CALIFORNIA ISO

California Independent
System Operator

October 10, 2003

Attn: Parties of CPUC Docket # A.02-09-043

RE: Docket # A.02-09-043, Application of Pacific Gas and Electric Company (U 39 E) for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Jefferson-Martin 230 kV Transmission Project

Dear Parties:

Enclosed please find the Testimony of Gary L. DeShazo on Behalf of The California Independent System Operator in Docket # A.02-09-043.

Thank you

Sincerely,

Gene Waas
Regulatory Counsel

Cc: Attached Service List

Exhibit No.: _____
Commissioner: Loretta M. Lynch
Administrative Law Judge: Charlotte TerKeurst
Witness: Gary DeShazo

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the of Pacific Gas and Electric Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Jefferson-Martin 230 kV Transmission Project	Application 02-09-043

TESTIMONY OF GARY DESHAZO
ON BEHALF OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR

Submitted by the California Independent System Operator

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October 10, 2003

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Pacific Gas and Electric Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Jefferson-Martin 230 kV Transmission Project	Application 02-09-043

TESTIMONY OF GARY L. DESHAZO ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR

Submitted by the California Independent System Operator

Q. Please state your name, employer, position, duties and qualifications.

A. My name is Gary L. DeShazo, Regional Transmission Manager of the California Independent System Operator Corporation ("CA ISO"). My statement of qualifications is provided as Attachment 1 to this testimony.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this testimony on behalf of the CA ISO.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the CA ISO's review of, and conclusions regarding, the need and timing for the Jefferson-Martin 230 kV Transmission Project that from this point forward I will refer to as the "Jefferson- Martin Project" or "the Project".

Q. Do you use any specialized terms in your testimony?

A. Yes. Unless indicated otherwise, we use capitalized terms as defined in the CA ISO Tariff Appendix A: Master Definitions Supplement.

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INTRODUCTION AND SUMMARY

Q. Please discuss the basic background information associated with your testimony?

A. The Pacific Gas & Electric Company ("PG&E") has applied to the California Public Utilities Commission ("CPUC") for a Certificate of Public Convenience and Necessity ("CPCN") for the Project. On April 25, 2002, the CA ISO Governing Board approved the Project With the following motion: The Board…

A. Grants its approval of the Jefferson-Martin 230 kV Transmission Project as the preferred long-term transmission alternative (without regard for routing) to address the identified reliability concerns in the San Francisco Area beginning in 2005 and directs PG&E to proceed expeditiously with design and licensing activities for the proposed project and to include the ISO's analysis of the alternatives in its application to the CPUC.

B. Approves ISO support of PG&E recovery of reasonably incurred costs associated with the permitting and construction of the Jefferson-Martin 230 kV Transmission project in relevant FERC rate cases.

C. Instructs ISO staff to work with the City of San Francisco and interested stakeholder groups toward their goal of closing the Hunters Point Power Plant.

Q. Please describe the events that initiated the need for developing the Project?

A. In December 1998, the PG&E experienced a severe disturbance that resulted in a blackout of most of the City of San Francisco and nearby communities on the San Francisco Peninsula. The blackout affected more than 456,000 customers, nearly one million people, and interrupted approximately 1,200 MW of load. Generation located within the City of San Francisco was also affected by the disturbance. The resulting Western Electricity Coordinating Council ("WECC") disturbance report recommended the CA ISO initiate a coordinated stakeholder study process to develop a long-term transmission plan to assure that the future electric needs of the San Francisco Peninsula Area can be reliably served.

Q. Please summarize the need for the Project?

A. The Jefferson – Martin Project will increase the load serving capability within the San Francisco Peninsula and the City and County of San Francisco according to the CA ISO Study Report

