
Pacific Gas and Electric Company

*Cogeneration and
Small Power
Production
Semi-Annual Report*

July 1999

Pacific Gas and Electric Company

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Small Power
Production
Semi-Annual Report***

**to the
California Public Utilities
Commission**

July 1999

Pacific Gas and Electric Company

Summary of Projects

July 1999

Signed Contracts * Actively Delivering

Project Type	Number of Projects	Operating Size (kW)
COGENERATOR		
	103	2,719,597
SMALL POWER PRODUCER		
BIOGAS	18	41,456
BIOMASS	22	420,700
GEOTHERMAL	8	152,900
HYDRO	96	218,375
SOLAR	3	23
WASTE TO ENERGY	10	144,250
WIND	42	641,330
Total	302	4,338,631

Projects Terminated During the Half Year

All Project Types	Number of Projects	Nameplate (kW)
Total	4	33,155

* Projects which have signed contracts but have not delivered to PG&E in the past year are not included in this report.

Table 1

Summary of Signed Contracts
Cogeneration Projects - Operational and Currently Delivering
July 1999

1 - 1

No.	Log. No.	Project Name	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date	Enhanced Oil Recovery
1	02C048	1080 CHESTNUT CORP.	SAN FRANCISCO / SAN FRANCISCO	3	NATURAL GAS	60	3/23/88	
2	25C004	AERA ENERGY (LOST HILLS)	LOST HILLS / KERN	1	NATURAL GAS EOR	10,970	10/8/95	Yes
3	25C180	AERA ENERGY (OXFORD)	FELLOWS / KERN	4	NATURAL GAS EOR	5,200	9/19/84	Yes
4	04C140	AIRPORT CLUB	SANTA ROSA / SANTA ROSA	3	NATURAL GAS	60	8/27/92	
5	16C047	ALTAMONT COGENERATION CORP.	TRACY / SAN JOAQUIN	4	NATURAL GAS	6,500	4/13/90	
6	02C047	ARDEN WOOD BENEVOLENT ASSOC.	SAN FRANCISCO / SAN FRANCISCO	3	NATURAL GAS	90	9/9/87	
7	06C155	ATHLETIC CLUB	VACAVILLE / SOLANO	3	NATURAL GAS	22	7/15/91	
8	25C250	BADGER CREEK LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	4/1/91	Yes
9	25C251	BEAR MOUNTAIN LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	4/3/95	Yes
10	25C099A	BERRY PETROLEUM COGEN	TAFT / KERN	1	NATURAL GAS EOR	38,000	1/16/97	Yes
11	25C151	BERRY PETROLEUM COMPANY	TAFT / KERN	2	NATURAL GAS EOR	17,000	12/8/86	Yes
12	25C249	CAL RESOURCES (COALINGA)	COALINGA / FRESNO	1	NATURAL GAS EOR	8,500	6/3/88	Yes
13	25C258	CAL RESOURCES (N. MIDWAY SUNSET)	BAKERSFIELD / KERN	1	NATURAL GAS EOR	4,250	6/19/88	Yes
14	25C049	CAL RESOURCES (S. BELRIDGE)	BELRIDGE / KERN	4	NATURAL GAS EOR	48,000	1/10/86	Yes
15	25C246	CAL RESOURCES (SE KERN RIVER)	BAKERSFIELD / KERN	1	NATURAL GAS EOR	34,468	1/31/89	Yes
16	18C006	CALPINE AMERICAN I COGEN.	KING CITY / MONTEREY	4	NATURAL GAS	120,000	3/14/89	
17	08C002	CALPINE GILROY COGEN, L.P.	GILROY / SANTA CLARA	4	NATURAL GAS	130,000	9/18/87	
18	08C022	CALPINE MONTEREY COGEN INC.	WATSONVILLE / SANTA CRUZ	4	NATURAL GAS	28,500	4/27/90	
19	01C052	CALPINE PITTSBURG POWER PLANT	PITTSBURG / CONTRA COSTA	1	NATURAL GAS	65,500	7/1/77	
20	08C003	CARDINAL COGEN	STANFORD UNIVERSITY / SANTA CLARA	4	NATURAL GAS	49,900	2/20/88	
21	25C272	CHALK CLIFF LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	3/20/90	Yes
22	01C202	CHEVRON RICHMOND REFINERY	RICHMOND / CONTRA COSTA	1	NATURAL GAS	99,000	8/31/92	
23	25C055	CHEVRON USA (COALINGA)	COALINGA / FRESNO	1	NATURAL GAS EOR	16,500	11/7/86	Yes
24	01C080	CHEVRON USA (CONCORD)	CONCORD / CONTRA COSTA	1	NATURAL GAS	3,000	3/29/88	
25	25C003	CHEVRON USA (CYMRIC)	CYMRIC / KERN	1	NATURAL GAS EOR	21,040	10/15/82	Yes
26	25C248	CHEVRON USA (EASTRIDGE)	BAKERSFIELD / KERN	1	NATURAL GAS EOR	35,000	6/13/88	Yes
27	25C002	CHEVRON USA (TAFT/CADET)	TAFT / KERN	1	NATURAL GAS EOR	10,000	7/26/82	Yes
28	01C057	CITY OF CONCORD	CONCORD / CONTRA COSTA	1	NATURAL GAS	105	10/1/86	
29	06C061	CITY OF FAIRFIELD	FAIRFIELD / SOLANO	1	NATURAL GAS	775	8/15/84	
30	08C097	CITY OF MILPITAS	MILPITAS / SANTA CLARA	3	NATURAL GAS	60	10/6/89	
31	06C010	CITY OF VACAVILLE (COMM. CENTER)	VACAVILLE / SOLANO	4	NATURAL GAS	450	7/9/86	
32	04C130	CITY OF VALLEJO (CUNNINGHAM POOL)	VALLEJO / SOLANO	3	NATURAL GAS	80	8/15/85	
33	08C078	CITY OF WATSONVILLE	SANTA CRUZ /	1	DIGESTER GAS	550	1/23/93	
34	25C124	COALINGA COGENERATION COMPANY	COALINGA / FRESNO	4	NATURAL GAS EOR	41,000	10/17/91	Yes
35	08C023	CONTAINER CORP.OF AMERICA	SANTA CLARA / SANTA CLARA	2	NATURAL GAS	30,000	12/20/85	

