

APPENDIX A: System Data

A1 Existing Generation

Table A1-1: Existing generation plants in PG&E planning area

Planning Area	Generating Plant	Maximum Capacity
PG&E - Humboldt	Humboldt Bay	166
	Kekawaka	4.9
	Pacific Lumber	32.5
	LP Samoa	25
	Fairhaven	17.3
	Blue Lake	12
	Humboldt Area Total	258
PG&E - North Coast and North Bay	Santa Fe	160
	Bear Canyon	20
	Westford Flat	30
	Western Geo	38
	Geysers 5	53
	Geysers 6	53
	Geysers 7	53
	Geysers 8	53
	Geysers 11	106
	Geysers 12	106
	Geysers 13	133
	Geysers 14	109
	Geysers 16	118

Planning Area	Generating Plant	Maximum Capacity
	Geysers 17	118
	Geysers 18	118
	Geysers 20	118
	Bottle Rock	55
	SMUD Geo	72
	Potter Valley	11
	Geo Energy	20
	Indian Valley	3
	Sonoma Landfill	6
	Exxon	54
	Monticello	12
		North Coast and North Bay Area Total
PG&E - North Valley	Pit River	752
	Battle Creek	17
	Cow Creek	5
	North Feather River	736
	South Feather River	123
	West Feather River	26
	Black Butte	11
	CPV	717
	Hatchet Ridge Wind	103
	QFs	353
		North Valley Area Total

Planning Area	Generating Plant	Maximum Capacity
PG&E - Central Valley	Wadham	27
	Woodland Biomass	25
	UC Davis Co-Gen	4
	Cal-Peak Vaca Dixon	49
	Wolfskill Energy Cener	60
	Lambie, Creed and Goosehaven	143
	EnXco	60
	Solano	100
	High Winds	200
	Shiloh	300
	Bowman Power House	4
	Camp Far West (SMUD)	7
	Chicago Park Power House	40
	Chili Bar Power House	7
	Colgate Power House	294
	Deer Creek Power House	6
	Drum Power House	104
	Dutch Plat Power House	49
	El Dorado Power House	20
	Feather River Energy Center	50
French Meadow Power House	17	
Green Leaf No. 1	73	
Green Leaf No. 2	50	

Planning Area	Generating Plant	Maximum Capacity
	Halsey Power House	11
	Haypress Power House	15
	Hellhole Power House	1
	Middle Fork Power House	130
	Narrows Power House	66
	Newcastle Power House	14
	Oxbow Power House	6
	Ralston Power House	83
	Rollins Power House	12
	Spaulding Power House	17
	SPI-Lincoln	18
	Ultra Rock (Rio Bravo-Rocklin)	25
	Wise Power House	20
	Yuba City Co-Generation	49
	Yuba City Energy Center	61
	Altamont Co-Generation	7
	Camanche Power House	11
	Co-generation National POSDEF	44
	Electra Power House	101
	Flowind Wind Farms	76
	GWF Tracy Peaking Plant	192
	Ione Energy	18
	Lodi CT	25

Planning Area	Generating Plant	Maximum Capacity
	Lodi Stigg	57
	Pardee Power House	29
	Salt Springs Power House	42
	San Joaquin Co-Generation	55
	Simpson Paper Co-Generation	50
	Stockton Co-Generation (Air Products)	50
	Stockton Waste Water Facility	2
	Thermal Energy	21
	Tiger Creek Power House	55
	US Wind Power Farms	158
	West Point Power House	14
	Lodi Energy Center	280
	GWF Tracy Expansion	145
	Beardsley Power House	11
	Donnells Power House	68
	Fiberboard (Sierra Pacific)	6
	Melones Power Plant	119
	Pacific Ultra Power Chinese Station	22
	Sand Bar Power House	15
	Spring Gap Power House	7
	Stanislaus Power House	83
	Stanislaus Waste Co-gen	24
	Tulloch Power House	17