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titled "San Francisco Peninsula Load Serving Capability" dated July 3, 2003. The CA ISO refers to the combined San Francisco Peninsula and City and County of San Francisco areas as the "San Francisco Peninsula Area". At the present time, the load in the San Francisco Peninsula Area is served by a combination of generation units within the San Francisco Peninsula Area and the transmission system that connects the San Francisco Peninsula Area with the remainder of PG&E's transmission infrastructure. The San Francisco Peninsula Area is a "net importer" of electricity which means that the area's load is greater than the amount of generation located within this area. This means that power from outside of the area must be imported into the San Francisco Peninsula Area through the Peninsula Transmission System in order to serve the load in this area. The Peninsula Transmission System is made up of several 230 kV lines crossing San Francisco Bay, and a combination of 230 kV, 115 kV, and 60 kV lines which traverse the San Francisco Peninsula from the San Jose area. The CA ISO believes that the Peninsula Transmission System will be inadequate to serve the projected load in the San Francisco Peninsula Area beyond 2005, unless the Jefferson - Martin Project and other proposed transmission additions identified in PG&E's 2003 Ten Year Bulk Power Expansion Plan are put into place in a timely manner. In addition, the need for the Project is exacerbated by the uncertainty of the continued operation of generation at the Hunters Point Power Plant ("Hunters Point") that serves load in the San Francisco Peninsula Area. The loss or retirement of this existing generation will result in increased power flow through the already heavily-stressed Peninsula Transmission System, increasing the exposure of this system to Reliability Criteria violations. Based on PG&E's timely completion of CA ISO approved projects in PG&E's 2003 Ten Year Bulk Power Expansion Plan, the CA ISO has determined that the total load serving capability ("LSC") in the San Francisco Peninsula Area without the Jefferson – Martin Project in-service is approximately 1,862 MW and assuming Hunters Point Unit #1 and Unit #4 are retired. Building the Jefferson – Martin Project would increase the San Francisco Peninsula Area LSC to approximately 2,092 MW. While the San Francisco Peninsula Load Serving Capability study provides key load serving information about the San Francisco Peninsula Area, a companion ten-year load forecast for the area is needed to assess the need and timing of the Project. In March 2003, PG&E released a load forecast for this area to the CA ISO and area Community Stakeholders. This load forecast projects the 2006 load

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for the San Francisco Peninsula Area to be 1,949 MW which without the Project, will exceed the LSC for this area in 2006. Therefore, based on this forecast, the Jefferson – Martin Project would provide enough load serving capability for the San Francisco Peninsula Area through 2010 when the load is currently projected to reach 2050 MW.

Finally, while local generation does exist, the San Francisco Peninsula Area is also dependent on transmission to import the balance of the power that is consumed within this area. Among other things, there is already uncertainty surrounding the future of generation at Hunters Point where its retirement will further impact the already stressed transmission system into the area The CA ISO, PG&E, City and County of San Francisco, and other stakeholders have determined that a transmission line is needed to support the long-term load serving needs of the San Francisco Peninsula Area. The Jefferson – Martin Project has been selected as the preferred long-term solution and the CA ISO Governing Board has approved it. As such, the CA ISO believes that the Jefferson – Martin Project is the most important component of a broader load-serving plan for the San Francisco Peninsula Area that must be in place when needed.

My testimony: 1) describes the Jefferson - Martin Project; 2) describes the CA ISO Controlled Grid Planning Standards that are used to assess the need for the Jefferson – Martin Project; 3) describes the reliability benefits and need for the Jefferson – Martin Project within the next five years; 4) describes how the Jefferson – Martin Project fits into the long range transmission needs for the San Francisco Peninsula Area; 5) describes the review and approval given to the Jefferson – Martin Project by the CA ISO; and 6) provides a brief summary of the CA ISO's Transmission Planning Process.

I. JEFFERSON – MARTIN PROJECT DESCRIPTION

Q. Please describe the Jefferson – Martin 230kV Transmission Project.

A. The Jefferson – Martin Project would be located in the County of San Mateo, including the Towns of Hillsborough and Colma, and the Cities of Brisbane, Daly City, San Bruno, and South San Francisco. One proposed alternative of the Jefferson – Martin Project consists of the following major components:

- Installing a new approximately 27-mile 230 kV transmission line with underground and overhead segments;

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- Rebuilding the existing Jefferson-Martin 60 kV double-circuit power line;
- Constructing a new transition station near the intersection of San Bruno Avenue and Glenview Drive just east of Skyline Boulevard/Highway 35;
- Modifying the existing Jefferson and Martin Substations to accommodate the new 230 kV transmission line;
- Modifying equipment at the existing San Mateo, Ralston, Millbrae and Monta Vista Substations;
- Modifying Hillsdale Junction Switching Station for the new 60 kV arrangement

The overhead line portion of the Jefferson – Martin Project would be created by removing the existing double-circuit 60 kV power line and replacing it with a new double-circuit line consisting of a single 230 kV circuit and a single 60 kV circuit between Jefferson Substation and the proposed transition station. In addition, primary and secondary fiber-optic wires would be strung along the conductors to provide dedicated fiber strands for communications purposes during project operation.

