all records in the four RNC Programs.

Unit Energy Savings (UES)

Unit Energy Savings and associated precisions are reported in Chapter 3 of the NCCS RNC report. UES values were calculated by climate region for each utility. The kWh and kW results were broken down into three regions for each utility (Inland, Coastal, and Desert) whereas the Therms results were only broken into two regions (Inland and Coastal). SCG only had a Desert-based Whole House measure, however the results were reported under the ‘Inland’ region in the Therms results. PG&E had no Whole House measures in the Desert region. SCE had Whole House measures in all three regions, and the Desert region was combined with the Inland region in the Therms results. The SCE gross realization rate was over 400% because the ex-ante estimates of savings were lower than they had been in past cycles and also lower than the ex-ante savings estimates other utilities. Another factor in the high gross realization rate was the high compliance margin in the participant registry as well as a poor compliance margin of the baseline homes. The high gross savings also translated into a high net realization rate for SCE.

The total savings by climate zones for each utility in the RNC report differ slightly (less than 5%) from the savings by climate zones in the ERT tool because the climate zones for some sites changed from the original utility tracking database to the final Standardized Program Tracking Database (SPTdb).

Utility	Inland		Coastal		Desert	
	Ex Post Gross UES	RP	Ex Post Gross UES	RP	Ex Post Gross UES	RP
PG&E	628	25.0%	511	45.8%	NA	
SCE	1,606	25.0%	693	45.8%	7,428	19.3%
SCG	NA	NA	NA	NA	2,709	19.3%

Table 13: kWh Unit Energy Savings by Utility Climate Regions

Utility	Inland		Coastal	
	Ex Post Gross UES	RP	Ex Post Gross UES	RP
PG&E	63	31.7%	57	65.0%
SCE	83	25.3%	38	26.3%
SCG	16	19.4%	NA	NA

Table 14: Therm Unit Energy Savings by Utility Climate Regions

The UESType was set to “EMV” for all Whole House records in the NCCS RNC program

Interactive Effects

Any interactive effects for all NRNC records were captured in the gross realization rates developed in the RNC evaluation's compliance models. Therefore, interactive UES's were set equal to the base UES's.

Net-to-Gross Ratios (NTGRs)

NTGRs estimated by the NCCS evaluations were applied to the tracking database at the evaluation level: NTGR values were calculated using the difference of differences approach. The NTGR results are presented in the Chapter 3 of the RNC report and the difference of differences approach is described in detail in the RNC Appendix D.

Utility	Inland	Coastal	Desert
	Net-to-Gross Ratio	Net-to-Gross Ratio	Net-to-Gross Ratio
PG&E	1.06	0.57	NA
SCE	1.06	0.52	0.58
SCG	NA	NA	0.45

Table 15- kWh NTGR by Utility Climate Regions

Utility	Inland	Coastal
	Net-to-Gross Ratio	Net-to-Gross Ratio
PG&E	0.53	(0.02)
SCE	0.84	1.20
SCG	(0.29)	NA

Table 16- Therm NTGR by Utility Climate Regions

These NTGRs reflect aggregated, project-specific NTGRs from a statistically representative sample of projects. They provide improvements over the ex-ante, generalized NTGR assumptions because they incorporate customer-reported data that were used to assess the likelihood that each sampled project delivered net savings.

The NTGRType was set to "EMV" for all NRNC records.

Effective Useful Life (EUL)

EULs were not a part of the NCCS RNC evaluation and there was no Whole House measure within DEER, therefore the ex-ante EUL estimates were utilized. The EULType was set to "PassThru".

