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

Southern California Edison Company) Docket No. ER97-2355-000

Prepared Cross-Answering Testimony of
Armando J. Perez
On Behalf of the California Independent System Operator Corporation

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

A. My name is Armando J. Perez and my business address is 151 Blue Ravine Road, Folsom, California, 95630.

Q. IN WHAT CAPACITY ARE YOU EMPLOYED?

A. I am employed as the Director of Grid Planning for the California Independent System Operator Corporation (ISO).

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS.

A. I graduated from Aurora University, Aurora, Illinois with a Bachelor of Science Degree in Physics. I received a Masters Degree in Electrical Engineering from the University of Southern California, Los Angeles, California. I am a graduate of the Power Systems Engineering Course taught by the General Electric Company in Schenectady, New York and I

am a Registered Professional Engineer in the State of California. My professional qualifications include:

- Member of the Institute of Electrical and Electronic Engineers;
- Chairman of the Western Systems Coordinating Council (WSCC) Reliability Subcommittee;
- Past Chairman of the WSCC Technical Studies Subcommittee;
- WSCC's representative to the North American Electric Reliability Council (NERC) Planning Standards Subcommittee (previously the Reliability Criteria Subcommittee); and
- Worked for Southern California Edison from 1968 to 1997 and held positions in the operating area (Engineer, Senior Engineer, Supervising Engineer) and planning area (Supervisor of Interconnection, Manager of Transmission Planning).

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Yes, I have filed testimony in the following proceeding: Petition for Declaratory Order of Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company, Docket No. EL96-48-000.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked to provide testimony related to the request for customer credits made by the City of Vernon, California (Vernon) and Cities of Anaheim, Riverside, Azusa, Banning, and Colton (Southern Cities)(Collectively with Vernon, Municipal Customers) for transmission facilities they own. My testimony will be limited to issues related to the

physical relationship between ISO controlled transmission facilities and transmission facilities owned by the Municipal Customers, including their design, operation, and use.

Q. HOW HAVE YOU PREPARED YOURSELF TO GIVE TESTIMONY IN THIS PROCEEDING?

A. I have reviewed the testimony filed by the Municipal Customers with regard to their request for customer credits, the direct testimony of the Commission Staff, certain of the pleadings filed in this proceeding, and certain of the data responses of the parties to this proceeding.

Q. ON WHAT BASIS CAN A MUNICIPAL CUSTOMER RECEIVE A TRANSMISSION CREDIT BECAUSE OF ITS INVESTMENT IN TRANSMISSION FACILITIES?

A. As described in the testimony of my colleague Mr. Greenleaf, the Commission has established certain criteria that must be satisfied in order for a transmission customer to warrant a credit for its transmission facility investments.

Q. PLEASE BRIEFLY DESCRIBE THE COMMISSION CRITERIA.

A. As described by Mr. Greenleaf, the Commission requires that, in order for a customer's transmission facilities to warrant a credit, they must demonstrate that their transmission facilities are:

(1) Integrated with the facilities of the transmission provider; and

(2) Provide additional capability benefits to the transmission grid in terms of capability and reliability, and can be relied upon for the coordinated operation of the grid.

Q. HAVE YOU APPLIED THIS TEST TO THE MUNICIPAL CUSTOMERS TRANSMISSION FACILITIES?

A. Yes I have.

Q. SO THAT THE COMMISSION CAN BETTER UNDERSTAND THE BASIS OF YOUR TESTIMONY, PLEASE FIRST INDICATE THE FACILITIES FOR WHICH THE MUNICIPAL CUSTOMERS SEEK A CREDIT.

A. Based on my review of documents presented in this proceeding, the transmission facilities for which the Municipal Customers seek a credit are:

1. Transmission facilities of the COT Project;
2. Transmission facilities of the Mead-Phoenix Project;
3. Transmission facilities of the Mead-Adelanto Project; and
4. Transmission facilities of the IPP Project.

These facilities are remote from the Municipal Customers' internal systems.

Q. IN YOUR OPINION, BASED ON THE MUNICIPAL CUSTOMERS' TESTIMONY AND YOUR KNOWLEDGE OF THE TRANSMISSION

SYSTEM IN QUESTION, HAS THE ENTITLEMENT TO A CREDIT BEEN SATISFIED?

A. No, the Municipal Customers have not made the required showing and therefore a transmission credit would be inappropriate.