II. CA ISO GRID PLANNING STANDARDS USED TO ASSESS THE JEFFERSON – MARTIN PROJECT

Q. Please describe the CA ISO Grid Planning Standards utilized in determining the need for the Jefferson – Martin Project.

A. The studies performed in the course of the CA ISO Grid Planning Process must meet the CA ISO Planning Standards. The primary principle guiding the development of the ISO Planning Standards is to develop a consistent set of reliability standards by which the CA ISO grid will be planned that will maintain or improve the level of transmission system reliability that existed with the pre-ISO planning standards.

In recognition of the need to closely coordinate the development of the ISO Grid with neighboring electric systems both inside and outside of California, the CA ISO Planning Standards utilize national and regional planning standards, in particular the North American Electric Reliability Council ("NERC") and WECC Planning Standards, to the maximum extent possible. The CA ISO Planning Standards build from, rather than duplicate, standards that were developed by WECC and NERC. This is accomplished by the CA ISO Planning Standards accomplish this because they:

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- Address specifics not covered in the NERC/WSCC Planning Standards.
- Provide interpretations of the NERC/WSCC Planning Standards specific to the CA ISO Grid.
- Identify whether specific criteria should be adopted that are more stringent than the NERC and/or /WECC planning standards.

Q. What is the basis for the CA ISO Controlled Grid Planning Standards?

A. Public Utilities Code Section 345 provides that, "[t]he Independent System Operator shall ensure efficient use and reliable operation of the transmission grid consistent with achievement of planning and operating reserve criteria no less stringent than those established by the Western Systems Coordinating Council and the North American Electric Reliability Council."

The Western Systems Coordinating Council is now the Western Electricity Coordinating Council, or WECC.

> Section 2.3.1.3 of the CA ISO Tariff refers to Reliability Criteria and includes the following: The CA ISO shall exercise Operational Control over the CA ISO Controlled Grid to meet planning and Operating Reserve criteria no less stringent than those established by WECC and NERC as those standards may be modified from time to time, and Local Reliability Criteria that are in existence on the CA ISO Operations Date and have been submitted to the CA ISO by each Participating TO pursuant to Section 2.2.1(v) of the TCA. All Market Participants and the CA ISO shall comply with the CA ISO reliability criteria.

The CA ISO Tariff states (e.g. sections 5.4.1, 5.4.2 and 5.7.1) that the facilities that are to be added to the CA ISO Controlled Grid are to meet the applicable reliability standard, which is defined as follows "The reliability standards established by NERC, WECC, and Local Reliability Criteria as amended from time to time, including any requirements of the Nuclear Regulatory Commission ("NRC").

III. RELIABILITY BENEFITS AND NEED WITHIN THE NEXT 5 YEARS

Q. What studies has the CA ISO performed to assess the need for the Jefferson – Martin Project?

A. During 2002, the CA ISO worked closely with the City and County of San Francisco, PG&E, and others to address the load serving needs of the San Francisco Peninsula Area. While supportive of

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these efforts, the CA ISO concluded that an independent analysis of the San Francisco Peninsula Area transmission system also was needed to provide a comprehensive determination of the maximum San Francisco Area load serving capability under a multitude of future generation and transmission scenarios including the Jefferson – Martin Project. Based on this need, the CA ISO initiated the "San Francisco Peninsula Load Serving Capability Study" during the last quarter of 2002. The study was completed and the report finalized in July 2003.