* Contract Type: 1/ As-Delivered Capacity Energy, 2/ Firm Capacity Energy, 3/ Energy Purchase, 4/ Long-term Energy Capacity

Table 1

Summary of Signed Contracts
Cogeneration Projects - Operational and Currently Delivering
July 1999
COGENERATOR

1 - 2

No.	Log. No.	Project Name	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date	Enhanced Oil Recovery
36	08C071	COUNTY OF SANTA CRUZ (WATER ST. JAIL)	SANTA CRUZ / SANTA CRUZ	1	NATURAL GAS	180	9/1/87	
37	01C045	CROCKETT COGEN	CROCKETT / CONTRA COSTA	4	NATURAL GAS	260,000	12/20/95	
38	25C138	DAI / OILDALE , INC.	OILDALE / KERN	4	NATURAL GAS EOR	32,000	11/30/89	Yes
39	25C241	DOUBLE "C" LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	3/14/89	Yes
40	25C016	DYNAMIS COGEN	SANGER / FRESNO	2	NATURAL GAS	38,000	12/11/90	
41	25C092	FRESNO COGENERATION CORPORATION	FRESNO / FRESNO	2	NATURAL GAS	25,000	12/27/89	
42	25C063	FRITO LAY COGEN	BAKERSFIELD / KERN	4	NATURAL GAS	6,000	4/2/86	
43	08C010	GATX/CALPINE COGEN-AGNEWS INC.	SAN JOSE / SANTA CLARA	4	NATURAL GAS	36,100	10/19/90	
44	01C104	GAYLORD	ANTIOCH / CONTRA COSTA	2	NATURAL GAS	49,670	11/18/82	
45	12C020	GREENLEAF UNIT #1	YUBA CITY / SUTTER	4	NATURAL GAS	49,500	1/11/89	
46	12C021	GREENLEAF UNIT #2	YUBA CITY / SUTTER	4	NATURAL GAS	49,500	10/12/89	
47	01C201	HAYWARD AREA REC & PARK DIST.	HAYWARD / ALAMEDA	3	NATURAL GAS	60	2/2/88	
48	25C242	HIGH SIERRA LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	2/24/89	Yes
49	16C004	JACKSON VALLEY ENERGY PTNRS (IONE)	IONE / AMADOR	4	LIGNITE COAL	17,990	1/5/87	
50	25C188	KERN FRONT LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	1/7/89	Yes
51	25C274	LIVE OAK LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	3/16/91	Yes
52	01C044	MARTINEZ COGEN LIMITED PARTNERSHIP	MARTINEZ / CONTRA COSTA	4	NATURAL GAS	99,900	2/23/87	
53	25C275	MCKITTRICK LIMITED	BAKERSFIELD / KERN	2	NATURAL GAS EOR	48,094	10/16/91	Yes
54	25C123	MIDSET COGEN. CO.	TAFT / KERN	4	NATURAL GAS EOR	46,000	3/16/89	Yes
55	25C321	MIDWAY-SUNSET COGEN. CO.	FELLOWS / KERN	1	NATURAL GAS EOR	30,000	12/18/89	Yes
56	18C048	MONTEREY POWER COMPANY	SALINAS / MONTEREY	2	NATURAL GAS	6,000	12/29/90	
57	04C101	MT. TAM RACQUET CLUB	NEAR LARKSPUR / MARIN	3	NATURAL GAS	60	9/9/85	
58	25C018	MT.POSO COGENERATION CO.	BAKERSFIELD / KERN	4	COAL	49,500	4/1/89	Yes
59	04C054	NAPA STATE HOSPITAL	NAPA / NAPA	1	NATURAL GAS	1,330	7/18/84	
60	02C058	NIHONMACHI TERRACE	SAN FRANCISCO / SAN FRANCISCO	3	NATURAL GAS	75	6/1/92	
61	25C293	NUEVO ENERGY COMPANY (DOME)	FELLOWS / KERN	1	NATURAL GAS EOR	6,064	9/2/88	Yes
62	25C308	NUEVO ENERGY COMPANY (WELPORT)	MCKITTRICK / KERN	1	NATURAL GAS EOR	4,000	1/27/90	Yes
63	25C337	OCCIDENTAL OF ELK HILLS, INC.	TUPMAN / KERN	1	NATURAL GAS	17,500	11/2/94	
64	25C170	OILDALE ENERGY LLC	OILDALE / KERN	4	NATURAL GAS	33,800	12/29/84	
65	01C245	ORINDA SENIOR VILLAGE	ORINDA / CONTRA COSTA	3	NATURAL GAS	60	2/6/91	
66	12C019	OROVILLE COGEN	OROVILLE / BUTTE	2	NATURAL GAS	8,500	12/18/89	
67	08C017	OWL COMPANIES	SANTA RUZ / SANTA CRUZ	1	NATURAL GAS	600	12/30/85	
68	01C084	PE - BERKELEY, INC.	BERKELEY / ALAMEDA	4	NATURAL GAS	26,350	5/19/87	
69	25C164	PE - KES KINGSBURG,LLC	KINGSBURG / FRESNO	2	NATURAL GAS	34,500	12/5/90	
70	16C007	POSDEF (COGEN NATIONAL)	PORT OF STOCKTON / SAN JOAQUIN	4	COAL	44,000	12/7/87	

* Contract Type: 1/ As-Delivered Capacity Energy, 2/ Firm Capacity Energy, 3/ Energy Purchase, 4/ Long-term Energy Capacity

