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December 20, 2004

Honorable Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

FILED
OFFICE OF THE
SECRETARY
FEB 20 2005
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Re: *California Independent System Operator Corporation,*
Docket No. ER01-313-004
Pacific Gas and Electric Company
Docket No. ER01-424-004

Dear Secretary Salas:

Enclosed please find an original and 7 copies of the Prepared Direct Testimony and Exhibits of A. Deane Lyon on behalf of the California Independent System Operator Corporation. Two additional copies of this filing are enclosed to be stamped with the date and time of filing and returned to our messenger. If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,



Ronald E. Minsk

Counsel for the California Independent System
Operator Corporation

cc: The Honorable Bobbie J. McCartney
Service List

ORIGINAL

**Summary of Testimony of A. Deane Lyon
on Behalf of the California Independent System
Operator Corporation**

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REGULATORY COMMISSION
ENERGY

A. Deane Lyon is manager of Operations Support at the California Independent System Operator Corporation ("ISO"). His testimony addresses the manner and extent to which behind-the-meter generation was included in the ISO's transmission and operations planning studies between 2001 and 2003. His testimony also identifies the relevant factors the ISO considers when modeling behind-the-meter generators in its transmission and operations planning studies and how behind-the-meter load netted against unmodeled generation imposes control area services costs on the ISO.

Mr. Lyon's testimony initially defines behind-the-meter generation as situations in which a Load's electrical consumption cannot be distinguished from a Generating Unit's simultaneous production of electricity, because since both are measured with only one meter. Mr. Lyon's testimony presents the list of generators that the ISO modeled between 2001 and 2003 which was prepared for the initial refund calculation in this proceeding, and states that the ISO has not prepared a similar list for generators modeled in 2004. No such list was prepared because the basis for calculating the Grid Management charge has changed sufficiently. It is now allocated on a basis that does not depend on the identification of the Generating Units that the ISO models, and the ISO, therefore, does not maintain a list of the included Generating Units.

Mr. Lyon's testimony explains that the ISO adopts the powerflow modeling of generators from the Participating TOs and that the process for modeling generators is the same, regardless whether the generator is "behind the meter" or not. He then explains that for most Planning and Operations study cases, the Participating TOs - not

the ISO - decide which generators to model when they provide their powerflow models to the WECC and the ISO, and the ISO merely adopts that modeling representation.

Mr. Lyon's testimony summarizes the services provided by the ISO, the costs of which were intended to be recovered by the control area services component of the former GMC, and explains that there are certain services provided by the ISO from which all loads and generation derive benefits, including behind-the-meter load. The testimony also reiterates that there was not in 2001, and there currently is, no exemption in WECC that permits excluding "load behind the meter" from a Control Area's Load Responsibility. Mr. Lyon indicates that the ISO directly incurs costs for behind-the-meter load in connection with all Control Area Services that are directed toward ensuring that load continues to be served and that behind-the-meter load also benefits, although less directly, from such activities as transmission planning, maintenance, and outage coordination that ensure the existence of a robust transmission network that can protect load in the case of the failure of behind-the-meter generation. Mr. Lyon states that in order to meet its Control Area Operator reliability obligations to the WECC, the ISO has the operational responsibility, operations engineering and grid planning obligations to: 1) study and determine the impact to the transmission system of such behind-the-meter loads and generators, 2) ensure that local transmission facilities and substation equipment are designed and built such that the interconnection of these loads and generators do not negatively impact that system, and, 3) where necessary, modify local transmission facilities and substation equipment to meet WECC planning and operating criteria for the Control Area in order to reliably accommodate the new behind-the-meter loads and generators.

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

California Independent System)	Docket Nos. ER01-313-000
Operator Corporation)	ER01-313-001
)	
Pacific Gas and Electric Company)	Docket Nos. ER01-424-000
)	ER01-424-001

**PREPARED DIRECT TESTIMONY OF
A. DEANE LYON
ON BEHALF OF THE
CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

1 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

2 **A. My name is A. Deane Lyon. I am Director of Operations Support and Training**
3 **(“OSAT”) for the California Independent System Operator (“ISO”). My business**
4 **address is 151 Blue Ravine Road, Folsom, CA 95630.**

5 **Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN A REGULATORY**
6 **PROCEEDING?**

7 **A. Yes I have. I provided testimony for the hearing that preceded the Initial**
8 **Decision in this docket. The Commission's Order establishing this proceeding**
9 **requests elaboration of the discussion of Control Area Services in my previous**
10 **testimony. I also provided testimony in Docket No. EL99-93-000, *Turlock***
11 ***Irrigation District v. California Independent System Operator Corporation.***

12 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?**

13 **A. I am certified by the California Apprenticeship Council as a System Operator.**
14 **Through May 19, 2004, I was a certified System Operator by the Western**
15 **Electricity Coordinating Council (“WECC”) and the North American Electric**
16 **Reliability Council (“NERC”). I attended Ohlone Junior College, Fremont,**
17 **California in 1976, taking business law, business administration and electronics**
18 **courses. Since being employed first with Pacific Gas and Electric Company**
19 **(“PG&E”) from December 1976 through September 1997 and from October 1997**
20 **with the California ISO, I have completed several system operations, supervisory**
21 **and management courses.**

1 **Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE PRIOR TO THE**
2 **WORK YOU ARE DOING TODAY.**

3 **A. I began my professional career with PG&E in 1976 as a System Operator.**

4 Through the course of my PG&E career, I worked as a System Operator at both
5 the distribution and transmission switching center levels, and supervised or
6 managed distribution and transmission switching centers, regional transmission
7 departments and a regional operator training program. I was an instructor at the
8 PG&E System Operator Training Center and Power System simulator. The last
9 seven years of my career with PG&E were spent in its Energy Control Center as
10 a Transmission Dispatcher, Interchange Scheduler, Generation Dispatcher and
11 Senior Operations Supervisor, in that order. As Senior Operations Supervisor, or
12 Shift Supervisor, I was responsible for the safe and reliable operation of the
13 PG&E Control Area grid which, prior to its incorporation into the ISO Control
14 Area, spanned from Bakersfield in the south to the California-Oregon border in
15 the north, and from the California coast to the California-Nevada border in the
16 east.

17 I joined the California ISO in October 1997 as a Shift Manager, assuming
18 the same responsibilities as I had at PG&E, but with a considerably larger
19 Control Area that includes most of the state of California, and with the added
20 market component. I moved from Grid Operations to the Operations Support and
21 Training department in late 1999 as an Operations Trainer. I became manager
22 of Operations Support in June 2000, and I became the Director, Operations
23 Support and Training in August 2001.

1 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES AT THE ISO?**

2 **A. I am currently Director of the Operations Support and Training Department at the**
3 **ISO. Personnel that report directly to me include managers for the following**
4 **groups: Operations Support, Operations Training, Operations Applications**
5 **Support and Operations Coordination. The primary role of OSAT is to provide**
6 **support to all departments within the Operations Division, including the**
7 **development of training programs, and support and development of tools for**
8 **operations. OSAT coordinates the Operations Division position on matters**
9 **affecting Operations and coordinates responses by Operations respondents to**
10 **market participant and legal inquiries. OSAT provides training and support to all**
11 **groups within the Operations Division, to other departments within the ISO, and**
12 **to Market Participants, to ensure and enhance system reliability as well as to**
13 **facilitate and expand workably competitive markets.**

14 **As the Director of OSAT, I am responsible for overseeing preparation and**
15 **administration of training across all operations groups, other groups in the ISO,**
16 **and Market Participants; providing support for ISO efforts to interface with and**
17 **incorporate markets and deregulation from an operations perspective as they**
18 **develop inside and outside the ISO; updating, creating and maintaining all ISO**
19 **Operating Procedures; implementing emergency response programs and**
20 **procedures within the ISO and in coordination with state and federal agencies;**
21 **providing presentation development and support for the Operations organization;**
22 **reviewing ISO Tariff changes, legislation, and regional and national operating**

1 organization polices from an operations feasibility point-of-view; and for providing
2 budget development and support for the Operations Division.

3 **Q. AS YOU TESTIFY, WILL YOU BE USING ANY SPECIALIZED TERMS?**

4 **A. Yes, I will use capitalized terms as defined in the Master Definitions Supplement,**
5 **Appendix A of the ISO Tariff.**

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 **A. The purpose of my testimony is to provide information in response to issues**
8 **identified by the Commission in its November 16, 2004, Order initiating this**
9 **proceeding. Those issues are the following:**

10 1. The manner and extent to which behind-the-meter generation was included
11 during the time period at issue in the ISO's transmission and operations
12 planning studies, including a listing of generators that were explicitly modeled
13 in these studies. Additionally, the Commission also asked for the same
14 information for 2004.

15 2. All relevant factors the ISO has considered when modeling behind-the-meter
16 generators in its transmission and operations planning studies, including: (1)
17 WECC requirements for modeling; (2) the generator size and location on the
18 transmission and/or distribution system; (3) load associated with that
19 generation; (4) voltage, stability, and short-circuit concerns; and (5) the
20 impact of the generator on the transmission system.

21 3. How and to what extent behind-the-meter load netted against unmodeled
22 generation imposes CAS costs, as delineated by ISO witness Lyon, on the
23 ISO.

24 4. What regulatory controls (if any) are necessary for the ISO to report which
25 generation and associated load it does not model.

1 **Q. DO YOU UNDERSTAND THE TERM "BEHIND-THE-METER**
2 **GENERATION" AS IT IS USED BY THE COMMISSION IN ITS ORDER**
3 **OF NOVEMBER 16, 2004?**

4 **A.** Yes. The term "behind-the-meter" generally refers to situations in which a
5 Load's electrical consumption cannot be distinguished from a Generating Unit's
6 simultaneous production of electricity, because both are measured with only one
7 meter. This is the manner in which I used the term in my previous testimony and
8 the manner in which I understand the Commission to have used it in the
9 November 16 Order. This definition of behind-the-meter holds true no matter
10 what type of entity is generating power behind the meter, including municipal
11 utility generators, QFs, and any other entity that might be generating power.