The ISO believes that this study report provides the necessary foundation of information to form a broad based understanding of the load serving needs of the San Francisco Peninsula Area and how existing and proposed transmission and generation facilities work to serve that load. In particular, the study provides insight into the significant roles that San Francisco Peninsula Area transmission and generation facilities play in assuring that a sufficient level of reliability exist within this area such that the intent of all applicable national, regional, and local planning standards are met.

Q. Please describe what Load Serving Capability is and how it is applied to the San Francisco Peninsula Area?

A. Load Serving Capability is the amount of demand that can be served in an area by the electrical transmission system into that area and available generation within that area, without violating the CA ISO Planning Standards. As mentioned earlier, the report titled "San Francisco Peninsula Load Serving Capability" describes how much electric load within the San Francisco and San Francisco Peninsula Area can be served under different transmission reinforcement and generation scenarios. When compared to load projections, the results of the load serving capability study describe, from a Grid Planning perspective, what combinations of transmission reinforcement and generation within the San Francisco Peninsula Area would be required to meet the CA ISO Planning Standards.

Q. Are there other things that must be considered when addressing load serving concerns for the San Francisco Peninsula Area?

A. For an area like the San Francisco Peninsula Area where the load is served through a radial transmission system, adequate generation and transmission capacity within and into the area is required to (1) account for planned or forced outages of transmission facilities, and (2) to protect for the next possible facility outage before the initial facility or facilities are put back in service. Under

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these conditions, sufficient generation or remaining import capability to serve load is required to prevent loss of load for the next outage of a single transmission facility.

Q. Please describe how power is supplied to serve load within the San Francisco Peninsula Area?

A. Power is supplied by a combination of generator units within the San Francisco Peninsula Area and generator units outside of this area. Power from outside of the area is imported across several 230 kV lines crossing San Francisco Bay and, through a combination of 230 kV, 115 kV, and 60 kV lines running up the San Francisco Peninsula from the San Jose Area. Generation resources located within the San Francisco Peninsula Area consist of two primary generation facilities, Hunters Point and the Potrero Power Plants ("Potrero"). Hunters Point consists of a steam generator (Unit 4) and a combustion turbine (Unit 1). Potrero consists of a steam generator (Unit 3) and three combustion turbines (Units 4, 5, and 6). Also located in the Peninsula is a 25 MW co-generation unit at the United Airlines facilities at the San Francisco International Airport. Together, these power plants can generate up to 595 megawatts (MW) of power to support the load serving needs of the San Francisco Peninsula Area.

The transmission system in the San Francisco Peninsula Area consists of numerous transmission lines and substations at various voltage levels. Based on the physical attributes of this transmission system, they can be generally illustrated by four key transmission segments:

Segment 1 - Greater East Bay to San Mateo Switching Station

Segment 2 - San Mateo Substation to Martin Substation

Segment 3 - Underground 115 kV cables within the City of San Francisco

Segment 4 – Greater East Bay to Jefferson Substation

Q. Are each of these four segments congested?

A. Yes. All segments currently face Congestion, or bottlenecks, which are managed through existing CA ISO Operating Procedures and Congestion Management protocols.

Q. How does Congestion on the various segments impact the LSC of the San Francisco Peninsula Area?

A. The ability to serve load in San Francisco and/or the Peninsula is rooted in the capability of the entire import path to deliver the necessary power to the load that is not served by local generation. By

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way of example, the ability to serve the entire load within the San Francisco Peninsula Area is dependent on the ability of the existing transmission system to deliver the necessary power into the load serving area while all CA ISO Planning Standards are met. If the transmission system supplying power to the load serving area is constrained, then the ability to serve load in that area will be limited by those Constraints unless the Constraints are mitigated.

Q. Did the CA ISO study evaluate the LSC for San Francisco and the Peninsula separately?

A. No. The LSCs, for San Francisco and the Peninsula were calculated based on the overall combined region: the San Francisco Peninsula Area. As previously discussed, the CA ISO LSC study recognized the entire San Francisco Peninsula Area so that all constraints to serving load within the study area could be identified and mitigation alternatives could be developed. Although the LSC study region is some what larger that the area traversed by the Jefferson – Martin Project, the CA ISO believes that the enlarged study area provides a much better perspective for assessing the benefits of the Jefferson – Martin Project.