Q. WHAT IS THE BASIS FOR YOUR OPINION?

A. The Municipal Customers have not demonstrated that their transmission facilities and the ISO-controlled facilities operate as an integrated transmission system nor have they demonstrated that their transmission facilities provide additional capability benefits to the ISO-controlled transmission grid in terms of capability and reliability, or that these facilities can be relied upon for the coordinated operation of the ISO grid.

Q. WHY SHOULD THE MUNICIPAL CUSTOMERS' TRANSMISSION FACILITIES LOCATED REMOTE FROM THEIR SYSTEMS NOT BE ELIGIBLE FOR A CREDIT?

A. Municipal Customers have ownership rights together with other entities on transmission facilities outside of the Municipal Customers internal systems. These transmission facilities include the COT Project, the Mead-Phoenix Project, the Mead-Adelanto Project, and the IPP Project (Projects). These Projects are major interconnections between California and other regions. The COT Project is a 500 kV line providing an interconnection between the Pacific Northwest and central California.

There are two 500 kV lines making up the ISO-controlled interconnection with the Pacific Northwest (often referred to as the Pacific AC Intertie). The southern terminus of the COT Project connects with the ISO-controlled Pacific AC Intertie at the Tesla and Los Banos substations. The Mead-Phoenix Project is a 500 kV transmission line between Southern Nevada and the Phoenix area of Arizona. The Mead-Adelanto Project is a 500 kV transmission line between Southern Nevada and Southern California. There is no direct connection between these last two Projects and ISO-controlled facilities.

For example, the western termination of the Mead-Adelanto line connects with facilities owned by the Los Angeles Department of Water & Power (LADWP). LADWP has major interconnections with ISO-controlled facilities at Sylmar, Lugo, and Eldorado. The IPP Project consists of a Northern Transmission System (NTS) and a Southern Transmission System (STS). The NTS is comprised of two 345 kV AC transmission lines located in Utah. The STS is a DC transmission line providing an interconnection between Southern California and the NTS in Utah.

There is no direct connection between this Project and ISO-controlled facilities. The southern terminus of the STS at Adelanto connects with facilities owned by the Los Angeles Department of Water & Power (LADWP). The COT, Mead-Phoenix, Mead-Adelanto, and IPP Projects in which the Municipal Customers have ownership shares are not integrated with the ISO-controlled network. The transmission facilities in California

that were in service prior to these Projects, much of which are now under ISO control, operated reliably at their rated capabilities in the absence of the Projects. The new transmission facilities including transmission control devices (e.g. HVDC controls, SVCs) added to the system were required by the Projects to achieve their respective ratings while maintaining adequate reliability and complying with WSCC requirements.

The Projects were built to benefit their owners, not the existing network. For example, the existing (ISO-controlled) network did not receive an increase in its capacity or scheduling capability from the Projects. Under normal operation, energy is scheduled over the Projects based on ownership and contractual agreements and ISO entities do not have ownership or contractual rights to schedule over these Projects.

In my judgment, there is no integrated operation under normal conditions, since the Projects and the ISO-controlled facilities essentially operate independent of one another. That is, while these facilities may be interconnected, they do not operate as part of the integrated system. Under infrequent emergency conditions, all transmission facilities operating in parallel back each other up if there is a disturbance on the system. The transmission grid in California is no exception. Typically, there are mutual assistance agreements in place that delineate the actions that are to be taken, who will take them and to what extent. For example, if there is an outage of the COT Project, the ISO-controlled Pacific AC Intertie provides a specified amount of scheduling capability for the COT

Project participants. Likewise, if an outage occurs on the Pacific AC Intertie, the COT Project will provide back up support.

However, a transmission credit does not appear reasonable for actions taken under emergency conditions since the benefits accrue to both parties (Municipal Customers and ISO entities) and over time will likely net to zero. Also, these types of events are very infrequent compared to normal operation.

Q. WOULD YOUR CONCLUSIONS CHANGE IF THE MUNICIPAL CUSTOMERS WERE TO BECOME PTOs?

A. Yes, my conclusions would change. If the Municipal Customers were to join the ISO and transfer their portion of the remote transmission facilities to the ISO, the ISO would be in a position to integrate the Municipal Customers' share of the remote facilities with facilities already under ISO control. Consequently, the ISO would be able to schedule over the four Projects in proportion to the Municipal Customers' entitlements. Under this scenario, the Projects and the ISO-controlled facilities would no longer operate independent of one another. The ability to integrate the use of the Municipal Customer's transmission facilities within the ISO-controlled network would allow ISO entities to schedule additional capacity and energy, and possibly off-system ancillary services, a clear benefit to the ISO.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.