12 **Q. IN THE NOVEMBER 16 ORDER, THE COMMISSION INDICATED THAT**
13 **IT WANTED INFORMATION ABOUT THE MANNER AND EXTENT TO**
14 **WHICH BEHIND-THE-METER GENERATION WAS INCLUDED DURING**
15 **THE TIME PERIOD AT ISSUE IN THE ISO'S TRANSMISSION AND**
16 **OPERATIONS PLANNING STUDIES, INCLUDING A LISTING OF**
17 **GENERATORS THAT WERE EXPLICITLY MODELED IN THESE**
18 **STUDIES. PLEASE IDENTIFY THE GENERATORS THAT THE ISO**
19 **MODELED AS PART OF ITS TRANSMISSION AND OPERATIONS**
20 **PLANNING STUDIES BETWEEN JANUARY 1, 2001 AND DECEMBER**
21 **31, 2003.**

1 **A.** Exhibit ISO-37 is a list of the generators that the ISO modeled as part of its
2 transmission and operations planning studies between January 1, 2001 and
3 December 31, 2003. This list was previously prepared in order to comply with
4 the Commission's January 23, 2004 rehearing order in this proceeding, and was
5 used to identify the generators with unmodeled behind-the-meter load, so that
6 the ISO could undertake the calculations necessary for the compliance filing of
7 the ISO in this proceeding, which was filed on November 15, 2004 and rendered
8 moot by the Commission's Order issued the following day. The list was not
9 included as part of the submission to the Commission. I did not prepare that
10 filing.

11 **Q.** **THE COMMISSION ALSO ASKED FOR INFORMATION REGARDING**
12 **THE GENERATORS THAT THE ISO MODELED AS PART OF ITS**
13 **TRANSMISSION AND OPERATIONS PLANNING STUDIES SINCE**
14 **JANUARY 1, 2004. DO YOU HAVE SUCH INFORMATION AT THIS**
15 **TIME?**

16 **A.** No. As I will discuss later in my testimony, the ISO adopts powerflow models
17 from the Participating Transmission Owners (Participating TO's), who identify the
18 Generating Units to be included. It is not necessary for the ISO to maintain a list
19 of the included Generating Units. The list of generators for the compliance filing
20 was prepared specifically for that purpose. Because the Grid Management
21 charge is now allocated on a basis that does not depend on the identification of
22 the Generating Units that the ISO models, the ISO does not have a list for 2004.

1 **Q. IN ADDITION TO ASKING ABOUT THE MANNER IN WHICH ISO**
2 **INCLUDES THE MODELING OF BEHIND-THE-METER GENERATION IN**
3 **THE ISO'S TRANSMISSION AND OPERATIONS PLANNING STUDIES,**
4 **THE COMMISSION INQUIRED ABOUT RELEVANT FACTORS THE ISO**
5 **HAS CONSIDERED WHEN MODELING BEHIND-THE-METER**
6 **GENERATORS IN ITS TRANSMISSION AND OPERATIONS PLANNING**
7 **STUDIES. PLEASE EXPLAIN THE ROLE OF GENERATION**
8 **MODELING, INCLUDING BEHIND-THE-METER GENERATION, IN THE**
9 **ISO'S TRANSMISSION AND OPERATIONS PLANNING.**

10 **A.** In order to discharge all of its WECC functions, the ISO models such generation
11 not only for Grid Planning, but also, along with the other generation in the Control
12 Area, for operational engineering and other operations responsibilities. For
13 example, the ISO and its Participating TO must include all behind-the-meter
14 generation and associated load in operating and planning studies when:

- 15 • The behind-the-meter generation may deliver excess Energy to the grid in
16 the wholesale market arena, either on a regular and routine basis, or
17 intermittently at various times throughout the year.
- 18 • The behind-the-meter load served by the behind-the-meter generation
19 would remain connected and continue to draw power from the
20 transmission grid in the event the behind-the-meter generation tripped or
21 was curtailed (i.e., for facilities that have a standby service agreement with
22 the UDC).
- 23 • The behind-the-meter generation is of such size, nature, and character
24 and connected at a critical point within the transmission system such that
25 the generation could have a pronounced and significant effect on the
26 transient or dynamic performance of the transmission system including,
27 but not limited to:
 - 28 ➤ transient stability,

- 1 ➤ voltage collapse,
- 2 ➤ local area power quality,
- 3 ➤ fault current contribution,
- 4 ➤ coordination of protective devices.

5 **Q. PLEASE EXPLAIN THE ISO'S PROCESS FOR MODELING A**
6 **GENERATOR IN ITS TRANSMISSION AND OPERATIONS AND**
7 **PLANNING STUDY CASES.**

8 **A.** The ISO adopts the power flow modeling of generators from the Participating
9 TOs. For existing units, the generator models are embedded in power flow
10 cases the ISO routinely receives from Participating TOs or the WECC through
11 various Planning and Operating study forums. For proposed and newly
12 constructed units, the ISO receives power flow model "change files" from the
13 Participating TO where the unit will be connecting. These incremental modeling
14 changes are then applied to the ISO's current resident Planning and Operating
15 study cases, where appropriate.

16 **Q. DOES THE MODELING PROCESS VARY FROM GENERATOR TO**
17 **GENERATOR? FOR A BEHIND-THE-METER GENERATOR AS**
18 **OPPOSED TO ONE THAT IS NOT BEHIND-THE-METER, FOR**
19 **EXAMPLE? IF SO, PLEASE DESCRIBE THE REASON THAT, AND**
20 **THE MANNER IN WHICH, THE PROCESS MIGHT VARY BETWEEN**
21 **GENERATORS.**

22 **A.** For most Planning and Operations study cases, the process for modeling
23 generators is the same, regardless whether the generator is behind-the-meter or

1 not. In some specialized uses of the power flow model (Energy Management
2 System's (EMS) and the Market Model power flow), the ISO changes the
3 detailed, gross representation of behind-the-meter generation and load to an
4 equivalent ("netted") model.

5 **Q. HOW DOES THE ISO DECIDE WHICH GENERATORS TO MODEL AND**
6 **WHICH GENERATORS NOT TO MODEL?**

7 **A.** For most Planning and Operations study cases, the Participating TOs - not the
8 ISO - decide which generators to model when they provide their powerflow
9 models to the WECC and the ISO; the ISO adopts and preserves that modeling
10 representation. The ISO only changes generator models in the previously
11 described specialized circumstances, when the nature of the associated
12 information system (EMS telemetry, or the appropriate granularity for Market
13 Scheduling) necessitates changing it.

14 **Q. PLEASE EXPLAIN WHAT YOU UNDERSTAND TO BE THE MEANING**
15 **OF 'NETTING LOAD,' AS USED BY THE COMMISSION IN THE**
16 **NOVEMBER 16 ORDER.**

17 **A.** In the context provided by the Commission's November 16 Order in this
18 proceeding, I understand the term to mean the metered value at the point of
19 delivery, which generally is the netted value of the behind-the-meter load and
20 generation. For example if a behind-the-meter generator is producing 20 MW

1 and the behind-the-meter load in that same location is consuming 10 MW, the
2 metered value at the point of delivery would be 10 MW.

3 **Q. PLEASE SUMMARIZE THE SERVICES PROVIDED BY THE ISO, THE**
4 **COSTS OF WHICH WERE INTENDED TO BE RECOVERED BY THE**
5 **CONTROL AREA SERVICES COMPONENT OF THE FORMER GMC.**

6 **A. The ISO is charged with ensuring the safe, reliable operation of the Control Area,**
7 **including the dispatch of bulk power supplies in accordance with NERC and**
8 **WECC (formerly WSCC) standards. It is therefore the ISO's responsibility,**
9 **subject to monetary penalty, to ensure that it provides system balancing and to**
10 **arrange for adequate Operating Reserves for ALL Loads within the ISO Control**
11 **Area, which include those Loads served by on-site Generation interconnected**
12 **and synchronized to the ISO Controlled Grid and capable of drawing Energy in**
13 **the event of an on-site Outage of Generation. The physics of a transmission grid**
14 **require that a system operator must constantly monitor, in real time, what is**
15 **happening to the entire transmission grid to maintain the reliability and safety of**
16 **the system. While the actual Energy used to balance Generation and Load is not**
17 **itself an element of CAS, the monitoring efforts by the ISO to ensure the safe and**
18 **reliable operation of the ISO Control Area, and the administrative costs of**
19 **dispatching of the Energy to balance Generation and Load are a part of the CAS**
20 **component.**

21 The ISO, as Control Area operator, performs numerous administrative
22 functions beyond the moment-to-moment monitoring and operation of the ISO

1 Controlled Grid and real-time delivery of Energy requirements. A non-
2 comprehensive listing of these functions includes:

- 3 • Determination of real-time resource adequacy
- 4 • Dispatching of resources in order to balance Load and resources in
- 5 real time
- 6 • Procurement and maintenance of the required amount of Operating
- 7 Reserve
- 8 • Coordination of Western Interconnection reliability with WECC
- 9 reliability coordinators
- 10 • Integration and coordination with other control areas
- 11 • Interchange scheduling
- 12 • Existing Transmission Contracts scheduling and administration
- 13 • Development, maintenance and monitoring of the EMS and associated
- 14 telemetry
- 15 • Day-ahead/Hour-ahead intertie scheduling
- 16 • Reconciliation of schedules post real-time
- 17 • NERC, WECC, and ISO Tariff required reporting
- 18 • Coordination of transmission and generation outages
- 19 • Development, monitoring and enforcement of transmission
- 20 maintenance standards
- 21 • Management and oversight of generation interconnection
- 22 • Performance of seasonal, annual and special analyses of transmission
- 23 system performance and ratings
- 24 • Performance of transmission planning to ensure overall system
- 25 reliability, performance of reserve requirement studies, load forecasting
- 26 and long term transmission resource adequacy
- 27 • Coordination of participation in regional organizations, such as WECC,
- 28 NERC, and NAESB
- 29 • Determination of Long Term Generation adequacy
- 30 • Determination of Reliability Must Run requirements