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Summary of Signed Contracts
Cogeneration Projects - Operational and Currently Delivering
July 1999
COGENERATOR

No.	Log. No.	Project Name	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date	Enhanced Oil Recovery
71	08C101	REACH FITNESS INC.	LOS ALTOS / SANTA CLARA	3	NATURAL GAS	26	6/10/91	
72	13C160	RED BLUFF UNION HIGH SCHOOL	RED BLUFF / TEHAMA	3	NATURAL GAS	60	7/15/91	
73	01C108	RHONE-POULENC (STAUFFER CHEMICAL)	MARTINEZ / CONTRA COSTA	1	NATURAL GAS	4,000	6/1/77	
74	25C076	RIO BRAVO POSO	BAKERSFIELD / KERN	4	COAL	37,000	9/27/89	Yes
75	16C034	RIPON COGENERATION, INC.	RIPON / SAN JOAQUIN	4	NATURAL GAS	49,500	4/19/88	
76	25C178	SAINT AGNES MED. CTR	FRESNO / FRESNO	1	NATURAL GAS	2,325	11/21/85	
77	18C053	SALINAS RIVER COGEN CO.	SAN ARDO / MONTEREY	4	NATURAL GAS EOR	49,600	10/11/91	Yes
78	25C057	SAN JOAQUIN COGEN	LATHROP / SAN JOAQUIN	2	NATURAL GAS	55,000	1/9/90	
79	25C045	SAN JOAQUIN POWER COMPANY	ATWATER / MERCED	2	NATURAL GAS	10,750	4/19/91	
80	08C030	SAN JOSE COGEN	SAN JOSE / SANTA CLARA	1	NATURAL GAS	6,000	12/18/84	
81	08C026	SAN JOSE CONVENTION CENTER	SAN JOSE / SANTA CLARA	1	NATURAL GAS	1,500	4/2/90	
82	18C026	SANTA MARIA COGEN	SANTA MARIA / SANTA BARBARA	4	NATURAL GAS	8,044	6/21/89	
83	18C052	SARGENT CANYON COGEN. COMPANY	SAN ARDO / MONTEREY	4	NATURAL GAS EOR	49,600	10/7/91	Yes
84	01C199	SATELLITE SENIOR HOMES	OAKLAND / ALAMEDA	3	NATURAL GAS	60	7/17/86	
85	06C017	SOLANO CO. GOVERNMENT CENTER	VACAVILLE / SOLANO	4	NATURAL GAS	1,450	6/15/89	
86	02C041	SRI INTERNATIONAL	MENLO PARK / SAN MATEO	1	NATURAL GAS	6,000	3/10/87	
87	01C089	STANFORD ENERGY GROUP	OAKLAND / ALAMEDA	1	NATURAL GAS	115	1/8/86	
88	16C036	STOCKTON COGEN CO.	STOCKTON / SAN JOAQUIN	4	COAL	49,900	2/27/88	
89	04C143	TENNIS EVERYONE	NOVATO / MARIN	3	NATURAL GAS	56	7/7/93	
90	25C130	TEXACO EXPLORATION & PRODUCTION INC. FEE A	OILDALE / KERN	2	NATURAL GAS EOR	7,450	6/25/86	Yes
91	25C186	TEXACO EXPLORATION & PRODUCTION INC. FEE B	OILDALE / KERN	2	NATURAL GAS EOR	3,725	4/28/87	Yes
92	25C168	TEXACO EXPRLORATION & PRODUCTION, INC. FEE C	OILDALE / KERN	2	NATURAL GAS EOR	7,450	2/26/87	Yes
93	25C193	TEXACO INC. (MCKITTRICK)	MCKITTRICK / KERN	1	NATURAL GAS EOR	6,000	10/1/94	Yes
94	01C061	TOSCO (RODEO PLANT)	RODEO / CONTRA COSTA	1	NATURAL GAS	49,900	5/21/87	
95	02C001	UNITED COGEN	SAN BRUNO / SAN MATEO	4	NATURAL GAS	30,000	9/12/86	
96	02C003	UNIVERSITY OF SAN FRANCISCO	SAN FRANCISCO / SAN FRANCISCO	1	NATURAL GAS	1,500	6/1/87	
97	02C049	WESTMOOR HIGH SCHOOL	DALY CITY / SAN MATEO	3	NATURAL GAS	60	4/9/87	
98	13P162	WHEELABRATOR HUDSON	ANDERSON / SHASTA	4	WOODWASTE	6,875	7/12/93	
99	13C082	WHEELABRATOR LASSEN INC.	ANDERSON / SHASTA	2	NATURAL GAS	42,000	4/28/83	
100	06C153	YOUNG RADIO INC.	FAIRFIELD / SOLANO	3	NATURAL GAS	20	1/16/91	
101	04C008	YOUNTVILLE COGEN ASSOCIATES	YOUNTVILLE / NAPA	4	NATURAL GAS	3,000	8/6/86	
102	12C026	YUBA CITY COGEN	YUBA CITY / SUTTER	4	NATURAL GAS	49,000	12/27/90	
103	12C085	YUBA CITY RACQUET CLUB	YUBA CITY / SUTTER	3	NATURAL GAS	60	7/18/91	
Total:						2,719,597		

* Contract Type: 1/ As-Delivered Capacity Energy, 2/ Firm Capacity Energy, 3/ Energy Purchase, 4/ Long-term Energy Capacity

Table 2

Summary of Signed Contracts
July 1999
Small Power Projects - Operational and Currently Delivering