Planning Area	Generating Plant	Maximum Capacity
	Central Valley Area Total	3,970
PG&E - Greater Bay Area	Alameda Gas Turbines	51
	Calpine Gilroy I	182
	Contra Costa Power Plant	680
	Crockett Co-Generation	243
	Delta Energy Center	965
	High Winds, LLC	162
	Los Esteros Critical Energy Facility	242
	Los Medanos Energy Center	678
	Mariposa Peaker	196
	Metcalf Energy Center	575
	Oakland C Gas Turbines	165
	Donald Von Raesfeld Power Plant	182
	Pittsburg Power Plant	1,360
	Riverview Energy Center	61
	Ox Mountain	13
Gateway Generating Station	599	
	Area Total	6,354
PG&E - Greater Fresno Area	Fresno Cogen-Agrico	79.9
	Balch 1 PH	31
	Balch 2 Pho	25
	Mendota Biomass Power	107
	Chow 2 Peaker Plant	52.5

Planning Area	Generating Plant	Maximum Capacity
	Chevron USA (Coalinga)	25
	Chow II Biomass to Energy	12.5
	Coalinga Cogeneration Company	46
	CalPeak Power – Panoche LLC	49
	Crane Valley	0.9
	Corcoran PB	20
	Dinuba Generation Project	13.5
	El Nido Biomass to Energy	12.5
	Exchequer Hydro	94.5
	Fresno Waste Water	9
	Friant Dam	27.3
	GWF Henrietta Peaker Plant	109.6
	HEP Peaker Plant Aggregate	102
	Hanford L.P.	23
	Hass PH Unit 1 &2 Aggregate	146.2
	Helms Pump-Gen	1,212
	J.R. Wood	10.8
	Kerkhoff PH1	32.8
	Kerkhoff PH2	142
	Kingsburg Cogen	34.5
	Kings River Hydro	51.5
	Kings River Conservation District	112
	Liberty V Lost Hills	20

Planning Area	Generating Plant	Maximum Capacity
	Madera	28.7
	McSwain Hydro	10
	Merced Falls	4
	O'Neill Pump-Gen	11
	Panoche Energy Center	410
	Pine Flat Hydro	189.9
	Sanger Cogen	38
	San Joaquin 2	3.2
	San Joaquin 3	4.2
	Starwood Panoche	121.8
	Stratford	20
	Rio Bravo Fresno (AKA Ultrapower)	26.5
	Wellhead Power Gates, LLC	49
	Wellhead Power Panoche, LLC	49
	Wishon/San Joaquin #1-A Aggregate	20.4
		Greater Fresno Area Total
PG&E - Kern Area	Badger Creek (PSE)	49
	Chalk Cliff	48
	Cymric Cogen (Chevron)	21
	Cadet (Chev USA)	12
	Dexzel	33
	Discovery	44
	Double C (PSE)	45

Planning Area	Generating Plant	Maximum Capacity
	Elk Hills	623
	Frito Lay	8
	Hi Sierra Cogen	49
	Kern	177
	Kern Canyon Power House	11
	Kernfront	49
	Kern Ridge (South Belridge)	76
	La Paloma Generation	926
	Midsun	25
	Mt. Poso	56
	Navy 35R	65
	Oildale Cogen	40
	Bear Mountain Cogen (PSE)	69
	Live Oak (PSE)	48
	McKittrick (PSE)	45
	Rio Bravo Hydro	11
	Shell S.E. Kern River	27
	Solar Tannenhill	18
	Sunset	225
	North Midway (Texaco)	24
	Sunrise (Texaco)	338
	Sunset (Texaco)	239
	Midset (Texaco)	42

Planning Area	Generating Plant	Maximum Capacity
	Lost Hills (Texaco)	9
	Ultra Power (OGLE)	45
	University Cogen	36
	New RPS Units	55
	Kern Area Total	3,588
PG&E - Central Coast and Los Padres	Moss Landing Power Plant	2,600
	Basic Energy Cogen (King City)	120
	King City Peaker	61
	Sargent Canyon Cogen (Oilfields)	50
	Salinas River Cogen (Oilfields)	50
	Diablo Canyon Power Plant	2,400
	Morro Bay Power Plant	1,014
	Union Oil (Tosco)	6
	Santa Maria	8
	Vandenberg Air Force Base	15
	Central Coast and Los Padres Area Total	6,324