31 **Q. DOES THE ISO PROVIDE THESE SERVICES FOR ALL LOAD,**
32 **INCLUDING BEHIND-THE-METER LOAD? FOR EXAMPLE, DOES THE**
33 **ISO UNDERTAKE TRANSMISSION PLANNING ACTIVITIES TO**
34 **SUPPORT BEHIND-THE-METER LOAD?**

35 **A. There are certain services provided by the ISO from which all loads and**
36 **generation derive benefits. As I allude to above, and elaborate upon here. the**

1 ISO, as a Control Area Operator, is obligated by WECC criteria and NERC policy
2 to provide its proportionate share of frequency control to the Western
3 Interconnection, to control and manage voltage within the ISO Control Area and
4 to balance resources with load, including maintaining a required amount of
5 operating reserve, such that the ISO Control Area is not a burden to the other
6 Control Areas and non-Control Area entities that comprise the Western
7 Interconnection. The ISO Grid Planning process incorporates transmission
8 assessments performed by Participating Transmission Owners to develop
9 transmission expansion plans for the ISO Controlled Grid. These studies include
10 transmission adequacy analyses during generation outage conditions that require
11 the transmission system to serve load that can no longer be served by local
12 generation because the local generation is unavailable.

13 **Q. ARE BEHIND-THE-METER LOADS A PART OF THE ISO'S LOAD**
14 **RESPONSIBILITY FOR THE ISO CONTROL AREA?**

15 **A.** Yes, when the behind-the-meter load served by the behind-the-meter generation
16 remains connected and continues to draw power from the transmission grid in
17 the event the behind-the-meter generation trips, that is, disconnects from the
18 grid. The ISO therefore needs to have reserves available to serve the load if the
19 behind-the-meter generation trips. There was not in 2001 and there currently is
20 no exemption in WECC that permits excluding load behind the meter from a
21 Control Area's Load Responsibility. As was discussed during the previous
22 hearing on this docket, there has been some discussion regarding revisions of

1 the WECC requirements to exclude behind-the-meter retail load with standby
2 service from a Control Area's Responsibility, but that has not occurred and
3 certainly does not affect the period at issue in this proceeding.

4 **Q. IN RESPONSE TO THE COMMISSION'S INQUIRY, CAN YOU IDENTIFY**
5 **THE AREAS IN WHICH THE ISO INCURS COSTS TO MEET ITS**
6 **RESPONSIBILITIES WITH RESPECT TO BEHIND-THE-METER LOAD**
7 **(I.E., BEHIND-THE-METER LOAD NETTED AGAINST UNMODELED**
8 **GENERATION)?**

9 **A.** The ISO acknowledged in 2001 GMC that it hoped in later filings to allocate the
10 Grid Management Charge with a greater degree of granularity, and indeed has
11 done so. From my perspective as a former System Operator, the Control Area
12 Services category in the 2001 GMC filing is not easily amenable to further
13 specific subdivisions. The most important factor is that the WECC does not
14 distinguish between load behind-the-meter and any other load. Therefore the
15 ISO directly incurs costs for behind-the-meter load in connection with all Control
16 Area Services that are directed toward ensuring that load continues to be served.
17 These costs would include the maintenance of voltage control; frequency control;
18 and Operations Engineering and Planning functions to determine the impact of
19 the behind-the-meter load or generator when connected to and disconnected
20 from the grid. To the extent the behind-the-meter load has not self-provided or
21 made appropriate arrangements (for example though an adequate standby
22 service arrangement) for the required amount of operating reserve, the ISO must

1 be prepared to maintain continuity of service to such load, and, therefore, must
2 procure the required amount of operating reserve. Behind-the-meter load also
3 benefits, although less directly, from such activities as transmission planning,
4 maintenance, and outage coordination that ensure the existence of a robust
5 transmission network that can protect load in the case of the failure of behind-
6 the-meter generation.

7 **Q. WHY MUST THE ISO PROVIDE SUCH SERVICES FOR BEHIND-THE-**
8 **METER LOAD? WHY IS IT ESSENTIAL THAT THE ISO HAVE**
9 **COMPREHENSIVE INFORMATION ABOUT BEHIND-THE-METER**
10 **LOAD IN ORDER TO MANAGE THE GRID?**

11 **A.** Simply stated, in order to meet its Control Area Operator reliability obligations to
12 the WECC. The ISO has the operational responsibility, operations engineering
13 and grid planning obligations to: 1) study and determine the impact to the
14 transmission system of such behind-the-meter loads and generators, 2) ensure
15 that local transmission facilities and substation equipment are designed and built
16 such that the interconnection of these loads and generators does not negatively
17 impact that system, e.g., that this new equipment does not exceed existing
18 substation circuit breaker fault duties and that protective relays are properly
19 coordinated, 3) where necessary, modify local transmission facilities and
20 substation equipment to meet WECC planning and operating criteria for the
21 Control Area in order to reliably accommodate the new behind-the-meter loads
22 and generators.

1 **Q. DOES THE ISO NEED INFORMATION THAT IT DOES NOT HAVE, IN**
2 **ORDER TO REPORT WHICH GENERATORS AND WHAT**
3 **ASSOCIATED LOAD THE ISO DOES NOT MODEL?**

4 **A. It is my understanding that this fact finding proceeding by the Commission relates**
5 **to the Commissions' orders in Opinion No. 463-A. Specifically it refers to the**
6 **liability of behind-the-meter generation for the Control Area Services component**
7 **of the then Grid Management Charge. Because the ISO no longer estimates**
8 **behind-the-meter load for the purposes of assessing Control Area Services (or its**
9 **current equivalent) and that the relevant entities remaining within the Control**
10 **Area now comply with the ISO's requirements, regulatory controls through which**
11 **the Commission directs parties to provide information to the ISO so that it may**
12 **accurately charge behind-the-meter load are not required.**

13 **As to whether or not there is additional information that the Commission**
14 **might assist the ISO in obtaining, the answer is yes there is. However, I am**
15 **unsure whether, given the earlier part of my answer and the restricted nature of**
16 **this proceeding, this is the place to seek such assistance.**

17

EXHIBIT ISO-55

California ISO
 Docket Nos. ER01-313-004 et al.

Exh. ISO-55
 Page 1 of 18

Type of Unit	bus	name	kv	ld	long ld	pgen
SDG&E	22074	BDLRKSP1	13.8	1		49
SDG&E	22075	BDLRKSP2	13.8	1		49
SDG&E	22149	CPBORDER	13.8	1		49.9
SDG&E	22150	CPELCAJN	13.8	1		49
SDG&E	22153	CPESCND0	13.8	1		49
SDG&E	22176	DIVISNGT	12.5	1		13
SDG&E	22212	ELCAJNGT	12.5	1		13
SDG&E	22233	ENCINA 1	14.4	1		100
SDG&E	22234	ENCINA 2	14.4	1		100
SDG&E	22236	ENCINA 3	14.4	1		100
SDG&E	22240	ENCINA 4	22	1		280
SDG&E	22244	ENCINA 5	24	1		320
SDG&E	22248	ENCINAGT	12.5	1		14
SDG&E	22257	ESPGEGEN	13.8	1		46
SDG&E	22332	GOALLINE	69	1		49.8
SDG&E	22987	INTBCT	16	1		160
SDG&E	22988	INTBST	18	1		150
SDG&E	22373	KEARN2AB	12.47	1		14
SDG&E	22373	KEARN2AB	12.47	2		14
SDG&E	22374	KEARN2CD	12.47	1		14
SDG&E	22374	KEARN2CD	12.47	2		14
SDG&E	22375	KEARN3AB	12.47	1		14
SDG&E	22375	KEARN3AB	12.47	2		14
SDG&E	22376	KEARN3CD	12.47	1		14
SDG&E	22376	KEARN3CD	12.47	2		14
SDG&E	22377	KEARNGT1	12.5	1		14.5
SDG&E	22385	KYOCERAG	12	1		0
SDG&E	22990	LRP-U4	16 C			150
SDG&E	22488	MIRAMRGT	12.5	1		17
SDG&E	22488	MIRAMRGT	12.5	2		16
SDG&E	22533	MURRAY12	12 A			0
SDG&E	22576	NOISLMTR	69 QF			33
SDG&E	22577	NOISLNAV	69 CG			1
SDG&E	22552	NSCOGEN	12.47	1		20
SDG&E	22805	OTAY	12.47	1		3.5
SDG&E	22817	OYPGEGEN	13.8	1		49
SDG&E	22861	POINTLMA	12.47	CG		3
SDG&E	22860	POINTLMA	69 QF			22
SDG&E	22776	SOUTHBT	12.5	1		13
SDG&E	22780	SOUTHBY1	15	1		130
SDG&E	22784	SOUTHBY2	15	1		145
SDG&E	22788	SOUTHBY3	20	1		165
SDG&E	22792	SOUTHBY4	20	1		0
SDG&E	22801	STRMVVBC	12.47 B			0
SDG&E	22801	STRMVVBC	12.47 C			0
SDG&E	22993	TDM CTG1	18 G1			180
SDG&E	22992	TDM CTG2	18 G2			179
SDG&E	22991	TDM STG	21 S			240.72