BIOGAS

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
1	01P219	BIO-ENERGY PART.	LIVERMORE / ALAMEDA	1	LANDFILL GAS	6,000	5/4/89
2	04P051	COUNTY OF SONOMA	PETALUMA / SONOMA	1	LANDFILL GAS	6,000	4/30/93
3	01P171	EBMUD (OAKLAND)	OAKLAND / ALAMEDA	1	DIGESTER GAS	4,000	10/20/91
4	04P010	GAS RECOVERY SYS. (AMERICAN CYN)	AMERICAN CANYON / NAPA	4	LANDFILL GAS	1,500	12/27/85
5	08P006	GAS RECOVERY SYS. (GUADALUPE)	LOS GATOS / SANTA CLARA	4	LANDFILL GAS	2,600	1/12/84
6	02P014	GAS RECOVERY SYS. (MENLO PARK)	MENLO PARK / SAN MATEO	2	LANDFILL GAS	2,000	1/11/83
7	08P004	GAS RECOVERY SYS. (NEWBY ISLAND 2)	SAN JOSE / SANTA CLARA	4	LANDFILL GAS	4,200	8/3/84
8	08P021	LANDFILL GENERATING PTNRS. I	SANTA CRUZ / SANTA CRUZ	4	LANDFILL GAS	933	11/22/88
9	10P058	LANGERWERF DAIRY	DURHAM / BUTTE	3	DIGESTER GAS	85	11/3/82
10	18P059	MONTEREY REGIONAL WASTE MGMT DIST.	MARINA / MONTEREY	2	LANDFILL GAS	2,900	12/30/83
11	18C001	MONTEREY REGIONAL WATER	MARINA / MONTEREY	1	DIGESTER GAS	1,740	8/26/88
12	04P116	NAPA SANITATION DISTRICT	NAPA / NAPA	3	LANDFILL GAS	98	1/10/86
13	01P070	NOVE INVESTMENTS	RICHMOND / CONTRA COSTA	4	LANDFILL GAS	3,000	12/31/85
14	18P014	OGDEN PACIFIC POWER (SALINAS)	SALINAS / MONTEREY	4	LANDFILL GAS	1,500	11/10/86
15	08P008	OGDEN PACIFIC POWER (SANTA CLARA)	SANTA CLARA / SANTA CLARA	4	LANDFILL GAS	2,000	10/22/86
16	16P001	OGDEN PACIFIC POWER (STOCKTON)	STOCKTON / SAN JOAQUIN	4	LANDFILL GAS	800	11/27/85
17	08P024	PALO ALTO LANDFILL	PALO ALTO / SANTA CLARA	4	LANDFILL GAS	2,000	6/13/90
18	25C326	ROY SHARP JR.	CARUTHERS / FRESNO	3	DIGESTER GAS	100	11/21/91
Total:						41,456	

BIOMASS

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
19	13C010	BIG VALLEY LUMBER COMPANY	BIEBER / LASSEN	2	WOODWASTE	5,000	8/18/83
20	10C003	COLLINS PINE	CHESTER / PLUMAS	2	WOODWASTE	12,000	4/4/84
21	16C088	DIAMOND WALNUT GROWERS INC.	STOCKTON / SAN JOAQUIN	2	WALNUT SHELLS	4,500	11/25/80
22	19P005	FAIRHAVEN POWER CO.	FAIRHAVEN / HUMBOLDT	4	WOODWASTE	17,250	9/15/86
23	04P056	GEORGIA PACIFIC CORP.	FORT BRAGG / MENDOCINO	1	WOODWASTE	15,000	6/1/80
24	10P005	HL POWER	WENDEL / LASSEN	4	WOODWASTE	30,000	7/26/89
25	25C013	MENDOTA BIOMASS POWER	MENDOTA / FRESNO	4	WOODWASTE	28,000	6/29/89

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Table 2

Summary of Signed Contracts
July 1999
Small Power Projects - Operational and Currently Delivering

BIOMASS

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
26	16P002	OGDEN POWER PACIFIC, INC. (CHINESE STATION)	CHINESE STATION / TUOLUMNE	4	WOODWASTE	22,000	6/4/86
27	12P001	OGDEN POWER PACIFIC, INC. (OROVILLE)	OROVILLE / BUTTE	4	WOODWASTE	18,000	9/26/85
28	13P118	OGDEN POWER PACIFIC, INC. (BURNEY)	BURNEY / SHASTA	4	WOODWASTE	9,750	8/15/84
29	10P001	OGDEN POWER PACIFIC, INC.(MT. LASSEN)	WESTWOOD / LASSEN	4	WOODWASTE	11,400	10/11/84
30	19C010	PACIFIC LUMBER CO.	SCOTIA / HUMBOLDT	1	WOODWASTE	20,000	3/22/86
31	25P026	RIO BRAVO FRESNO	FRESNO / FRESNO	4	WOODWASTE	26,500	7/20/88
32	13C049	SIERRA PACIFIC IND. (BURNEY)	BURNEY / SHASTA	4	WOODWASTE	20,000	11/4/86
33	12C008	SIERRA PACIFIC IND. (LINCOLN)	LINCOLN / PLACER	4	WOODWASTE	7,500	6/3/86
34	10C018	SIERRA PACIFIC IND. (QUINCY)	QUINCY / PLUMAS	4	WOODWASTE	20,000	1/14/83
35	10C009	SIERRA PACIFIC IND.(SUSANVILLE)	SUSANVILLE / LASSEN	4	WOODWASTE	15,000	10/5/81
36	16P054	THERMAL ENERGY DEV. CORP.	TRACY / SAN JOAQUIN	4	WOODWASTE	21,000	4/26/90
37	19P001	ULTRAPOWDER (BLUE LAKE)	BLUE LAKE / HUMBOLDT	4	WOODWASTE	11,400	7/3/85
38	12P018	WADHAM ENERGY LTD. PART.	WILLIAMS / COLUSA	4	RICE HULLS	26,500	3/24/89
39	13P045	WHEELABRATOR SHASTA	COTTONWOOD / SHASTA	4	WOODWASTE	54,900	10/30/87
40	06P022	WOODLAND BIOMASS	WOODLAND / YOLO	4	AGRICULTURAL WASTE	25,000	8/31/89
Total:						420,700	