Table A1-2: Existing generation plants in SCE planning area

Planning Area	Generating Plant	Maximum Capacity
SCE - Tehachapi and Big Creek Corridor	Big Creek 1-1 Gen 1	19.9
	Big Creek 1-1 Gen 2	21.6
	Big Creek 1-2 Gen 3	21.6
	Big Creek 1-2 Gen 4	31.2
	Big Creek 2-1 Gen 1	50.8
	Big Creek 2-1 Gen 2	52.0
	Big Creek 2-2 Gen 3	18.7
	Big Creek 2-2 Gen 4	19.7
	Big Creek 2-3 Gen 5	17.0
	Big Creek 2-3 Gen 6	18.5
	Big Creek 3-1 Gen 1	35.0
	Big Creek 3-1 Gen 2	35.0
	Big Creek 3-2 Gen 3	35.0
	Big Creek 3-2 Gen 4	41.0
	Big Creek 3-3 Gen 5	39.0
	Big Creek 4 Gen 41	50.4
	Big Creek 4 Gen 41	50.6
	Big Creek 8 Gen 81	24.4
	Big Creek 8 Gen 81	44.0
	Eastwood	207.0
Mammoth 1G	93.5	
Mammoth 2G	93.5	

Planning Area	Generating Plant	Maximum Capacity
	Portal	9.6
	Antelope Bailey	389.1
	Warne 1	38.0
	Warne 2	38.0
	Pandol 1	56
	Pandol 2	56
	Ultragen	41
	Omar 1G	90.8
	Omar 2G	90.8
	Omar 3G	90.8
	Omar 4G	90.8
	SYCCYN 1G	75
	SYCCYN 2G	75
	SYCCYN 3G	75
	SYCCYN 4G	75
	Pastoria Energy Facility	770
	CPC East	270
	CPC West	450
	Corum	102
		Tehachapi and Big Creek Corridor Total
	Arbwind	21.8
	Canwind	65.0
	Enwind	47.1

Planning Area	Generating Plant	Maximum Capacity
SCE - Antelope-Bailey Area	Flowind	40.8
	Dutchwind	14.0
	Northwind	19.4
	Oakwind	21.1
	Southwind	13.4
	Zondwind	26.0
	Breeze	12.5
	Midwind	18.0
	Morwind	56.0
	Kern River	24.0
	Borel	10.0
		Antelope-Bailey Area Total
SCE - East of Lugo Area	Desert Star Energy Star	495
	Mountain Pass - Ivanpah Solar	400
	Copper Mountain Solar I	58
		East of Lugo Area Total
SCE - North of Lugo	BSPHYD 26	13.4
	BSPHYD 34	15.8
	Poole	10.9
	Lundy	3.0
	Rush Creek	11.9
	Casa Diablo	30.0

Planning Area	Generating Plant	Maximum Capacity
	BLM (E7G, E8G & W9G)	100.7
	Borax I	48.0
	Calgen (1G, 2G, & 3G)	92.2
	Kerrgen	25.6
	Kerr McGee	55.0
	Luz (8 & 9)	160.0
	McGen	118.3
	MoGen G	62.5
	NavyII (4G, 5G, & 6G)	99.0
	Oxbow G1	56.0
	Segs (1 & 2)	38.4
	Sungen (3G, 4G, 5G, 6G, & 7G)	160
	Alta 1G	65.0
	Alta 2G	81.0
	Alta 3ST	108.0
	Alta 4ST	108.0
	Alta 31GT	66.5
	Alta 32GT	66.5
	Alta 41GT	66.5
	Alta 42GT	66.5
	HDPP Energy Facility	830.0
		Area Total
	Blythe Energy Center	520

Planning Area	Generating Plant	Maximum Capacity
SCE - Eastern Area	Indigo Peaker	136
	Cabazon Wind	42.6
	Mountainview IV Wind	42
	Wintec 5 Wind	3.7
	Wintec 6 Wind	45
	Pacificorp Wind	2.1
	FPLE Green 1 Wind	8.7
	FPLE Green 2 Wind	3.0
	FPLE Green 3 Wind	6.8
	Wintec 2 Wind	16.5
	Wintec 3 Wind	11.6
	Wintec 4 Wind	16.5
	Seawest 1 Wind	44.4
	Seawest 2 Wind	22.2
	Seawest 3 Wind	22.4
	Renwind Wind	9.0
	Whitewater Wind	66
	Altamesa 4 Wind	40
	Painted Hills Wind	16.9
	Altwind QF 1	32.9
Altwind QF 2	15.1	
Buchwind QF	17	
Capwind QF	20	