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SCE	28008	AGUAMNSA	13.8	1	30
SCE	25853	ALAMO SC	13.8	1	0
SCE	24001	ALAMT1 G	18	1	158
SCE	24002	ALAMT2 G	18	2	158
SCE	24003	ALAMT3 G	18	3	300
SCE	24004	ALAMT4 G	18	4	606.45
SCE	24005	ALAMT5 G	20	5	460
SCE	24161	ALAMT6 G	20	6	460
SCE	24162	ALAMT7 G	18	7	0
SCE	24714	ALTA 1G	13.8	1	60
SCE	24715	ALTA 2G	13.8	2	80
SCE	24719	ALTA30ST	13.8	30	80
SCE	24718	ALTA31GT	13.8	31	50
SCE	24734	ALTA32GT	13.8	32	50
SCE	24721	ALTA40ST	13.8	40	80
SCE	24720	ALTA41GT	13.8	41	50
SCE	24735	ALTA42GT	13.8	42	50
SCE	25835	ALTWIND	115	1	0
SCE	25203	ANAHEIMG	13.8	1	50
SCE	24009	APPGEN1G	13.8	1	50
SCE	24010	APPGEN2G	13.8	2	50
SCE	24012	APPGEN3G	13.8	3	10
SCE	24457	ARBWIND	66	1	0
SCE	24011	ARCO 1G	13.8	1	400
SCE	24012	ARCO 2G	13.8	1	400
SCE	24013	ARCO 3G	13.8	1	400
SCE	24014	ARCO 4G	13.8	1	400
SCE	24163	ARCO 5G	13.8	1	400
SCE	24164	ARCO 6G	13.8	1	400
SCE	24314	B CRK 4	12	41	50
SCE	24314	B CRK 4	12	42	40
SCE	24315	B CRK 8	13.8	81	25
SCE	24315	B CRK 8	13.8	82	35
SCE	24306	B CRK1-1	7.2	1	15
SCE	24306	B CRK1-1	7.2	2	15
SCE	24307	B CRK1-2	13.2	3	15
SCE	24307	B CRK1-2	13.2	4	20
SCE	24308	B CRK2-1	13.8	1	40
SCE	24308	B CRK2-1	13.8	2	40
SCE	24309	B CRK2-2	7.8	3	10
SCE	24309	B CRK2-2	7.8	4	10
SCE	24310	B CRK2-3	6.8	5	15
SCE	24310	B CRK2-3	6.8	8	15
SCE	24311	B CRK3-1	13.8	1	30
SCE	24311	B CRK3-1	13.8	2	30
SCE	24312	B CRK3-2	13.8	3	30
SCE	24312	B CRK3-2	13.8	4	37
SCE	24313	B CRK3-3	13.8	5	25
SCE	28282	BIGCRK1	33	PO	0

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SCE	24703	BLM E7G	13.8	7	20
SCE	24704	BLM E8G	13.8	8	20
SCE	24705	BLM W9G	13.8	9	20
SCE	24708	BORAX I	13.8	1	47
SCE	24458	BOREL	66	1	0
SCE	28028	BRDWAYB3	13.8	C1	0
SCE	24408	BREEZE	66	1	0
SCE	28506	BREEZE1	12	1	0
SCE	28507	BREEZE2	12	1	0
SCE	24018	BRIGEN	13.8	1	0
SCE	24709	BSPHYD26	2.2	26	12
SCE	24710	BSPHYD34	2.2	34	14
SCE	25634	BUCKWND	115	1	0
SCE	28280	CABAZON	34.5	1	0
SCE	24711	CALGEN1G	13.8	1	30
SCE	24712	CALGEN2G	13.8	2	25
SCE	24713	CALGEN3G	13.8	3	25
SCE	25633	CAPWIND	115	1	0
SCE	24020	CARBOGEN	13.8	1	34
SCE	28007	CENTURY	12.47	1	7.25
SCE	28007	CENTURY	12.47	2	7.25
SCE	28007	CENTURY	12.47	3	7.25
SCE	28007	CENTURY	12.47	4	7.25
SCE	24199	CHEVMAIN	66	1	76
SCE	24028	CIMGEN	13.8	1	30
SCE	24027	COLDGEN	13.8	1	0
SCE	28022	CPC-COLT	12	1	0
SCE	28022	CPC-COLT	12	2	0
SCE	24728	CSA DIAB	4.18	1	15
SCE	24030	DELGEN	13.8	1	45
SCE	28006	DREWSG12	12.47	1	6
SCE	28006	DREWSG12	12.47	2	6
SCE	28009	DREWSG34	12.47	3	6
SCE	28009	DREWSG34	12.47	4	6
SCE	24460	DUTCHWND	66	1	0
SCE	25648	DVLCYN1G	13.8	1	60
SCE	25649	DVLCYN2G	13.8	2	60
SCE	25603	DVLCYN3G	13.8	3	0
SCE	25604	DVLCYN4G	13.8	4	0
SCE	24045	ELSEG1 G	18	1	0
SCE	24046	ELSEG2 G	18	2	0
SCE	24047	ELSEG3 G	18	3	310
SCE	24048	ELSEG4 G	18	4	310
SCE	24458	ENCANWND	66	1	0
SCE	24055	ETIWANDA	66	MW	23
SCE	24055	ETIWANDA	66	QF	30
SCE	24459	FLOWIND	66	1	0
SCE	24831	GARNET	34.5	QF	2
SCE	24831	GARNET	34.5	UN	0

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SCE	28028	GLNARMC1	13.8	C1	0
SCE	28029	GLNARMC2	13.8	C2	0
SCE	28030	GLNARMC3	13.8	C3	0
SCE	28031	GLNARMC4	13.8	C4	0
SCE	24438	GOLDTOWN	66	1	0
SCE	24057	GOLETA	66	EX	0
SCE	24057	GOLETA	66	GV	0
SCE	24057	GOLETA	66	QF	0
SCE	24060	GROWGEN	13.8	1	0
SCE	24062	HARBOR G	13.8	1	80
SCE	24062	HARBOR G	13.8	2	10
SCE	25510	HARBORG3	4.18	3	14
SCE	28003	HIDEDCT1	15	1	175
SCE	28002	HIDEDCT2	15	1	175
SCE	28001	HIDEDCT3	15	1	175
SCE	28000	HIDEDST1	20	1	0
SCE	24063	HILLGEN	13.8	1	45
SCE	24064	HINSON	66	1	0
SCE	24727	HOLGATE	115	BX	47
SCE	24727	HOLGATE	115	MG	57
SCE	24066	HUNT1 G	13.8	1	200
SCE	24067	HUNT2 G	13.8	2	200
SCE	24167	HUNT3 G	13.8	3	200
SCE	24168	HUNT4 G	13.8	4	200
SCE	24169	HUNT5 G	18	5	0
SCE	24070	ICEGEN	13.8	1	45
SCE	28180	INDIGOG1	13.8	1	43.85
SCE	28190	INDIGOG2	13.8	2	43.85
SCE	28191	INDIGOG3	13.8	3	43.85
SCE	24071	INLAND	13.8	1	30
SCE	25417	IRONMTP1	6.9	1	-3.2
SCE	25417	IRONMTP1	6.9	2	-3.2
SCE	25417	IRONMTP1	6.9	3	-3.2
SCE	25417	IRONMTP1	6.9	4	-3.2
SCE	25418	IRONMTP2	6.9	5	-3.2
SCE	25418	IRONMTP2	6.9	6	-3.2
SCE	25418	IRONMTP2	6.9	7	-3.2
SCE	25418	IRONMTP2	6.9	8	-3.2
SCE	25418	IRONMTP2	6.9	9	-0.4
SCE	24437	KERNRVR	66	1	0
SCE	28284	KERNRVU1	11	K1	0
SCE	28285	KERNRVU2	11	K2	0
SCE	24732	KERRGEN	12.5	1	0
SCE	24733	KERRMGEE	13.8	1	55
SCE	24237	LACSD	12	1	10
SCE	24237	LACSD	12	2	10
SCE	24237	LACSD	12	3	10
SCE	24237	LACSD	12	4	5.5
SCE	28008	LAKEGEN	13.8	1	0

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SCE	24078	LBEACH1G	13.8	1	60
SCE	24170	LBEACH2G	13.8	2	50
SCE	24171	LBEACH3G	13.8	3	50
SCE	24172	LBEACH4G	13.8	4	50
SCE	24173	LBEACH5G	13.8	5	50
SCE	24174	LBEACH6G	13.8	6	50
SCE	24079	LBEACH7G	13.8	7	50
SCE	24080	LBEACH8G	13.8	8	70
SCE	24081	LBEACH9G	13.8	9	50
SCE	24737	LUZ8 G	13.8	8	80
SCE	24738	LUZ9 G	13.8	9	80
SCE	24317	MAMOTH1G	13.8	1	80
SCE	24318	MAMOTH2G	13.8	2	80
SCE	24089	MANDLY1G	13.8	1	200
SCE	24090	MANDLY2G	13.8	2	200
SCE	24740	MC GEN	13.8	1	105
SCE	24484	MIDWIND	66	1	0
SCE	24094	MOBGEN	13.8	1	45
SCE	24742	MOGEN G	13.8	1	57
SCE	24095	MOHAV1CC	22	1	680
SCE	24096	MOHAV2CC	22	2	680
SCE	24485	MORWIND	66	1	0
SCE	24050	MTNVIST1	15.5	1	0
SCE	24051	MTNVIST2	15.5	2	0
SCE	24052	MTNVIST3	18	3	300
SCE	24053	MTNVIST4	18	4	300
SCE	24054	MTNVIST5	18	5	125
SCE	24744	NAVYII4G	13.8	4	25
SCE	24745	NAVYII5G	13.8	5	25
SCE	24746	NAVYII6G	13.8	6	25
SCE	24482	NORTHWND	66	1	0
SCE	24491	OAKWIND	66	1	0
SCE	24211	OLINDA	66	1	0
SCE	24102	OMAR 1G	13.8	1	70
SCE	24103	OMAR 2G	13.8	2	70
SCE	24104	OMAR 3G	13.8	3	70
SCE	24105	OMAR 4G	13.8	4	70
SCE	24107	ORMOND1G	26	1	700
SCE	24108	ORMOND2G	26	2	700
SCE	24747	OXBOW G1	13.8	1	53
SCE	24110	OXGEN	13.8	1	34
SCE	24422	PALMDALE	66	1	0
SCE	25640	PANAERO	115	1	0
SCE	28286	PANDOL1G	13.8	1	25
SCE	28287	PANDOL2G	13.8	2	25
SCE	28005	PASADNA1	13.8	1	0
SCE	28006	PASADNA2	13.8	1	0
SCE	28005	PICO_THM	13.8	1	0
SCE	24118	PITCHGEN	13.8	1	30