Q. What were the conclusions of the CA ISO's San Francisco Peninsula Load Serving Capability Study?

A. Overall, the study contains twelve conclusions. However, there are four key conclusions that I believe are appropriate to mention in my testimony. These conclusions are summarized below:

1) The LSC of the San Francisco Peninsula Area is directly related to generation located within this Area and the capability of the transmission system in the San Mateo-Martin Corridor, the 230kV system south of San Mateo, and local transmission along the San Francisco Peninsula to deliver power to the San Francisco Peninsula Area.

2) Reducing generation at Hunters Point and Potrero to zero MW reduces the amount of San Francisco Peninsula Area load that the transmission system can reliably serve.

3) The Jefferson – Martin 230kV Transmission Project contributes to the LSC for the overall San Francisco Peninsula Area. However, the ability of the Jefferson – Martin Project to contribute to the LSC of the San Francisco Peninsula Area is limited by

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transmission constraints South of San Mateo and within the City of San Francisco 115kV cable system.

4) The Jefferson – Martin 230kV Transmission Project increases the capacity through the San Mateo-Martin Corridor, and provides a transmission source other than San Mateo Substation for serving the San Francisco Peninsula Area load. This helps reduce the San Francisco Peninsula Area's exposure to interruptions associated with San Mateo Substation, which is essentially the only present day connection to externally generated power.

Q. What was the primary scenario analyzed that defined the need for the Jefferson – Martin Project?

A. The scenario that the CA ISO analyzed to determine the need for the Jefferson – Martin Project included the following two key assumptions: First, PG&E completes all CA ISO approved transmission projects they are currently proposing to include in the 2003 Bulk Power Transmission Expansion Plan; and second, Hunters Point Units 1 and 4 are retired. Based on these key assumptions and applying the CA ISO Planning Standards, the CA ISO has determined that the LSC for the San Francisco Peninsula Area without the Jefferson – Martin Project will be limited to 1862 MW. Based on PG&E's load forecast, the San Francisco Peninsula Area load is expected to reach 1949 MW by 2006. The Jefferson – Martin Project is needed by the end of 2005 to ensure that the projected load in the San Francisco Peninsula Area can be reliably served beyond 2005.

Q. Do the results of the CA ISO Load Serving Capability Study support the need for the Jefferson-Martin 230 kV Transmission Project within the next 5 years?

A. Yes, based on the primary scenario evaluated by the CA ISO.

Based on PG&E's 2006 load projections of 1,949 MW for the San Francisco Peninsula Area, and assuming the retirement of all of Hunters Point Unit #1 and #4 by the end of 2005, the Jefferson – Martin Project will be needed as presently scheduled to be in operation by September 2005.

IV. THE PROJECT AND THE LONG-RANGE TRANSMISSION NEEDS OF THE SAN FRANCISCO PENINSULA

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Q. In addition to serving load growth within the San Francisco Peninsula Area, are there other benefits from the Jefferson-Martin 230 kV line?

A. In addition to serving load growth within the San Francisco Peninsula area, the Jefferson – Martin Project alleviates San Francisco Peninsula import line limitations. These line limitations are primarily on lines into the San Francisco Peninsula across from Greater East Bay and South Bay. It also alleviates limitations in the San Mateo-Martin Corridor.

However, one of the greatest benefits of the Jefferson-Martin Project is that it provides an alternative, geographically separated parallel Peninsula path over which power can flow into the San Francisco Peninsula Area relieving the high loading burden on the existing Peninsula transmission system. This increases the overall load serving capability of the Peninsula transmission system and provides a different transmission source than San Mateo Substation for serving the San Francisco Peninsula Area load. This greatly reduces the San Francisco Peninsula Area's exposure to interruptions associated with San Mateo Substation, which is essentially the only source of externally generated power to this area.

The Jefferson – Martin Project also has potential RMR benefits for the San Francisco Area which is a RMR sub-area within the Greater Bay Area ("GBA") local RMR area. The proposed Jefferson-Martin 230 kV line will increase the ability to import power into the San Francisco Area and support reducing the RMR requirement.