Planning Area	Generating Plant	Maximum Capacity
	Garnet QF Wind	101.4
	Panaero Wind	30
	Renwind QF 1	6.3
	Renwind QF 2	6.6
	Sanwind QF 1	3.0
	Sanwind QF 2	28.0
	Seawind QF	27
	Terawind QF	22.5
	Transwind QF	40.0
	Venwind QF 1	25.5
	Venwind QF 2	19.3
	Eastern Area Total	1,470
	SCE Metro Area	Alamitos
Canyon Power Plant		195
Anaheim CT		41
Watson Cogeneration		271
Barre Peaker		45
Broadway 3		65
Center Area Lumped Units		18
MWD Rio Hondo Hydroelectric Recovery Plant		2
Center Peaker		45
Century		36
O.L.S. Energy Company- Chino-Mens Inst.		25

Planning Area	Generating Plant	Maximum Capacity
SCE Metro Area	Ripon Cogeneration	27
	Milliken Landfill Project	1
	Agua Mansa Generating Facility	43
	Clearwater Power Plant	28
	Diamond Valley P-G Plant	1
	Drews	36
	Devil Canyon	235
	El Segundo 3 & 4	670
	Fontana/Lytle Creek Hydro	1
	Grapeland Peaker	43
	Etiwanda Hydro Recovery Plant	10
	Mid Valley Landfill Project	2
	Etiwanda 3 & 4	640
	Glen Arm Power Plant	132
	Harbor Cogen Combined Cycle	100
	BP West Coast Products	21
	Long Beach 1 – 4	260
	City Of Long Beach	28
	Huntington Beach 1 & 2	452
	Inland Empire Energy Center	670
MWD Venice Hydroelectric Recovery Plant	4	
Carson Cogeneration Company	47	
MWD Corona Hydroelectric Recovery Plant	2	

Planning Area	Generating Plant	Maximum Capacity
	MWD Temescal Hydroelectric Recovery Plant	2
	Corona Energy Partners, Ltd.	30
	Mira Loma Peaker	43
	Lake Mathews Hydro Recovery Plant	5
	Mojave Siphon PH	18
	MWD Coyote Creek Hydroelectric Recovery Plant	3
	Olinda Area Lumped Units	1
	Olinda Landfill	5
	Ontario/Sierra Hydro Project	1
	San Dimas Hydro Recovery Plant	8
	Padua Area Lumped Units	1
	San Dimas Wash Hydro	1
	Redondo	1,356
	Riverside Energy Resource Center (RERC)	194
	Springs Generation Plant	36
	Coyote Canyon	6
	Mountainview Power Plant	969
	Mill Creek Hydro Project	1
	San Onofre Nuclear Generating Station (SONGS)	2,246
	MWD Perris Hydroelectric Recovery Plant	8
	MWD Red Mountain Hydroelectric Recovery Plant	2

Planning Area	Generating Plant	Maximum Capacity
	Badlands Landfill Gas to Energy Facility	1
	El Sobrante Landfill Gas Generation	1
	H. Gonzales Gas Turbine	12
	Malburg Generating Facility	134
	MWD Valley View Hydroelectric Recovery Plant	4
	L.A. County Sanitation District #2 (Puente Hills B)	47
	MM West Coast Covina, LLC	6
	Ellwood Generating Station	54
	Exxon Company, USA	1
	Gaviota Oil Heating Facility	1
	MM Tajiguas Energy, LLC	3
	Mandalay 1 & 2	430
	Mandalay 3 GT	130
	Calabasas Gas-to-Energy Facility	7
	Simi Valley Landfill Gas Generation	1
	Ormond Beach	1,516
	Toland Landfill Gas to Energy Project	1
	Foothill Hydro Recovery Plant	8
	County Of Los Angeles (Pitchess Honor Ranch)	19
	Saugus Area Lumped Units	1
	Chiquita Canyon Landfill Generating Facility	7
	MM Lopez Energy, LLC	5

Planning Area	Generating Plant	Maximum Capacity
	E. F. Oxnard, Incorporated	34
	Procter & Gamble Paper Prod. (Oxnard II)	46
	Weyerhaeuser Company (Formerly Willamette Industries)	13
	Berry Petroleum Placerita	37
	Metro Area Total	13,658