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SCE	24784	POOLWMD	6.9	1		13
SCE	24119	PROCGEN	13.8	1		51
SCE	28051	PSTRIAG1	18 G1			0
SCE	28051	PSTRIAG2	18 G2			0
SCE	28051	PSTRIAG3	18 G3			0
SCE	28051	PSTRIAS1	18 S1			0
SCE	28051	PSTRIAS2	18 S2			0
SCE	24120	PULPGEN	13.8	1		40
SCE	24121	REDON5 G	18	5		150
SCE	24122	REDON6 G	18	6		130
SCE	24123	REDON7 G	20	7		350
SCE	24124	REDON8 G	20	8		350
SCE	25636	RENWIND	115	1		0
SCE	24783	RUSH	2.3	1		15
SCE	24905	RVCANAL1	13.8	1		0
SCE	24906	RVCANAL2	13.8	2		0
SCE	24907	RVCANAL3	13.8	3		0
SCE	24908	RVCANAL4	13.8	4		0
SCE	24127	S. CLARA	68	1		0
SCE	24481	S. OAKWIND	68	1		0
SCE	24129	S. ONOFR2	22	2		1070
SCE	24130	S. ONOFR3	22	3		1080
SCE	24133	SANTIAGO	66	1		0
SCE	25846	SANWIND	115	1		0
SCE	24785	SEARLES	34.5 AR			55
SCE	24785	SEARLES	34.5 WS			3
SCE	28080	SEAWEST	34.5	1		44.4
SCE	24136	SEAWEST	230	1		0
SCE	28080	SEAWEST	34.5	2		22.2
SCE	28080	SEAWEST	34.5	3		0
SCE	25639	SEAWIND	115	1		0
SCE	24751	SEGS 1G	13.8	1		18
SCE	24752	SEGS 2G	13.8	2		28
SCE	24139	SERFGEN	13.8	1		33
SCE	24140	SIMPSON	13.8	1		37
SCE	28502	SOUTHWIND	12	1		0
SCE	24754	SUNGEN3G	13.8	3		34
SCE	24755	SUNGEN4G	13.8	4		34
SCE	24756	SUNGEN5G	13.8	5		34
SCE	24757	SUNGEN8G	13.8	6		35
SCE	24758	SUNGEN7G	13.8	7		35
SCE	24143	SYCCYN1G	13.8	1		70
SCE	24144	SYCCYN2G	13.8	2		70
SCE	24145	SYCCYN3G	13.8	3		70
SCE	24146	SYCCYN4G	13.8	4		70
SCE	24148	TENNGEN1	13.8	1		22
SCE	24149	TENNGEN2	13.8	2		22
SCE	25632	TERAWIND	115	1		0
SCE	25637	TRANWIND	115	1		0

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SCE	24150	ULTRAGEN	13.8	1		41
SCE	24160	VALLEYSC	115	1		0
SCE	25645	VENWIND	115	1		0
SCE	24152	VESTAL	66	UG		37
SCE	24152	VESTAL	66	WF		0
SCE	24902	VSTA	66	1		0
SCE	24157	WALNUT	68	QF		0
SCE	25651	WARNE1	13.8	1		38
SCE	25652	WARNE2	13.8	2		38
SCE	28061	WHITEWTR	34.5	1		0
SCE	24159	WILLAMET	13.8	1		25
SCE	28020	WINTEC6	115	1		0
SCE	28180	WINTEC8	13.8	1		0
SCE	24828	WINTEC9	13.8	1		0
SCE	28191	WINTECX1	13.8	1		0
SCE	28190	WINTECX2	13.8	1		0
SCE	24463	ZONDWIND	66	1		0
SCE	28504	ZONDWIND1	12	1		0
SCE	28505	ZONDWIND2	12	1		0
PG&E	33160	DOW CHEM	13.8	3		19.77
PG&E	33160	DOW CHEM	13.8	2		19.77
PG&E	33145	CROWN.Z.	13.8	2		5.4
PG&E	35860	OLS-AGNE	9.11	3		9.86
PG&E	35860	OLS-AGNE	9.11	2		9.86
PG&E	33463	CARDINAL	12.47	2		20.5
PG&E	34608	AGRICO	13.8	4		0
PG&E	34608	AGRICO	13.8	3		0
PG&E	31726	ELKCREEK	60	SG		0
PG&E	34316	ONEILPMP	4.16	6		0
PG&E	34316	ONEILPMP	4.16	5		0
PG&E	34316	ONEILPMP	4.16	4		0
PG&E	34316	ONEILPMP	4.16	3		0
PG&E	34316	ONEILPMP	4.16	2		0
PG&E	32001	WOLFSKIL	13.8	1		0
PG&E	35663	LECEFGT4	13.8	4		50
PG&E	35662	LECEFGT3	13.8	3		50
PG&E	35661	LECEFGT2	13.8	2		50
PG&E	35660	LECEFGT1	13.8	1		50
PG&E	32175	CREEDGT1	13.8	3		46.32
PG&E	32174	GOOSEHGT	13.8	2		46.32
PG&E	32173	LAMBGT1	13.8	1		46.32
PG&E	38357	WOODMID2	13.8	2		4
PG&E	33178	RIVERVG1	13.8	1		45
PG&E	34773	FELLOWSG	21	3		0
PG&E	34773	FELLOWSG	21	2		0
PG&E	32205	FREC	13.8	1		0
PG&E	32960	STATIN-L	12	EB		0
PG&E	31874	SPI-BURN	9.11	SM		3
PG&E	35851	GLRYCGS2	13.8	2		40

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PG&E	34773	FELLOWSG	21	1		0
PG&E	35079	SUNRSE3S	18	1		0
PG&E	33807	GWFTRCY2	13.8	1		85.9
PG&E	33805	GWFTRCY1	13.8	1		85.9
PG&E	32150	DG_VADIX	13.8	1		49
PG&E	32172	HIGHWINDS	34.5	1		150
PG&E	32513	WSE2	2.3	2		0
PG&E	36207	KCTYPKER	13.8	1		48.7
PG&E	32962	GRNFLPKR	13.8	1		48.7
PG&E	37958	RDGCT4	13.8	1	SMUD OWN	45
PG&E	34608	AGRICO	13.8	2	SMUD OWN	0
PG&E	34301	CHOWCOGN	13.8	1	SMUD OWN	50
PG&E	31621	NEO RBLF	13.8	1		40
PG&E	36209	SLD ENRG	12.47	1	SMUD OWN	13.4
PG&E	35034	MIDSUN +	13.8	1	SMUD OWN	22
PG&E	36226	DUKMOSS6	18	1	SMUD OWN	190
PG&E	36225	DUKMOSS5	18	1	SMUD OWN	170
PG&E	36224	DUKMOSS4	18	1	SMUD OWN	170
PG&E	36223	DUKMOSS3	18	1	SMUD OWN	190
PG&E	36222	DUKMOSS2	18	1	SMUD OWN	170
PG&E	36221	DUKMOSS1	18	1	SMUD OWN	170
PG&E	33110	DEC CTG3	18	1	SMUD OWN	200
PG&E	33109	DEC CTG2	18	1	SMUD OWN	200
PG&E	33108	DEC CTG1	18	1	SMUD OWN	200
PG&E	33107	DEC STG1	24	1	SMUD OWN	280
PG&E	33113	LMECST1	18	1	SMUD OWN	200
PG&E	33112	LMECCT1	18	1	SMUD OWN	180
PG&E	33111	LMECCT2	18	1	SMUD OWN	180
PG&E	31451	WHEELBR2	12.47	1	SMUD OWN	4
PG&E	38365	N.HGN DM	4	2	SMUD OWN	1.1
PG&E	38365	N.HGN DM	4	1	SMUD OWN	2.2
PG&E	37523	SUTTER3	18	3	SMUD OWN	167
PG&E	37522	SUTTER2	18	2	SMUD OWN	167
PG&E	37521	SUTTER1	18	1	SMUD OWN	167
PG&E	35837	IBM-CTLE	115	1	SMUD OWN	0
PG&E	31404	WEST FOR	13.8	2	SMUD OWN	12
PG&E	35075	TEXSUN2G	18	1	SMUD OWN	189
PG&E	35074	TEXSUN1G	18	1	SMUD OWN	189
PG&E	35073	LAPLM_G4	21	1	SMUD OWN	277.5
PG&E	35072	LAPLM_G3	21	1	SMUD OWN	277.5
PG&E	35071	LAPLM_G2	21	1	SMUD OWN	277.5
PG&E	35070	LAPLM_G1	21	1	SMUD OWN	277.5
PG&E	33918	FBERBORD	9.11	1	SMUD OWN	3.2
PG&E	33773	ALTA-CGE	60	1	SMUD OWN	4.03
PG&E	31471	SPI_AND1	9.1	1	SMUD OWN	4.3
PG&E	31465	WHEELBR1	9.1	1	SMUD OWN	49.75
PG&E	34340	CRANEVLY	9.11	1	SMUD OWN	0.9
PG&E	38117	ROSEVCT2	13.8	1	SMUD OWN	22
PG&E	38119	ALMDACT2	13.8	1	SMUD OWN	22.6