V. THE CA ISO REVIEW AND APPROVAL OF THE JEFFERSON – MARTIN PROJECT

Q. Please describe the CA ISO proceedings to date regarding the Jefferson – Martin Project?

A. The identification of the need for the Jefferson – Martin Project grew out of the WECC disturbance report that resulted from the December 1998 San Francisco disturbance. As stated earlier in my testimony, the WECC disturbance report recommended that the CA ISO initiate a coordinated stakeholder study process to develop a long-term transmission plan to ensure that the future electric needs of the San Francisco Peninsula Area can be reliably served.

To accomplish this, the CA ISO formed a stakeholder study group that included a variety of entities such as the City and County of San Francisco ("CCSF"), the Pacific Gas & Electric Company,

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the California Public Utility Commission, the California Energy Commission ("CEC"), various generation developers, and others interested in the process. The stakeholder group first met in June 1999 and after fourteen meetings developed a recommendation for the Jefferson – Martin Project as the preferred long-term transmission planning solution for the area. The results of this group's effort are documented in the San Francisco Long Term Study Report dated October 24, 2000.

In October 2000, the CA ISO recommended to the ISO Board of Governors that they approve the Jefferson – Martin Project as the preferred long-term transmission alternative to address the identified reliability concerns in the San Francisco Peninsula Area Due to the long lead-time that is required to complete the Jefferson – Martin Project, the ISO Board of Governors directed PG&E to initiate permitting activities for the Jefferson – Martin Project. Prior to commencing construction, the Jefferson – Martin Project was to be brought before the CA ISO Board of Governors once again for final approval. PG&E initiated permitting activities for the Jefferson - Martin Project in November 2000.

Q. When did the CA ISO Board of Governors next consider the Jefferson – Martin Project and what was the result?

A. Between October 2000 and April 2002, the CA ISO continued to assess the need and timing of the Jefferson – Martin Project based upon the inability of PG&E's existing transmission system to serve the projected load in the San Francisco Peninsula Area beyond 2005. By letter dated February 19, 2002, PG&E provided the CA ISO with updated project information for the Jefferson – Martin Project which included further analysis on (1) the demand forecast, (2) decision quality cost estimates, and (3) new generation. In accordance with the CA ISO Board of Governor's October 2000 resolution, PG&E formally requested that the CA ISO seek final approval of the Jefferson – Martin Project by the CA ISO Board of Governors.

The CA ISO reviewed the updated information provided by PG&E and concluded that the project was still needed by the end of 2005. In April 2002, the CA ISO presented the Jefferson – Martin Project to the ISO Board of Governors requesting their final approval of the project. The CA ISO Board of Governors approved the Jefferson – Martin Project as the preferred long-term transmission alternative (without regard to routing) to address the identified reliability concerns in the

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San Francisco area.

Q. Has there been any further CA ISO proceedings regarding the Jefferson – Martin Project?

A. Not formally, although CA ISO staff has continued to keep the CA ISO Board of Governors informed of the project's status.

Q. Has CA ISO performed an independent electricity demand forecasting analysis for the Jefferson – Martin Project?

A. Yes. CA ISO has used historical data, provided through both PG&E and the CA ISO Energy Management System ("EMS") real time data, to conduct an independent analysis of the demand forecast. This was done to verify the reasonableness of the PG&E forecast.

CA ISO has reviewed PG&E's 2003 Expansion Plan load forecasts for PG&E's San Francisco and Peninsula Divisions. The PG&E's forecasts for these two Divisions are relatively close and within a range of reasonable expectation when compared with the CA ISO's own evaluation.

Q. Do you have any recommendation as to the appropriate demand forecast scenario for the Jefferson - Martin Project?

A. Yes. The CA ISO recommends utilizing PG&E's 2003 Expansion Plan demand forecast when planning the timing of the Jefferson-Martin Project. Considering historic load growth and other factors, this forecast appears to be reasonable.