GEOHERMAL

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
41	10G012	AMEDEE GEOTHERMAL VENTURE 1	WENDEL / LASSEN	4	GEOHERMAL	2,200	9/11/88
42	04G057	CALISTOGA GEOTHERMAL PARTNERS, L.P.	THE GEYSERS / LAKE	2	GEOHERMAL	80,000	3/14/84
43	04G012	CALPINE GEYSERS CO. L. P. (KW#1)	ANDERSON SPRINGS / LAKE	4	GEOHERMAL	10,000	9/6/88
44	04G016	CALPINE GEYSERS CO. L. P. (KW#2)	ANDERSON SPRINGS / LAKE	4	GEOHERMAL	10,000	9/2/88
45	04G025	CALPINE GEYSERS CO. L. P. (WFF)	THE GEYSERS / LAKE	4	GEOHERMAL	30,000	12/11/88
46	04G018	GEOHERMAL ENERGY PARTNERS 1	THE GEYSERS / SONOMA	4	GEOHERMAL	10,000	6/16/89
47	04G019	GEOHERMAL ENERGY PARTNERS 2	THE GEYSERS / SONOMA	4	GEOHERMAL	10,000	5/28/89
48	10G011	WINEAGLE DEVELOPERS 1	WENDEL / LASSEN	4	GEOHERMAL	700	6/11/85
Total:						152,900	

* Contract Type: 1/ As-Delivered Capacity Energy, 2/ Firm Capacity Energy, 3/ Energy Purchase, 4/ Long-term Energy Capacity

Table 2

Summary of Signed Contracts
July 1999
Small Power Projects - Operational and Currently Delivering

HYDRO

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
49	15H052	ADRIAN B. HAEMMIG	GRASS VALLEY / NEVADA	3	HYDRO	15	7/1/82
50	13H008	ARBUCKLE MOUNTAIN HYDRO	PLATINA / SHASTA	4	HYDRO	360	12/1/86
51	13H119	BAILEY CREEK RANCH	MANTON / SHASTA	3	HYDRO	800	5/26/82
52	15H072	BERTHA WRIGHT BERTILLION	WRIGHT RANCH / SIERRA	3	HYDRO	40	11/22/85
53	04H011	BES HYDRO	POTTER VALLEY / MENDOCINO	4	HYDRO	400	9/30/87
54	12H054	BROWNS VALLEY IRRIGATION DIST.	BROWNS VALLEY / YUBA	1	HYDRO	995	6/29/84
55	19H004	BURGESS, NORMAN ROSS	ZENIA / TRINITY	4	HYDRO	1,250	12/28/84
56	16H008	CALAVERAS CTY WD	SAN ANDREAS / CALAVERAS	1	HYDRO	3,300	4/15/86
57	16H092	CALAVERAS YUBA HYDRO #1	MOKELUMNE HILL / CALAVERAS	3	HYDRO	90	4/15/86
58	16H177	CALAVERAS YUBA HYDRO #2	CHILI GULCH / CALAVERAS	3	HYDRO	90	4/15/86
59	16H178	CALAVERAS YUBA HYDRO #3	CHILI GULCH / CALAVERAS	3	HYDRO	90	4/15/86
60	19H048	CEDAR FLAT HYDRO	BURNT RANCH / TRINITY	4	HYDRO	300	1/9/84
61	06H159	DAVID O. HARDE	SOMERSET / EL DORADO	3	HYDRO	100	11/18/92
62	15H012	EAGLE HYDRO	GEORGETOWN / EL DORADO	1	HYDRO	550	12/23/85
63	13H001	EL DORADO (MONTGOMERY CK)	MONTGOMERY CREEK / SHASTA	4	HYDRO	2,600	2/28/87
64	25H193	FAIRFIELD POWER PLANT	MERCED / MERCED	1	HYDRO	900	8/2/83
65	10H010	FIVE BEARS HYDROELECTRIC	TAYLORSVILLE / PLUMAS	4	HYDRO	990	4/27/89
66	25H037	FRIANT DAM	FRIANT / MADERA	4	HYDRO	25,000	4/16/85
67	12H056	GLENN COLUSA IRR. DIST. (FUNKS CK)	MAXWELL / COLUSA	3	HYDRO	93	8/2/85
68	12H053	GLENN COLUSA IRR. DIST. (STOVALL 2)	WILLIAMS / COLUSA	4	HYDRO	115	5/20/83
69	04H052	HAMMEKEN HYDRO	POTTER VALLEY / MENDOCINO	4	HYDRO	330	3/27/90
70	13H123	HAT CREEK HEREFORD RANCH	HAT CREEK / SHASTA	3	HYDRO	100	12/9/82
71	15H005	HAYPRESS HYDROELECTRIC, INC. (LWR)	SIERRA CITY / SIERRA	4	HYDRO	6,100	4/11/89
72	15H006	HAYPRESS HYDROELECTRIC, INC. (MDL)	SIERRA CITY / SIERRA	4	HYDRO	8,700	4/15/89
73	15H002	HENWOOD ASSOCIATES	SIERRA CITY / SIERRA	4	HYDRO	594	11/28/84
74	13H012	HIGHLAND HYDRO CONSTR. INC. - III	OAK RUN / SHASTA	4	HYDRO	200	2/1/85
75	19H051	HUMBOLDT BAY MWD	RUTH / TRINITY	1	HYDRO	1,300	4/10/83
76	10H013	HYPOWER, INC.	DE SABL A CITY / BUTTE	4	HYDRO	13,300	3/16/92
77	04H061	INDIAN VALLEY HYDRO	CLEAR LAKE / LAKE	1	HYDRO	3,335	9/15/83
78	16H095	JACKSON VALLEY IRRIGATION DIST	IONE / AMADOR	1	HYDRO	455	9/1/82

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Table 2

Summary of Signed Contracts
July 1999
Small Power Projects - Operational and Currently Delivering