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PG&E	32903	OAKLND 3	13.8	3	SMUD OWN	0
PG&E	32902	OAKLND 2	13.8	2	SMUD OWN	42.7
PG&E	32901	OAKLND 1	13.8	1	SMUD OWN	42.7
PG&E	31430	SMUDGE01	13.8	1	SMUD OWN	33
PG&E	32922	CHEVGEN2	13.8	1		54
PG&E	32921	CHEVGEN1	13.8	1		54
PG&E	36940	SPI1	60	1		10.47
PG&E	32512	WISE1	2.3	1		0
PG&E	32900	CRCKTCOG	18	1		240
PG&E	33134	GWF #4	13.8	1		18.58
PG&E	33141	SHELL 1	12.47	1		20
PG&E	33143	SHELL 3	12.47	3		40
PG&E	33142	SHELL 2	12.47	2		40
PG&E	38029	PALTOLND	60	1		1.02
PG&E	36205	CIC COGN	12.47	1		28
PG&E	36200	SARGCN G	13.8	1		33.73
PG&E	36201	SALNR GN	13.8	1		32.15
PG&E	33804	BELLTA T	13.8	1		0
PG&E	31400	SANTAFE	13.8	1		32.1
PG&E	31402	BEAR CAN	13.8	1		9.8
PG&E	31402	BEAR CAN	13.8	2		9.8
PG&E	31404	WEST FOR	13.8	1		12.1
PG&E	31764	MALCHA	13.8	1		12.54
PG&E	31798	BRNYFRST	13.2	1		28.58
PG&E	31800	SMPSN-AN	12.47	1		42
PG&E	33132	GWF #2	13.8	1		12.33
PG&E	32910	UNOCAL	12	1		15.7
PG&E	32910	UNOCAL	12	2		15.7
PG&E	32910	UNOCAL	12	3		15.7
PG&E	35850	GLRYCGG1	13.8	1		82
PG&E	34050	CH.STN.	13.8	1		10.02
PG&E	33818	I.ENERGY	12	1		14.5
PG&E	33818	COG.NTNL	12	1		35
PG&E	34054	MDSTO CN	13.8	1		4.45
PG&E	34056	STNSLSRP	13.8	1		16.27
PG&E	33808	TH.E.DV.	13.8	1		19.65
PG&E	33808	SJ COGEN	13.8	1		45.24
PG&E	33814	CPC STCN	12.47	1		49
PG&E	33810	SP CMPNY	13.8	1		37.7
PG&E	35004	SUNSETG1	13.8	1		75
PG&E	31902	HAT CRK1	6.6	1		8
PG&E	31904	HAT CRK2	6.6	1		6.5
PG&E	31818	PIT 1 U1	11	1		30
PG&E	31818	PIT 1 U1	11	2		11.25
PG&E	31802	PIT 3	11.5	1		23
PG&E	31802	PIT 3	11.5	2		18
PG&E	31802	PIT 3	11.5	3		23
PG&E	31768	PIT 4	13.8	1		47
PG&E	31768	PIT 4	13.8	2		32

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PG&E	31804	PIT 5 U1	11.5	1		38
PG&E	31804	PIT 5 U1	11.5	2		28.5
PG&E	31808	PIT 5 U2	11.5	1		37
PG&E	31808	PIT 5 U2	11.5	2		28.5
PG&E	31768	JBBLACK1	13.8	1		80
PG&E	31770	JBBLACK2	13.8	1		37
PG&E	31772	PIT 6 U1	13.8	1		39.5
PG&E	31774	PIT 6 U2	13.8	1		18.5
PG&E	31776	PIT 7 U1	13.8	1		55.5
PG&E	31778	PIT 7 U2	13.8	1		29.5
PG&E	31908	INSKIP	4.18	1		8.9
PG&E	31908	COLEMAN	6.8	1		8.73
PG&E	31898	DE SABL A	8.9	1		14.48
PG&E	31780	BUTTVL Y	13.8	1		39
PG&E	31808	CRBOU2-3	11.5	1		0
PG&E	31808	CRBOU2-3	11.5	2		0
PG&E	31810	CRBU 1	11.5	1		0
PG&E	31810	CRBU 1	11.5	OF		0
PG&E	31782	CRBU 4.5	13.8	1		59.25
PG&E	31782	CRBU 4.5	13.8	2		59.25
PG&E	31784	BELDEN	13.8	1		65
PG&E	31786	ROCK CK1	13.8	1		54.25
PG&E	31788	ROCK CK2	13.8	1		34.25
PG&E	31820	BCKS CRK	11	1		29
PG&E	31820	BCKS CRK	11	2		18
PG&E	31812	CRESTA	11.5	1		34
PG&E	31812	CRESTA	11.5	2		21
PG&E	31790	POE 1	13.8	1		59
PG&E	31792	POE 2	13.8	1		34
PG&E	38700	THERMLT1	13.8	1		26
PG&E	38705	THERMLT2	13.8	1		26
PG&E	38710	THERMLT3	13.8	1		25
PG&E	38715	THERMLT4	13.8	1		25
PG&E	38825	HYATT 1	12.5	1		85
PG&E	38830	HYATT 2	12.5	1		85
PG&E	38835	HYATT 3	12.5	1		85
PG&E	38840	HYATT 4	12.5	1		105
PG&E	38845	HYATT 5	12.5	1		108
PG&E	38850	HYATT 8	12.5	1		105
PG&E	38720	PINE FLT	13.8	1		55
PG&E	38720	PINE FLT	13.8	2		55
PG&E	38720	PINE FLT	13.8	3		0
PG&E	31794	WOODLEAF	13.8	1		54.41
PG&E	31814	FORBSTWN	11.5	1		30
PG&E	32450	COLGATE1	13.8	1		146.1
PG&E	32452	COLGATE2	13.8	1		108.5
PG&E	32504	DRUM 1-2	6.6	1		13.2
PG&E	32504	DRUM 1-2	6.6	2		13.2
PG&E	32506	DRUM 3-4	6.6	1		13.2

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PG&E	32506	DRUM 3-4	6.6	2		13.2
PG&E	32454	DRUM 5	13.8	1		42.5
PG&E	32464	DTCHFLT1	11	1		22
PG&E	32460	NEWCASTLE	13.2	1		0
PG&E	32502	DTCHFLT2	8.9	1		22
PG&E	32462	CHI.PARK	11.5	1		37.88
PG&E	32508	FRNCH MD	4.16	1		18.4
PG&E	32456	MIDLFORK	13.8	1		84.5
PG&E	32456	MIDLFORK	13.8	2		84.5
PG&E	32458	RALSTON	13.8	1		83
PG&E	33800	SALT SPS	11	1		10.18
PG&E	33800	SALT SPS	11	2		32
PG&E	38122	NEWSPRICE	4.16	1		1.6
PG&E	38122	NEWSPRICE	4.16	2		1.6
PG&E	38122	NEWSPRICE	4.16	3		0.5
PG&E	33822	TIGR CRK	11	1		27
PG&E	33822	TIGR CRK	11	2		27
PG&E	33820	WEST PNT	11.5	1		15
PG&E	33812	ELECTRA	13.8	1		29
PG&E	33812	ELECTRA	13.8	2		29
PG&E	33812	ELECTRA	13.8	3		29
PG&E	33850	CAMANCHE	4.16	1		3.5
PG&E	33850	CAMANCHE	4.16	2		3.5
PG&E	33850	CAMANCHE	4.16	3		3.5
PG&E	33845	PARDEE 3	7.2	3		0
PG&E	33846	PARDEE 1	7.2	1		8
PG&E	32292	ELDOR U1	7.2	1		0
PG&E	32293	ELDOR U2	7.2	1		0
PG&E	33848	PARDEE 2	7.2	2		0
PG&E	34058	DONNELLS	13.8	1		64.15
PG&E	34074	BEARDSLY	6.9	1		10.58
PG&E	34078	TULLOCH	6.9	1		
PG&E	34078	TULLOCH	6.9	2		
PG&E	34080	SANDBAR	13.8	1		14.68
PG&E	34078	SPRNG GP	6.6	1		3.93
PG&E	34062	STANISLS	13.8	1		63.92
PG&E	38102	COLLRVL1	13.8	1		89.35
PG&E	38104	COLLRVL2	13.8	1		89.35
PG&E	36980	KIRKWD 1	13.8	1		37
PG&E	36982	KIRKWD 2	13.8	1		37
PG&E	36984	KIRKWD 3	13.8	1		37
PG&E	36986	HOLM 1	13.8	1		70
PG&E	36988	HOLM 2	13.8	1		70
PG&E	36990	MCSN CK1	13.8	1		45
PG&E	36992	MCSN CK2	13.8	1		45
PG&E	34306	EXCHOUER	13.8	1		89.95
PG&E	34658	WISHON	2.3	1		0
PG&E	34658	WISHON	2.3	2		0
PG&E	34658	WISHON	2.3	3		4.5