VI. SUMMARY OF CA ISO TRANSMISSION PLANNING PROCESS

Q. Please explain the CA ISO's responsibilities in the transmission planning and expansion process in California.

A. Pursuant to the provisions of Assembly Bill 1890 ("AB 1890"), the CA ISO is charged with maintaining the reliability of the CA ISO Controlled Grid. The CA ISO Controlled Grid is comprised of transmission facilities and rights turned over to the CA ISO's Operational Control by San Diego Gas & Electric Company ("SDG&E"), Southern California Edison Company ("SCE"), PG&E and various municipalities (collectively, the Participating Transmission Owners or Participating TOs). Concomitant with the CA ISO's responsibility to maintain system reliability, the CA ISO is also charged with planning and expanding the CA ISO Controlled Grid so as to ensure a reliable and efficient transmission system. These functions and responsibilities are codified in the CA ISO Tariff,

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which is on file and available for public inspection at the FERC.

Q. Please explain the CA ISO's transmission planning and expansion process.

A. Because transmission planning and expansion are important elements of maintaining reliability and ensuring the efficient use of the CA ISO Controlled Grid, the CA ISO Tariff (CA ISO Tariff section 3.2) and each Participating TO's Transmission Owner ("TO") tariff provide for a coordinated planning process. The coordinated planning process requires that, each year, the CA ISO and the Participating TOs assess the adequacy of the CA ISO Controlled Grid and determine whether additional facilities are required to ensure that Energy can be reliably and efficiently delivered to load.

Q. Please describe the goals and requirements of the CA ISO coordinated planning process.

A. The CA ISO Tariff requires Participating TOs to identify, plan and construct transmission additions within their Service Areas that are determined to be needed. A transmission addition is deemed to be needed if it would promote economic efficiency or is necessary to maintain system reliability. Section 3.2 of the CA ISO Tariff categorizes and identifies those projects necessary to reliably deliver Energy to load as "reliability driven" transmission projects and those projects deemed to be necessary on grounds of maximizing the efficiency of the CA ISO Controlled Grid as "economic" transmission projects.

Reliability-driven projects are deemed to be needed if they are necessary to satisfy specified planning standards. The CA ISO coordinates the planning of modifications to the CA ISO Controlled Grid to ensure that, at a minimum, they meet the CA ISO Grid Planning Standards. The CA ISO Grid Planning Standards incorporate the Western Electricity Coordinating Council Planning Standards, the North American Electric Reliability Council Planning Standards, and local area planning standards. Economic projects are deemed to be needed if either the project sponsor commits to pay for the cost of the project or has proposed a cost-allocation methodology that assigns the cost of such project to the identified beneficiaries of the proposed project (subject to the CA ISO's dispute resolution procedures).

Because the CA ISO's transmission planning function relates solely to its responsibilities to maintain a reliable and efficient transmission system, the CA ISO does not focus on a detailed consideration of environmental, routing, social and aesthetic factors. The CA ISO believes that these

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factors are appropriately considered in the CPUC's CPCN process.

Importantly, the CA ISO coordinated planning process is flexible in that transmission projects can be proposed by a variety of entities, including the Participating TOs, the CA ISO or any entity who participates in the Energy marketplace through the buying, selling, transmission or distribution of Energy or Ancillary Services. Thus, any Market Participant can step forward to become the sponsor of a transmission project. Having all these interests participate in the planning process is expected to facilitate the development of a CA ISO Controlled Grid that best meets the needs of all its users and maximizes the potential benefits to the State of California.

Q. Can you summarize how the CA ISO coordinated planning process works?

A. The CA ISO coordinated planning process includes an annual planning process to identify necessary transmission projects and expansions. Participating TOs are required to develop, and submit to the CA ISO, annual transmission expansion plans for the portion of the grid owned by the Participating TO. These plans describe the facility additions proposed by a Participating TO over a minimum five-year planning horizon, although the CA ISO requires Participating TOs to consider a longer period. The annual transmission expansion plans submitted by the Participating TOs identify those areas of the transmission system where enhancements are necessary to satisfy the applicable planning standards and evaluate the technical merits of various transmission, generation and operating solutions. The annual planning process is open to all Market Participants and is the forum in which their concerns and proposed projects can be considered. The CA ISO reviews the Participating TO's annual transmission expansion plans for adequacy. If the CA ISO finds that a plan does not meet the CA ISO Grid Planning Standards, or the CA ISO identifies solutions that would be preferable compared to those proposed by a Participating TO, the CA ISO provides comments and may propose changes or additions to a Participating TO's annual plan. Disagreements between the CA ISO and a Participating TO related to a change or addition to the plan proposed by the CA ISO are subject to the alternative dispute resolution procedures set forth in the CA ISO Tariff.