HYDRO

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
79	10H059	JAMES B. PETER	TAYLORSVILLE / PLUMAS	3	HYDRO	15	1/17/84
80	10H090	JAMES CRANE HYDRO	CHICO / BUTTE	3	HYDRO	3	6/20/91
81	04H134	JOHN NEERHOUT JR.	CALISTOGA / NAPA	3	HYDRO	85	5/1/87
82	10H007	KATHLEEN AUSTIN DBA GANSNER PWR. & WTR.	QUINCY / PLUMAS	1	HYDRO	275	4/6/85
83	25H073	KERN HYDRO (OLCESE)	BAKERSFIELD / KERN	4	HYDRO	16,000	5/18/89
84	25H150	KINGS RIVER HYDRO CO.	FRESNO / FRESNO	4	HYDRO	1,000	8/19/90
85	10H002	LASSEN STATION HYDRO	PULGA / BUTTE	4	HYDRO	990	5/22/86
86	13H120	LOFTON RANCH	BIG BEND / SHASTA	1	HYDRO	300	11/4/83
87	25H040	MADERA CANAL (1174 + 84)	MADERA / MADERA	4	HYDRO	563	4/11/86
88	25H042	MADERA CANAL (1923)	MADERA / MADERA	4	HYDRO	925	4/1/86
89	25H041	MADERA CANAL STATION 1302	MADERA / MADERA	4	HYDRO	424	4/16/86
90	25H036	MADERA-CHOWCHILLA WATER AND POWER AUTHORITY	MADERA / MADERA	4	HYDRO	1,800	2/2/85
91	13H047	MALACHA HYDRO L.P.	PITVILLE / LASSEN	4	HYDRO	26,000	12/7/88
92	04H062	MCFADDEN FARM	POTTER VALLEY / MENDOCINO	1	HYDRO	350	7/1/83
93	13H124	MCMILLAN HYDRO	MONTGOMERY CREEK / SHASTA	4	HYDRO	975	3/22/84
94	13H125	MEGA HYDRO #1 (CLOVER CREEK)	OAK RUN / SHASTA	4	HYDRO	1,000	2/21/86
95	13H122	MEGA HYDRO (GOOSE VALLEY RANCH)	BURNEY / SHASTA	4	HYDRO	280	4/8/83
96	13H017	MEGA RENEWABLES (BIDWELL DITCH)	BURNEY / SHASTA	4	HYDRO	2,000	2/22/87
97	13H015	MEGA RENEWABLES (HATCHET CRK)	MONTGOMERY CR. / SHASTA	4	HYDRO	7,000	1/5/87
98	13H014	MEGA RENEWABLES (ROARING CRK)	MONTGOMERY CREEK / SHASTA	4	HYDRO	2,000	12/5/86
99	13H036	MEGA RENEWABLES (SILVER SPRINGS)	BIG BEND / SHASTA	4	HYDRO	600	8/15/87
100	25H185	MERCED ID (PARKER)	MERCED / MERCED	1	HYDRO	2,690	9/23/81
101	19H006	MILL & SULPHUR CREEK	DINSMORE / HUMBOLDT	4	HYDRO	995	2/23/88
102	18H034	MONTEREY CTY WATER RES AGENCY	SAN LUIS OBISPO / SAN LUIS OBISPO	4	HYDRO	3,750	7/13/87
103	13H042	NELSON CREEK POWER INC.	BIG BEND / SHASTA	4	HYDRO	1,100	12/19/88
104	15H015	NEVADA POWER AUTHORITY	NEVADA CITY / NEVADA	4	HYDRO	3,600	8/18/86
105	15H013	NID/COMBIE NORTH	MEADOW VISTA / PLACER	4	HYDRO	330	3/24/88
106	15H054	NID/COMBIE SOUTH	PLACER CITY / PLACER	4	HYDRO	1,500	4/26/84
107	15H001	NID/SCOTTS FLAT	NEVADA CITY / NEVADA	4	HYDRO	850	12/14/84
108	13H024	OLSEN POWER PARTNERS	WHITMORE / SHASTA	4	HYDRO	5,000	1/3/90

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Table 2

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Small Power Projects - Operational and Currently Delivering