Table A1-3: Existing generation plants in SDG&E planning area

Planning Area	Generating Plant	Maximum Capacity
SDG&E	Encina 1	106
	Encina 2	103
	Encina 3	109
	Encina 4	299
	Encina 5	329
	Palomar	565
	Otay Mesa	603
	Encina GT	14
	Kearny GT1	15
	Kearny 2AB (Kearny GT2)	55
	Kearny 3AB (Kearny GT3)	57
	Miramar GT 1	17
	Miramar GT 2	16
	El Cajon GT	13
	Goalline	48
	Naval Station	47
	North Island	33
	NTC Point Loma	22
	Sampson	11
	NTC Point Loma Steam turbine	2.3
Ash	0.9	
Cabrillo	2.9	

Planning Area	Generating Plant	Maximum Capacity
	Capistrano	3.3
	Carlton Hills	1.6
	Carlton Hills	1
	Chicarita	3.5
	East Gate	1
	Kyocera	0.1
	Mesa Heights	3.1
	Mission	2.1
	Murray	0.2
	Otay Landfill I	1.5
	Otay Landfill II	1.3
	Covanta Otay 3	3.5
	Rancho Santa Fe 1	0.4
	Rancho Santa Fe 2	0.3
	San Marcos Landfill	1.1
	Miramar 1	46
	Larkspur Border 1	46
	Larkspur Border 2	46
	MMC-Electrovest (Otay)	35.5
	MMC-Electrovest (Escondido)	35.5
	El Cajon/Calpeak	42
	Border/Calpeak	42
	Escondido/Calpeak	42

Planning Area	Generating Plant	Maximum Capacity
	El Cajon Energy Center	48
	Miramar 2	46
	Orange Grove	94
	Kumeyaay (NQC)	8.3
	Bullmoose (NQC)	20
	Lake Hodges Pumped Storage	40
	Ocotillo Express	299
	Area Total	3,382

Table A1-4: Existing generation plants in VEA planning area

Planning Area	Generating Plant	Maximum Capacity
VEA	Not Applicable	0
	Area Total	0

A2 Retired Generation

Table A2-1: Generation plants projected to be retired in planning horizon

PTO Area	Project	Capacity (MW)	First Year to be retired
PG&E	Contra Costa 6	337	2013*
	Contra Costa 7	337	2013*
SCE	El Segundo 3	335	2014**
SDG&E	Kearny Peakers	135	2014
	Miramar GT1 and GT2	36	2014
	El Cajon GT	16	2014

Notes: * Contra Costa units 6 and 7 are scheduled to be retired when the Marsh Landing generation project is commercially available.

** El Segundo unit 3 is scheduled to be retired when the El Segundo Power Redevelopment project is commercially available.

A3 Planned Generation

Table A3-1: Planned Generation

PTO Area	Project	Capacity (MW)	First Year to be Modeled
PG&E	Marsh Landing (Construction)	774*	2013
	Los Esteros Combined Cycle (Construction)	120	2014
	Russel City – East Shore EC (Construction)	600	2013
	Oakley Generation Station (Construction)	624	2014
SCE	Abengoa Mojave Solar Project (Construction)	250	2014
	El Segundo Power Redevelopment (Construction)	570	2014
	Walnut Creek Peaker (Construction)	500	2013
	Sentinel Peaker (Construction)	850	2014
	Genesis Solar Energy Project (Construction)	250	2014
	Ivanpah Solar (Construction)	370	2013-2014
SDG&E	Carlsbad (Pre-Construction)	558	2016
	Pio Pico Energy Center (Pre-Construction)	300	2016

A4 Special Protection Schemes

Table A4-1: Existing Special Protection Schemes in the PG&E area

PTO	Area	SPS Name
PG&E	Central Coast / Los Padres	Mesa and Santa Maria Undervoltage SPS
	Central Coast / Los Padres	Divide Undervoltage SPS
	Central Coast / Los Padres	Temblor-San Luis Obispo 115 kV Overload Scheme (TBD)
	Bulk	COI RAS
	Bulk	Colusa SPS
	Bulk	Diablo Canyon SPS
	Bulk	Gates 500/230 kV Bank #11 SPS
	Bulk	Midway 500/230 kV Transformer Overload SPS
	Bulk	Path 15 IRAS
	Bulk	Path 26 RAS North to South
	Bulk	Path 26 RAS South to North
	Bulk	Table Mt 500/230 kV Bank #1 SPS

