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June 16, 2004

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

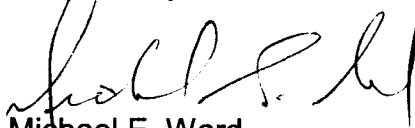
**Re: City of Anaheim and Riverside, California  
Docket Nos. EL03-15-000 and EL03-20-000**

Dear Secretary Salas:

Enclosed for filing please find an original and seven copies of the prepared supplemental testimony and exhibits of Eddie Ledesma on behalf the California Independent System Operator Corporation ("ISO") filed in the above-referenced dockets. Two copies are being provided to the Presiding Judge.

An additional copy of the enclosed prepared cross-answering testimony and exhibits is provided to be time-stamped and returned to our messenger. Thank you for your assistance in this matter.

Respectfully submitted,



Michael E. Ward  
Swidler Berlin Shereff Friedman, LLP  
Counsel for the California  
Independent System Operator  
Corporation

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

City of Anaheim, California	)	Docket Nos. EL03-15-000
	)	
City of Riverside, California	)	EL03-20-000

PREPARED SUPPLEMENTAL DIRECT TESTIMONY OF  
EDDIE C. LEDESMA  
ON BEHALF OF THE  
CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

City of Anaheim, California ) Docket Nos. EL03-15-000  
City of Riverside, California ) EL03-20-000  
)

SUMMARY OF  
PREPARED SUPPLEMENTAL DIRECT TESTIMONY OF  
EDDIE C. LEDESMA  
ON BEHALF OF THE  
CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION

Mr. Ledesma is Manager of Forward Markets for the California ISO. He testifies regarding certain changes that the ISO is implementing in its scheduling procedures regarding the Northern Transmission System ("NTS") and the Southern Transmission System ("STS"). The changes improve scheduling flexibility and reduce stranded transfer capacity on certain segments of the entitlements that the Cities of Anaheim, Azusa, Banning, Riverside, and Vernon transferred to the ISO's Operational Control, including the NTS and STS. In particular, first, by eliminating certain restrictions on exports, the changes make 118 MW of additional export capacity available on the NTS and STS. Second, the changes merge the Mona and IPP scheduling points to form a single scheduling point. Thus, in the event that Anaheim and Riverside do not use their FTRs on this line segment in the Day-Ahead Market, other Market Participants will be able to use the capacity in the Day-Ahead or Hour-Ahead Markets. In addition, the changes enforce contract based transmission line limit requirements of the Los Angeles

Department of Water and Power (“LADWP”) and the Western Area Power Administration (“WAPA”).

The ISO is implementing these revised procedures in response to concerns that became apparent during these proceedings. This constitutes the first phase of revisions in the ISO’s scheduling and congestion management procedures that the ISO hopes will eventually make the entire contractual capacity of the NTS and STS available for use by Market Participants.

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

2 A My name is Eddie C. Ledesma. I am the Manager of Forward Markets  
3 for the California ISO. My business address is 151 Blue Ravine Rd.,  
4 Folsom, California 95630.

5 **Q PLEASE DESCRIBE RESPONSIBILITIES.**

6 A As Manager of Forward Markets, I work under the Director of Market  
7 Operations. I manage the operations and staff responsible for the  
8 design, implementation, and business support of the ISO market  
9 applications.

10 **Q HAVE YOU HELD PREVIOUS POSITIONS AND RESPONSIBILTIES**  
11 **WITH THE ISO?**

12 A Yes. I previously held the positions of Market Design Engineer and  
13 Senior Market Design Engineer; in those positions, I designed,  
14 implemented, and provided business support for the ISO market  
15 applications.

16 **Q PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**  
17 **QUALIFICATIONS.**

1 A I hold a B.S. in Electrical Engineering from Sacramento State  
2 University and an M.S. in Computer Information Systems from the  
3 University of Phoenix.

4 **Q HAVE YOU TESTIFIED PREVIOUSLY BEFORE THIS**  
5 **COMMISSION?**

6 A No.

7 **Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A The purpose of my testimony is to discuss certain changes that the  
9 ISO is implementing in its scheduling procedures regarding the  
10 Northern Transmission System ("NTS") and the Southern  
11 Transmission System ("STS"). In particular, these changes will involve  
12 changes to ISO procedure S-326 and to the ISO's branch groups.

13 **Q HAVE YOU PREVIOUSLY TESTIFIED IN THIS PROCEEDING?**

14 A No.

15 **Q WILL YOU BE USING SPECIALIZED TERMS IN YOUR**  
16 **TESTIMONY?**

17 A Yes. I will be using capitalized terms with the meaning given them in

1 Appendix A, the Definitions Supplement of the ISO Tariff.

2 **Q WHAT PREPARATION HAVE YOU UNDERTAKEN TO**  
3 **FAMILIARIZE YOURSELF WITH PREVIOUS DISCUSSIONS OF THE**  
4 **SCHEDULING OF THE NTS AND STS?**

5 A I have reviewed the prepared testimony of Ziad Alaywan and the  
6 transcript of his examination as well as the deposition of Chris  
7 Mensah-Bonsu.