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No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
109	25H149	ORANGE COVE IRRIGATION DIST.	FRESNO / FRESNO	4	HYDRO	450	8/23/90
110	13H128	PAN PACIFIC (WEBER FLAT)	COVINGTON MILL / TRINITY	4	HYDRO	975	1/11/84
111	10H060	PERRY LOGGING	CHICO / BUTTE	1	HYDRO	300	1/26/83
112	15H059	PLACER COUNTY WATER AGENCY	FOREST HILL / PLACER	1	HYDRO	500	4/30/83
113	13H127	ROBERT W. LEE	MONTON / SHASTA	3	HYDRO	30	7/9/82
114	06H011	ROCK CREEK L.P.	PLACERVILLE / EL DORADO	4	HYDRO	3,000	4/24/86
115	16H033	ROCK CREEK WATER DISTRICT	SALT SPRINGS VA / CALAVERAS	1	HYDRO	700	2/25/86
116	13H132	RUGRAW INC.(DIGGER CREEK)	MONTON / TEHAMA	1	HYDRO	600	5/18/83
117	08H013	SANTA CLARA VALLEY WATER DIST.	MORGAN HILL / SANTA CLARA	4	HYDRO	800	12/1/88
118	16H030	SCHAADS HYDRO	WILSEYVILLE / CALAVERAS	1	HYDRO	230	2/18/86
119	15H055	SIERRA ENERGY COMPANY	FORESTHILL / SONOMA	1	HYDRO	200	1/11/88
120	13H016	SNOW MOUNTAIN HYDRO LLC (BURNEY CREEK)	BURNEY / SHASTA	4	HYDRO	3,000	3/28/90
121	13H013	SNOW MOUNTAIN HYDRO LLC (COVE)	MONTGOMERY CR. / SHASTA	4	HYDRO	5,000	2/20/90
122	13H057	SNOW MOUNTAIN HYDRO LLC (LOST CREEK 1)	LOST CREEK / SHASTA	4	HYDRO	1,400	10/9/89
123	13H041	SNOW MOUNTAIN HYDRO LLC (LOST CREEK 2)	HAT CREEK / SHASTA	4	HYDRO	500	6/15/89
124	13H035	SNOW MOUNTAIN HYDRO LLC (PONDEROSA BAILEY CREIMANTON / SHASTA		4	HYDRO	1,100	1/25/90
125	04H009	SONOMA COUNTY WATER AGENCY	GEYSERVILLE / SONOMA	4	HYDRO	2,600	12/22/88
126	16H094	SOUTH SAN JOAQUIN ID (FRANKENHEIMER)	OAKDALE / STANISLAUS	1	HYDRO	5,035	2/12/83
127	16H097	SOUTH SAN JOAQUIN ID (WOODWARD)	OAKDALE / STANISLAUS	1	HYDRO	2,850	4/16/82
128	12H004	SOUTH SUTTER WATER	SHERIDAN / PLACER	4	HYDRO	395	7/17/85
129	13H130	STEVE & BONNIE TETRICK	MILLVILLE / SHASTA	3	HYDRO	100	10/14/83
130	19H049	STEVEN SPELLENBERG HYDRO	BURNT RANCH / TRINITY	3	HYDRO	28	12/5/83
131	12H007	STS HYDROPOWER LTD. (KANAKA)	FEATHER FALLS / BUTTE	4	HYDRO	1,100	2/13/89
132	13H039	STS HYDROPOWER LTD. (KEKAWAKA)	ALDERPOINT / TRINITY	4	HYDRO	4,950	12/27/89
133	13H006	SUTTER'S MILL	SHINGLETOWN / SHASTA	1	HYDRO	150	6/25/85
134	15H069	SWISS AMERICA	AUBURN / PLACER	3	HYDRO	100	12/23/85
135	13H004	T & G HYDRO	WHITMORE / SHASTA	4	HYDRO	340	10/15/84
136	13H040	TKO POWER (SOUTH BEAR CREEK)	SHINGLETOWN / SHASTA	4	HYDRO	3,000	1/15/86
137	19H055	TOM BENNINGHOVEN	GARBERVILLE / HUMBOLDT	3	HYDRO	25	11/22/82
138	16H003	TRI-DAM AUTHORITY	SONORA / TUOLUMNE	4	HYDRO	16,200	5/19/86

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Summary of Signed Contracts

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Small Power Projects - Operational and Currently Delivering

HYDRO

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
139	25H038	UNITED HYDRO, INC. #1 (WOLFSEN BYPASS)	LOS BANOS / MERCED	4	HYDRO	1,000	2/1/86
140	25H039	UNITED HYDRO, INC. #2 (SAN LUIS BYPASS)	LOS BANOS / MERCED	4	HYDRO	675	2/1/86
141	19H002	WEA BAKER CREEK	BRIDGEVILLE / HUMBOLDT	4	HYDRO	1,500	12/10/87
142	04H002	YOLO COUNTY FLOOD & WCD	CLEAR LAKE / LAKE	1	HYDRO	2,500	9/7/85
143	12H010	YUBA COUNTY WATER (QF)	CHALLENGE / YUBA	4	HYDRO	2,000	1/29/90
144	12H006	YUBA COUNTY WATER AGENCY	MARYSVILLE / YUBA	4	HYDRO	150	9/30/86
Total:						<u>218,375</u>	

SOLAR

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
145	01S252	JAMES C. ROSS	OAKLAND / ALAMEDA	3	PHOTOVOLTAIC	3	9/1/93
146	04S152	REAL GOODS TRADING CORP.	HOPLAND / MENDOCINO	3	PHOTOVOLTAIC	13	6/10/96
147	04S142	ROBIN WILLIAMS SOLAR POWER GEN	NAPA / NAPA	3	PHOTOVOLTAIC	7	4/16/93
Total:						<u>23</u>	

WASTE TO ENERGY

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
148	01P049	GWF POWER SYSTEMS INC. #1	PITTSBURG / CONTRA COSTA	4	PETROLEUM COKE	17,740	12/7/90
149	01P086	GWF POWER SYSTEMS INC. #2	PITTSBURG / CONTRA COSTA	4	PETROLEUM COKE	17,740	12/22/89
150	01P091	GWF POWER SYSTEMS INC. #3	ANTIOCH / CONTRA COSTA	4	PETROLEUM COKE	17,740	8/27/90
151	01P051	GWF POWER SYSTEMS INC. #4	ANTIOCH / CONTRA COSTA	4	PETROLEUM COKE	17,740	10/10/89
152	01P087	GWF POWER SYSTEMS INC. #5	PITTSBURG / CONTRA COSTA	4	PETROLEUM COKE	17,740	3/17/90
153	25C136	HANFORD L.P.	HANFORD / KINGS	4	PETROLEUM COKE	23,000	9/26/90
154	18P123	LOS ALAMOS ENERGY, L.L.C.	BLAIR RANCH LEASE / SAN LUIS OBISPO	1	WASTE GAS	500	12/28/88
155	16P053	MODESTO ENERGY	WESTLY / STANISLAUS	4	TIRES	14,000	9/11/87
156	16P052	STANISLAUS WASTE ENERGY CO.	CROWS LANDING / STANISLAUS	4	GARBAGE	18,000	9/6/88

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Table 2

Summary of Signed Contracts

July 1999

Small Power Projects - Operational and Currently Delivering

WASTE TO ENERGY

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
157	25C062	VALLEY ENERGY RESOURCES, INC	KERN / KERN	3	WASTE GAS	50	2/5/91
Total:						144,250	