PTO	Area	SPS Name
	Central Valley	Drum (Sierra Pacific) Overload Scheme (Path 24)
	Central Valley	Stanislaus – Manteca 115 kV Line Load Limit Scheme
	Central Valley	Vaca-Suisun 115 kV Lines Thermal Overload Scheme
	Central Valley	West Sacramento 115 kV Overload Scheme
	Central Valley	West Sacramento Double Line Outage Load Shedding SPS Scheme
	Greater Fresno Area	Ashlan SPS
	Greater Fresno Area	Atwater SPS
	Greater Fresno Area	Gates Bank 11 SPS
	Greater Fresno Area	Helms HTT RAS
	Greater Fresno Area	Helms RAS
	Greater Fresno Area	Henrietta RAS
	Greater Fresno Area	Herndon-Bullard SPS
	Greater Fresno Area	Kerckhoff 2 RAS
	Greater Fresno Area	Reedley SPS
	Greater Bay Area	Metcalf SPS

PTO	Area	SPS Name
	Greater Bay Area	SF RAS
	Greater Bay Area	South of San Mateo SPS
	Greater Bay Area	Metcalf-Monta Vista 230kV OL SPS
	Greater Bay Area	San Mateo-Bay Meadows 115kV line OL
	Greater Bay Area	Moraga-Oakland J 115kV line OL RAS
	Greater Bay Area	Grant 115kV OL SPS
	Greater Bay Area	Oakland 115 kV C-X Cable OL RAS
	Greater Bay Area	Oakland 115kV D-L Cable OL RAS
	Greater Bay Area	Sobrante-Standard Oil #1 & #2-115kV line
	Greater Bay Area	Gilroy SPS
	Greater Bay Area	Transbay Cable Run Back Scheme
	Humboldt	Humboldt – Trinity 115kV Thermal Overload Scheme
	North Valley	Caribou Generation 230 kV SPS Scheme #1

PTO	Area	SPS Name
	North Valley	Caribou Generation 230 kV SPS Scheme #2
	North Valley	Cascade Thermal Overload Scheme
	North Valley	Hatchet Ridge Thermal Overload Scheme
	North Valley	Coleman Thermal Overload Scheme

Table A4-2: Existing Special Protection Schemes in SCE area

PTO	Area	SPS Name
SCE	Antelope-Bailey	Antelope-RAS
	Big Creek Corridor	Big Creek / San Joaquin Valley RAS
	North of Lugo	Bishop RAS
	North of Lugo	High Desert Power Project RAS
	North of Lugo	Kramer RAS
	Antelope-Bailey	Midway-Vincent RAS
	Antelope-Bailey	Lancaster N-2 Line Loss Tripping Scheme
	Antelope-Bailey	Palmdale N-2 Line Loss Tripping Scheme
	Antelope-Bailey	Pastoria Energy Facility Existing RAS
	North of Lugo	Reliant Energy Cool Water Stability Tripping Scheme
	Eastern Area	West-of-Devers Remedial Action Scheme
	Eastern Area	Blythe Energy RAS and Eagle Mountain Thermal Overload Scheme
	Metro Area	El Nido N-2 Remedial Action Scheme
	Metro Area	Mountain view Power Project Remedial Action Scheme

PTO	Area	SPS Name
	Metro Area	South of Lugo N-2 Remedial Action Scheme
	Metro Area	Mira Loma Low Voltage Load Shedding
	Metro Area	Santiago N-2 Remedial Action Scheme
	Metro Area	Valley Direct Load Trip Remedial Action Scheme

Table A4-3: Existing Special Protection Schemes in the SDG&E

PTO	Area	SPS Name
SDG&E	SDG&E	230kV Otay Mesa Energy Center Generation SPS
	SDG&E	ML (Miguel) Bank 80/81 Overload SPS
	SDG&E	CFE SPS to protect lines from La Rosita to Tijuana
	SDG&E	TL 50001 IV Generator SPS
	SDG&E	Path 44 South of SONGS Safety Net