Q. Please describe the review that the CA ISO undertakes of the Participating TOs annual transmission expansion plans.

A. Review by the CA ISO primarily focuses on whether the projects included in Participating TOs

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annual transmission expansion plans (including and taking into account new generator interconnections) meet the CA ISO Grid Planning Standards. In addition, the CA ISO conducts an operational review to ensure that projects meet the CA ISO's need for operational flexibility and the CA ISO requirements for proper integration with the CA ISO Controlled Grid. Finally, the CA ISO examines and reviews the Participating TO's annual transmission expansion plans including new requests for interconnection to the CA ISO Controlled Grid, with the aim to develop an integrated transmission plan for the entire CA ISO Controlled Grid. In this context the CA ISO may develop and recommend projects that are part of a larger regional expansion plan or are necessary to integrate the plans of the Participating TOs.

In the process of reviewing reliability-driven projects the CA ISO also evaluates whether proposed projects are cost-effective when compared to other transmission solutions and, if applicable, other non-transmission related (non-wires) projects that are equally reliable. To the extent a project is proposed not for reliability reasons but for economic reasons, the CA ISO will determine whether the cost of the project should be incorporated into the Access Charge or split among its identified beneficiaries If a third party proposes to pay the full cost of a project, the CA ISO does not undertake a thorough economic analysis, although it may recommend more economic alternatives.

If the CA ISO approves a transmission project, the Participating TO is obligated to use its best effort to obtain the regulatory approvals and other arrangements as necessary to construct the project. Licensing, design and construction of projects approved by the CA ISO are tracked by the CA ISO to ensure that a project will be in service by the required operating date.

Q. Does this conclude your testimony?

A. Yes. It does.

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STATEMENT OF QUALIFICATIONS OF GARY L. DESHAZO

Q. Please state your name and business address.

A. My name is Gary L. DeShazo. My business address is California Independent System Operator, 151 Blue Ravine Road, Folsom, CA 95630.

Q. Briefly describe your responsibilities at the California Independent System Operator.

A. I am a Regional Transmission Manager in the Grid Planning Department at the CA ISO. I manage a group of six grid planning engineers representing over 60 years of utility planning experience. My staff's core business is to direct and review the development of Pacific Gas and Electric Company's annual Ten Year Transmission Expansion Plan, the annual development of Reliability Must Run requirements, the performance of the Controlled Grid Study, and other special planning studies as required.

Q. Please summarize your educational and professional background.

A. I received a Bachelor of Science degree in Electrical Engineering from New Mexico State University in 1977 and a Master of Science degree in Electrical Engineering in the Electric Utility Management Program from New Mexico State University in 1979. After graduation I worked in positions of increasing responsibility in various transmission planning functions for Salt River Project (SRP) in Phoenix, Arizona from 1979 through November 2001, my last position being Manager, Transmission System Planning. During this tenure, I also was active in various Electric industry organizations such as: chairman of the Western Electricity Coordinating Council (WECC) Technical Studies Subcommittee and Rating Methods Task Force, vice-chairman of the WECC Operations Capability Study Group, and secretary for the WECC Operational Transfer Capability Policy Group. I also represented SRP on the WECC Reliability Subcommittee and as the State/Municipal representative for the WECC region on the North American Electric Reliability Council (NERC) Planning Standards Subcommittee.

In December 2001 I joined the CA ISO as a Regional Transmission Manager. I have over 24 years experience in electric utility transmission system planning.

Q. Does this conclude your statement of qualifications?

A. Yes.

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PROOF OF SERVICE

I hereby certify that on October 10, 2003, I served by electronic and U S mail, the Testimony of Gary L. DeShazo on Behalf of The California Independent System Operator in Docket # A.02-09-043.

DATED at Folsom, California on October 10, 2003.

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An Employee of the California
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