WIND

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
158	16W009	ALTAMONT MIDWAY LTD.	ALTAMONT PASS / SAN JOAQUIN	4	WIND	12,500	4/16/85
159	04W063	BERTHA NOLL	WOODACRE / MARIN	3	WIND	10	12/4/81
160	06W076	DAVID W. MCAVENIA	VACAVILLE / SOLANO	3	WIND	10	10/14/82
161	01W119	DONALD R. CHENOWETH	LIVERMORE / ALAMEDA	3	WIND	10	8/2/82
162	06W079	EDWARD ANDERSON JR.	BIRDS LANDING / SOLANO	3	WIND	10	7/18/82
163	16W014	FLOWIND 3-4	LIVERMORE / ALAMEDA	4	WIND	18,960	4/11/85
164	16W015	FLOWIND 4-4	ALTAMONT PASS / ALAMEDA	4	WIND	18,960	1/1/87
165	16W016	FLOWIND 5-4	ALTAMONT PASS / ALAMEDA	4	WIND	19,000	4/11/85
166	16W017	FLOWIND 6-4	ALTAMONT PASS / ALAMEDA	4	WIND	18,990	1/1/87
167	01W009	FLOWIND PARTNERS 1	ALTAMONT PASS / SAN JOAQUIN	4	WIND	8,480	1/9/84
168	16W010	FLOWIND PARTNERS 2	ALTAMONT PASS / ALAMEDA	4	WIND	2,700	4/11/85
169	06W148	GREEN RIDGE POWER LLC (10 MW)	MONTEZUMA HILLS / SOLANO	4	WIND	10,000	1/1/90
170	01W146A	GREEN RIDGE POWER LLC (100 MW - A)	TRACY / SAN JOAQUIN	4	WIND	43,100	1/1/88
171	01W146B	GREEN RIDGE POWER LLC (100 MW - B)	TRACY / SAN JOAQUIN	4	WIND	30,000	4/1/88
172	01W146C	GREEN RIDGE POWER LLC (100 MW - C)	TRACY / SAN JOAQUIN	4	WIND	11,900	1/2/90
173	01W146D	GREEN RIDGE POWER LLC (100 MW - D)	TRACY / SAN JOAQUIN	4	WIND	15,000	1/1/91
174	01W004	GREEN RIDGE POWER LLC (110 MW)	LIVERMORE / ALAMEDA	4	WIND	110,000	1/1/86
175	16W011	GREEN RIDGE POWER LLC (23.8 MW)	TRACY / SAN JOAQUIN	4	WIND	23,800	1/5/87
176	01W144	GREEN RIDGE POWER LLC (30 MW)	TRACY / SAN JOAQUIN	4	WIND	30,000	4/1/88
177	01W018	GREEN RIDGE POWER LLC (5.9 MW)	TRACY / SAN JOAQUIN	4	WIND	5,900	3/2/88
178	06W146A	GREEN RIDGE POWER LLC (70 MW - A)	TRACY / SAN JOAQUIN	4	WIND	20,000	4/1/88
179	06W146B	GREEN RIDGE POWER LLC (70 MW - B)	BENECIA / SOLANO	4	WIND	18,500	1/1/90
180	06W146C	GREEN RIDGE POWER LLC (70 MW - C)	BENECIA / SOLANO	4	WIND	30,000	1/1/91
181	06W146D	GREEN RIDGE POWER LLC (70 MW - D)	TRACY / SAN JOAQUIN	4	WIND	1,500	1/1/91

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Small Power Projects - Operational and Currently Delivering

WIND

No.	Log. No.	Project	City / County	Contract Type *	Primary Energy Source	Operating Size (kW)	Operating Start Date
182	01W035	GREEN RIDGE POWER LLC (70 MW)	LIVERMORE / ALAMEDA	4	WIND	70,000	4/1/87
183	25W105	INTERNATIONAL TURBINE RESEARCH	PACHECO PASS / MERCED	4	WIND	16,000	6/14/88
184	06W083	JOE T. HERNANDEZ	DAVIS / YOLO	3	WIND	2	8/3/82
185	01W129	L.P. REINHARD	HAYWARD / ALAMEDA	3	WIND	10	6/18/81
186	06W089	MARION ACQUISTAPACE	SUISUN CITY / SOLANO	3	WIND	10	10/16/82
187	01W132	MELBURN SWAFFORD	OAKLEY / CONTRA COSTA	3	WIND	4	10/23/81
188	04W072	MICHAEL OR KAREN RIPPEY	VALLEJO / NAPA	3	WIND	4	8/8/84
189	01W095	NORTHWIND ENERGY	ALTAMONT / CONTRA COSTA	4	WIND	15,500	1/4/86
190	16W028	PATTERSON PASS WIND FARM LLC	ALTAMONT PASS / SAN JOAQUIN	4	WIND	22,000	4/2/85
191	01W134	ROBERT AND JOYCE VIEUX	LIVERMORE / ALAMEDA	3	WIND	10	7/8/81
192	01W011	SEA WEST ENERGY - ALTECH	ALTAMONT PASS / SAN JOAQUIN	4	WIND	5,760	1/22/83
193	01W007	SEA WEST ENERGY - CWES	ALTAMONT PASS / SAN JOAQUIN	4	WIND	1,500	1/22/83
194	01W006	SEA WEST ENERGY - SEAWEST	ALTAMONT PASS / SAN JOAQUIN	4	WIND	60	1/22/83
195	01W015	SEA WEST ENERGY - TAXVEST	ALTAMONT PASS / SAN JOAQUIN	4	WIND	10,680	1/22/83
196	01W014	SEA WEST ENERGY - VIKING	ALTAMONT PASS / SAN JOAQUIN	4	WIND	1,560	1/22/83
197	01W012	SEA WEST ENERGY - WESTERN	ALTAMONT PASS / SAN JOAQUIN	4	WIND	900	1/22/83
198	01W094	TRES VAQUEROS WIND FARMS, LLC	ALTAMONT PASS / CONTRA COSTA	4	WIND	28,000	1/4/86
199	01W017	ZOND WINDSYSTEMS INC.	ALTAMONT PASS / ALAMEDA	4	WIND	20,000	12/30/85
Total:						641,330	

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