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PG&E	34658	WISHON	2.3	4	4.5
PG&E	34343	KERCK1G1	6.6	1	0
PG&E	34344	KERCK1G2	6.8	2	6.78
PG&E	34345	KERCK1G3	6.8	3	0
PG&E	34308	KERCKHOF	13.8	1	128
PG&E	34800	HELMS 1	18	1	350
PG&E	34802	HELMS 2	18	1	350
PG&E	34604	HELMS 3	18	1	200
PG&E	34610	HAAS	13.8	1	70
PG&E	34610	HAAS	13.8	2	70
PG&E	34624	BALCH 1	13.2	1	27
PG&E	34612	BLCH 2-2	13.8	1	50
PG&E	34614	BLCH 2-3	13.8	1	50
PG&E	34618	KINGSRIV	13.8	1	47
PG&E	31170	HMBOLDT1	13.8	1	50
PG&E	31172	HMBOLDT2	13.8	1	50
PG&E	33116	C.COS 6	18	1	329.05
PG&E	33117	C.COS 7	18	1	339.27
PG&E	33105	PTSB 5	18	1	325
PG&E	33106	PTSB 6	18	1	325
PG&E	30000	PTS7SWNG	20	1	680
PG&E	33252	POTRERO3	20	1	206.51
PG&E	33271	HNTRS P1	12	1	44
PG&E	33270	HNTRS P4	18	1	170
PG&E	36405	MOSSLND6	22	1	725
PG&E	36406	MOSSLND7	22	1	725
PG&E	36407	MORRO 1	18	1	157.3
PG&E	36408	MORRO 2	18	1	157.33
PG&E	36409	MORRO 3	18	1	336.88
PG&E	36410	MORRO 4	18	1	5
PG&E	36411	DIABLO 1	25	1	1133.2
PG&E	36412	DIABLO 2	25	1	1135.15
PG&E	31406	GEYSR5-6	13.8	1	39
PG&E	31406	GEYSR5-6	13.8	2	39
PG&E	31408	GEYSER78	13.8	1	39
PG&E	31408	GEYSER78	13.8	2	32
PG&E	31412	GEYSER11	13.8	1	60
PG&E	31414	GEYSER12	13.8	1	31
PG&E	31416	GEYSER13	13.8	1	68
PG&E	31418	GEYSER14	13.8	1	54
PG&E	31420	GEYSER16	13.8	1	64
PG&E	31422	GEYSER17	13.8	1	36
PG&E	31424	GEYSER18	13.8	1	56
PG&E	31426	GEYSER20	13.8	1	52
PG&E	38106	NCPA1GY1	13.8	1	35
PG&E	38108	NCPA1GY2	13.8	1	35
PG&E	38110	NCPA2GY1	13.8	1	36
PG&E	38112	NCPA2GY2	13.8	1	36
PG&E	33253	POTRERO4	13.8	1	42.9
PG&E	33254	POTRERO5	13.8	1	42.9
PG&E	33255	POTRERO6	13.8	1	42.9

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PG&E	31156	ULTRAPWR	12.47	1		10
PG&E	31158	LP SAMOA	12.47	1		10
PG&E	31150	FAIRHAVN	13.8	1		15.9
PG&E	31152	PAC.LUMB	13.8	1		20
PG&E	38730	SANLUIS1	13.8	1		20
PG&E	38730	SANLUIS1	13.8	2		20
PG&E	38735	SANLUIS2	13.8	1		20
PG&E	38735	SANLUIS2	13.8	2		20
PG&E	38740	SANLUIS3	13.8	1		0
PG&E	38740	SANLUIS3	13.8	2		0
PG&E	38745	SANLUIS4	13.8	1		0
PG&E	38745	SANLUIS4	13.8	2		0
PG&E	38854	CSC COG.	13.8	1		5.5
PG&E	38118	ROSEVCT1	13.8	1		22
PG&E	38118	ALMDACT1	13.8	1		22.6
PG&E	34316	ONEILPMP	4.16	1		-3.9
PG&E	31824	VOLTA 1	9.11	1		7.77
PG&E	31825	VOLTA 2	12	2		0.89
PG&E	31828	SOUTH G	9.11	1		6.91
PG&E	31828	KILRC1-2	2.3	1		2
PG&E	31830	HAMIL BR	2.4	1		4
PG&E	31832	SLYCREEK	6.6	1		12.8
PG&E	31834	KELLYRDG	4.16	1		10
PG&E	31838	TOAD TWN	9.11	1		0.9
PG&E	31838	CNTRVL12	2.3	1		4
PG&E	34871	WELLPORT	9.11	2		3.3
PG&E	31840	BLCKBUTT	9.11	1		2.23
PG&E	31433	POTTRVLY	9.11	1		3.2
PG&E	32700	MONTICLO	9.11	1		4.65
PG&E	32700	MONTICLO	9.11	2		4.65
PG&E	32700	MONTICLO	9.11	3		0
PG&E	32466	NARROWS1	11	1		6
PG&E	32466	NARROWS2	13.8	1		52
PG&E	32470	CMP FARW	4.16	1		4.6
PG&E	32472	SPAUL1-2	2.3	1		7
PG&E	32472	SPAUL1-2	2.3	2		4.16
PG&E	32473	SPAULD 3	9.11	3		1.7
PG&E	32474	DEER CRK	9.11	1		3.07
PG&E	32476	ROLLINSF	6.6	1		12
PG&E	32478	HALSEY F	6.6	1		8.57
PG&E	32480	BOWMAN	4	1		2.46
PG&E	32510	CHILIBAR	12	1		5.5
PG&E	32511	ROCK CRK	12	1		1.8
PG&E	32484	OXBOW F	9.11	1		5.4
PG&E	32486	HELLHOLE	9.11	1		0
PG&E	34320	MCSWAIN	9.11	1		6.8
PG&E	34322	MERCEDFL	12	1		2.91
PG&E	34138	CRESSY12	12	1		3
PG&E	34451	SJ1GEN	2.3	SJ		0
PG&E	34631	SJ2GEN	9.11	1		2.05
PG&E	34633	SJ3GEN	9.11	1		1
PG&E	35018	KERNCONVN	9.11	1		10.6

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PG&E	38120	LODI25CT	13.8	1		10
PG&E	31900	GRIZZLYG	6.9	1		18.81
PG&E	38860	CSCGNRA1	13.8	1		19.5
PG&E	38859	CSCGNRA2	13.8	2		19.5
PG&E	38114	STIG CC	13.8	1		48.16
PG&E	31435	GEO.ENGY	9.11	1		8.92
PG&E	31435	GEO.ENGY	9.11	2		8.93
PG&E	38908	WIN-AMED	60	1		1
PG&E	38908	WIN-AMED	60	2		2
PG&E	31848	COVE RD	9.11	1		0
PG&E	31848	COVE RD	9.11	2		2.47
PG&E	31848	COVE RD	9.11	3		0
PG&E	31848	COVE RD	9.11	4		0
PG&E	31182	LOW GAP	9.11	1		0.2
PG&E	31184	BLUFORD	9.11	1		0.27
PG&E	31188	KEKAWAK	9.11	1		0
PG&E	31438	INDIAN V	9.11	1		0.88
PG&E	31188	WEA BAKR	12	1		0
PG&E	31554	GROUSCRK	60	1		0
PG&E	31583	LEWISTON	12	1		0
PG&E	31855	OLSEN	60	1		0
PG&E	31590	CEDR CRK	60	1		1
PG&E	31858	BAILEY+2	12	1		
PG&E	31858	BAILEY+2	12	2		
PG&E	31858	BAILEY+2	12	3		
PG&E	31882	DEADWOOD	9.11	1		0
PG&E	31475	KANAKA	115	1		0
PG&E	31888	HATLOST+	9.11	1		0
PG&E	31888	HATLOST+	9.11	2		0
PG&E	31888	HATLOST+	9.11	3		0
PG&E	31870	FORKBUTT	9.11	1		
PG&E	31870	FORKBUTT	9.11	2		
PG&E	32488	HAYPRES+	9.11	1		0
PG&E	32488	HAYPRES+	9.11	2		1.9
PG&E	31591	COWCREEK	2.4	1		0.7
PG&E	33901	PHOENIX	17	1		0.7
PG&E	32375	BONNIE N	12	AL		0.7
PG&E	33505	MURPHYS	17	AN		0.7
PG&E	31705	CLARK RD	17	LS		2
PG&E	31705	CLARK RD	17	CC		0.9
PG&E	33505	MURPHYS	17	MU		0.7
PG&E	31587	BEAR CRK	2.4	1		5
PG&E	31872	CLOVER	9.11	1		0.8
PG&E	34638	FRIANTDM	9.11	1		22.54
PG&E	35020	RIOBRAVO	9.11	1		8.26
PG&E	31874	SPI-BURN	9.11	1		15.8
PG&E	31878	BIG VLLY	9.11	1		3.89
PG&E	31880	SPI-HAYF	9.11	1		6.8
PG&E	31884	PAC.ENGY	9.11	1		9.8
PG&E	32490	GRNLEAF1	9.11	1		41
PG&E	32492	GRNLEAF2	9.11	1		47
PG&E	32494	YUBA CTY	13.8	1		41.31

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PG&E	32154	WADHAM	9.11	1	22.84
PG&E	31888	OROENGY	9.11	1	8.5
PG&E	31890	PO POWER	9.11	1	
PG&E	31890	PO POWER	9.11	2	
PG&E	38908	JELD-WEN	60	1	1
PG&E	31892	PE.WWOOD	12	1	10.5
PG&E	36910	HONEYLAK	60	1	
PG&E	36910	HONEYLAK	60	2	
PG&E	31884	COLLINS	9.11	1	8.3
PG&E	31896	SPI-QUCY	9.11	1	
PG&E	31896	SPI-QUCY	9.11	2	
PG&E	32156	WOODLAND	9.11	1	25
PG&E	32498	SPILINCF	12	1	4.65
PG&E	32500	ULTR RCK	9.11	1	22.12
PG&E	33826	MARTELL	9.11	1	11
PG&E	33830	GEN.MILL	9.11	1	2.5
PG&E	31446	SONMA LF	9.11	1	4
PG&E	33151	FOSTER W	12.47	1	45.4
PG&E	33151	FOSTER W	12.47	2	45.4
PG&E	33151	FOSTER W	12.47	3	35
PG&E	33466	UNTED CO	9.11	1	28.22
PG&E	33468	SRI INTL	9.11	1	4.28
PG&E	32738	OLS	12	1	26
PG&E	33160	DOW CHEM	13.8	1	19.77
PG&E	33133	GWF #3	13.8	1	19.03
PG&E	33145	CROWN.Z.	13.8	1	40
PG&E	32920	UNION CH	9.11	1	20.37
PG&E	33139	STAUFER	4.16	1	1.85
PG&E	33131	GWF #1	9.11	1	12.74
PG&E	33135	GWF #5	13.8	1	18.94
PG&E	35860	OLS-AGNE	9.11	1	9.86
PG&E	36856	CSC_CCA	13.8	1	23.75
PG&E	35863	CATALYST	12	1	2.25
PG&E	34332	JRWCOGEN	9.11	1	3.77
PG&E	34334	BIO PWR	9.11	1	21.88
PG&E	33483	CARDINAL	12.47	1	20.5
PG&E	36416	ST MARIA	9.11	1	8
PG&E	34640	ULTR.PWR	9.11	1	14.46
PG&E	34642	KINGSBUR	9.11	1	34
PG&E	34646	SANGERCO	9.11	1	37.5
PG&E	34648	DINUBA E	13.8	1	11.5
PG&E	34650	GWF-PWR.	9.11	1	23
PG&E	34653	DERRICK	70	1	10
PG&E	34653	DERRICK	70	2	7.97
PG&E	34654	COLNGAGN	9.11	1	34.21
PG&E	35024	DEXEL +	9.11	1	28.57
PG&E	35026	KERNFRNT	13.8	1	47.65
PG&E	34733	DOUBLE C	13.8	1	46.28
PG&E	34723	HISIERRA	13.8	1	47.94
PG&E	34727	BADGERCK	13.8	1	42.52
PG&E	35028	OILDALE	9.11	1	33
PG&E	35032	CHV-CYMR	9.11	1	19.43

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PG&E	34783	TEXCO NM	9.11	1	5.38
PG&E	34785	TEX MCKT	9.11	1	2.7
PG&E	35038	MT POSO	13.8	1	50
PG&E	34787	UNIVRSTY	12.47	1	33.77
PG&E	35038	CHALKCLF	13.8	1	43.6
PG&E	35040	KERNRDGE	9.11	1	60
PG&E	35044	TX MIDST	9.11	1	33.38
PG&E	35046	SHL-KERN	9.11	1	17.75
PG&E	35048	FRITOLAY	12	1	4.28
PG&E	35050	SLR-TANN	6.9	1	14.95
PG&E	35052	CHEV.USA	9.11	1	10
PG&E	35058	PSE-LVOK	9.11	1	43.08
PG&E	35060	PSEMCKIT	9.11	1	43.52
PG&E	35062	DISCOVERY	9.11	1	32.53
PG&E	35064	NAVY 35R	9.11	1	
PG&E	35064	NAVY 35R	9.11	2	
PG&E	33136	CCCSO	12.47	1	4.4
PG&E	35068	PSE-BEAR	13.8	1	43.31
PG&E	32188	USWINDPW	9.11	1	0
PG&E	32188	USWINDPW	9.11	2	3.41
PG&E	30570	USWP-RLF	230	1	4.5
PG&E	30575	WND MSTR	230	1	0
PG&E	33175	ALTAMONT	9.11	1	0
PG&E	33175	ALTAMONT	9.11	2	0
PG&E	33838	USWP #3	9.11	1	0
PG&E	33840	FLOWD3-8	9.11	1	2.38
PG&E	33171	JVE&HOWD	9.11	1	0
PG&E	30655	ADCC	230	1	0
PG&E	35312	SEAWESTF	21	1	0.08
PG&E	35314	WALKER+	9.11	1	0
PG&E	35318	ZOND SYS	9.11	1	0
PG&E	35208	USWP-FRK	60	1	2.64
PG&E	35318	FLOWDPTR	9.11	1	0.03
PG&E	33576	USWP-PAT	115	1	
PG&E	33576	USWP-PAT	115	2	
PG&E	33576	USWP-PAT	115	3	
PG&E	33576	USWP-PAT	115	4	
PG&E	33578	FAYETTE	115	1	
PG&E	33578	FAYETTE	115	2	
PG&E	33578	FAYETTE	115	3	
PG&E	33578	FAYETTE	115	4	
PG&E	34342	INT.TURB	9.11	1	1.08
PG&E	37549	FOLSOM1	13.8	1	62
PG&E	37550	FOLSOM2	13.8	2	62
PG&E	37551	FOLSOM3	13.8	3	62
PG&E	37553	J.F.CARR	13.8	1	70
PG&E	37553	J.F.CARR	13.8	2	71
PG&E	37645	NIMBUS12	4.2	1	7
PG&E	37645	NIMBUS12	4.2	2	0
PG&E	37561	MELONE1	13.8	1	166
PG&E	37562	MELONE2	13.8	2	166
PG&E	37575	SHASTA1	13.8	1	110

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PG&E	37576	SHASTA2	13.8	2		107
PG&E	37577	SHASTA3	13.8	3		125
PG&E	37578	SHASTA4	13.8	4		125
PG&E	37579	SHASTA5	13.8	5		125
PG&E	37581	SPRINGCR	13.8	1		87
PG&E	37581	SPRINGCR	13.8	2		87
PG&E	37590	TRINITY12	13.8	1		60
PG&E	37590	TRINITY12	13.8	2		59
PG&E	37559	KESWICK1	6.9	1		35
PG&E	37556	KESWICK2	6.9	2		36
PG&E	37557	KESWICK3	6.9	3		0
PG&E	37941	RDGCT 2	13.8	1		0
PG&E	37942	RDGCT 3	13.8	1		30
PG&E	37944	RDGSTEAM	13.8	1		0
PG&E	37940	RDGCT 1	13.8	1		0
PG&E	38349	COTTLE	17.7	F		3.73
PG&E	38550	DONPDRO1	13.8	1		46
PG&E	38552	DONPDRO2	13.8	1		46
PG&E	38554	DONPDRO4	13.8	1		25
PG&E	38584	ALMONDPP	13.5	1		50
PG&E	38560	LA GRNCE	4.16	1		3.18
PG&E	38562	DAWSON	4.16	1		3.28
PG&E	38350	DONPDRO3	13.8	1		49.88
PG&E	38352	MCCLURE1	13.8	1		0
PG&E	38354	MCCLURE2	13.8	1		0
PG&E	38356	WOODLMID	13.8	1		41.1
PG&E	37301	CAMINO 1	13.8	1		60
PG&E	37302	CAMINO 2	13.8	1		60
PG&E	37304	CAMPBEL2	13.8	1		40
PG&E	37303	CAMPBEL1	13.8	1		85
PG&E	37305	JAYBIRD1	13.8	1		60
PG&E	37306	JAYBIRD2	13.8	1		60
PG&E	37307	JONESFRK	4.16	1		9.5
PG&E	37308	LOON LK	13.8	1		70
PG&E	37309	MCCLELLN	13.8	1		50
PG&E	37310	PROCTER1	13.8	1		41
PG&E	37311	PROCTER2	13.8	1		41
PG&E	37312	PROCTER3	13.8	1		41
PG&E	37313	PROCTER4	13.8	1		39.5
PG&E	37314	ROBBS PK	13.8	1		23
PG&E	37315	SRWTPA	13.8	1		40
PG&E	37315	SRWTPA	13.8	2		11
PG&E	37316	SRWTPB	13.8	1		40
PG&E	37317	UNIONVLY	13.8	1		40
PG&E	37318	WHITERK1	13.8	1		86.12
PG&E	37319	WHITERK2	13.8	1		100
PG&E	37320	UCDMC	12.5	1		27
PG&E	34436	GWF CT2	13.8	2		48.2
PG&E	34437	GWF CT1	13.8	1		48.2
PG&E	34179	MADERA G	13.8	1		28.7
PG&E	34142	WHD PAN2	13.8	1		49
PG&E	34185	WHD GAT2	13.8	1		49

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PG&E	34539	GWF GT1	13.8	1		49
PG&E	34541	GWF GT2	13.8	1		49
PG&E	34186	DG PAN1	13.8	1		49
PG&E	32963	GROYPKR1	13.8	1		48.7
PG&E	32964	GROYPKR2	13.8	2		48.7
PG&E	32965	GROYPKR3	13.8	3		48.7
PG&E	31154	HUMBOLDT	13.2	1		15
PG&E	31154	HUMBOLDT	13.2	2		15
PG&E	31400	SANTAFE	13.8	2		32.1
PG&E	38558	WALNUT1	13.8	1		0
PG&E	38558	WALNUT2	13.8	1		0
PG&E	30484	EXXON_BH	12.47	1		52
PG&E	35009	SUNSETG2	13.8	2		75
PG&E	35010	SUNSETG3	13.8	3		75
PG&E	35035	ULTRAOGL	13.8	1		34.47
PG&E	35078	ELKHIL3G	18	1	SMUD OWN	225.5
PG&E	35077	ELKHIL2G	18	1	SMUD OWN	166.8
PG&E	35076	ELKHIL1G	18	1	SMUD OWN	166.8
PG&E	36202	BAF COG1	13.8	1		38
PG&E	36203	BAF COG2	13.8	1		75
PG&E		PTSB 1				
PG&E		PTSB 2				
PG&E		PTSB 3				
PG&E		PTSB 4				
PG&E		FMC CT				
PG&E	33687	STKTN	60	1		
SCE	24120	Smurfit Stone Container Corp, Jefferson Smurfit Corpora				
SCE	24149	Berry Petroleum Placenta, Berry Petroleum				
PG&E	33918	SPI-Standard (on-line), Sierra Pacific Industries				
PG&E	31451	WES Shasta Energy (on-line), Wheelabrator Environmer				

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System)	
Operator Corporation)	Docket No. ER01-313-004
)	
Pacific Gas and Electric Company)	Docket No. ER01-424-004

DECLARATION OF WITNESS

I, Deane Lyon, declare under penalty of perjury that the statements contained in the Prepared Direct Testimony on behalf of the California Independent System Operator Corporation in this proceeding are true and correct to the best of my knowledge, information, and belief.

Executed on this 17th day of December, 2004.


Deane Lyon

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated this 20th day of December in the year 2004 at Folsom in the State of California.

Stephen A.S. Morrison by REM
Stephen A.S. Morrison