8 **Q PLEASE SUMMARIZE THE CHANGES IN THE SCHEDULING**  
9 **PROCEDURES.**

10 A The changes improve scheduling flexibility and reduce stranded  
11 transfer capacity on certain segments of the Entitlements that the  
12 Cities of Anaheim and Riverside transferred to the ISO's Operational  
13 Control, including the NTS and STS. In particular, first, by eliminating  
14 certain restrictions on exports, the changes make 118 MW of additional  
15 export capacity available on the NTS and STS. Second, the changes  
16 merge the Mona and IPP scheduling points to form a single Scheduling  
17 Point. Thus, in the event that Anaheim and Riverside do not use their

1 FTRs on this path in the Day-Ahead Market, other Scheduling  
2 Coordinators will be able to use the capacity in the Day-Ahead or  
3 Hour-Ahead Markets. In addition, the changes enforce contract based  
4 transmission line limit requirements of the Los Angeles Department of  
5 Water and Power ("LADWP").

6 **EXPORT MODIFICATIONS**

7 **Q PLEASE DISCUSS THE ISO'S RESTRICTIONS ON EXPORTS.**

8 A As shown in Exhibit CIT-11, Riverside has 142 MW of export-direction  
9 capacity from Adelanto to the Intermountain AC Switchyard, 200 MW  
10 from the Intermountain AC Switchyard to Mona, and 2 MW from the  
11 Intermountain AC Switchyard to Gonder. Anaheim also has export  
12 capacity on these line segments. In order to get from the ISO SP15  
13 Congestion Zone to Adelanto, however, it is necessary to use a portion  
14 of the ISO Controlled Grid other than the NTS or STS, i.e., an  
15 Entitlement that is governed by other contractual arrangements.

16 Mr. Alaywan described in his testimony how the ISO's current  
17 Congestion Management requires the use of radial branch groups. As



1 can be seen from S-326, Exhibit SCE-3, because of the structure of  
2 the branch groups, the use of Riverside's or Anaheim's export capacity  
3 on the NTS and the STS requires the use of Entitlements from the mid-  
4 point of the Victorville-Lugo segment to Adelanto. The use of these  
5 Entitlements is governed by Anaheim's and Riverside's contracts with  
6 LADWP regarding the Mead-Adelanto-Phoenix ("MAP") transmission  
7 lines. Anaheim's contracts prohibit "conjoining" the transmission rights  
8 under the MAP contracts with other Entitlements for scheduling  
9 purposes. The ISO believed that the Riverside contracts were similar.  
10 S-326 therefore prohibited exports at Mona.

11 **Q DO THE RIVERSIDE MAP CONTRACTS IN FACT PROHIBIT**  
12 **CONJOINING THE ENTITLEMENTS?**

13 **A** No. During this proceeding, Riverside representatives indicated that  
14 the ISO was mistaken regarding the prohibition on exports. After the  
15 hearing ended, the ISO had discussions with LADWP and Riverside  
16 about the contracts. They informed the ISO that although the contracts  
17 do not specifically authorize the conjoining of the Entitlements, they do

1 not prohibit it. LADWP indicated that it would not object to an  
2 interpretation that allowed conjunction of the MAP and NTS and STS  
3 Entitlements.

4 **Q HOW DID THE ISO'S NEW UNDERSTANDING OF RIVERSIDE'S**  
5 **MAP RIGHTS AFFECT THE CHANGES IN PROCEDURES?**

6 A As can be seen on Exhibit CIT-11, Riverside has 118 MW of capacity  
7 from Victorville-Lugo midpoint to Adelanto. As a result, the new  
8 procedures make 116 MW of export capacity available from Lugo to  
9 Mona and 2 MW of export capacity available from Lugo to Gonder.

10 **Q BUT ISN'T THIS CAPACITY STILL LESS THAN RIVERSIDE'S**  
11 **TOTAL RIGHTS?**

12 A Yes. At this time, however, the ISO is still constrained by its branch  
13 group model. These changes remain an interim solution. As Mr.  
14 Alaywan explained, the ISO plans to further reform its scheduling and  
15 congestion managements system to reduce the restraints imposed by  
16 the branch group modeling and the radial model.

17 **BRANCH GROUP MODIFICATIONS**

1   **Q     PLEASE DISCUSS THE CHANGES TO THE IPP AND MONA**  
2   **BRANCH GROUPS.**

3   **A     Under the current procedure, Lugo-IPP and Lugo-Mona are separate**  
4   **branch groups. Anaheim and Riverside have a combined import**  
5   **capacity of 460 MW from Mona to the IPP Intermountain AC**  
6   **Switchyard, 43 MW from Gonder to the Intermountain AC Switchyard,**  
7   **534 MW from the Intermountain AC Switchyard to Adelanto, and 874**  
8   **MW from Adelanto to the Victorville-Lugo midpoint. For the reasons**  
9   **Mr. Alaywan described, the ISO assigned 370 MW to the Lugo-IPP**  
10   **branch group. That left only 164 MW between Adelanto and the**  
11   **Intermountain AC Switchyard to be used by the Lugo-Mona and Lugo-**  
12   **Gonder branch groups, to which the ISO assigned capacities of 160**  
13   **MW and 4 MW respectively.**

14           The ISO's Congestion Management system does not allow  
15   unused capacity to be "switched" to a different branch group in either  
16   the Day-Ahead or Hour-Ahead Markets. Therefore, if the 370 MW of  
17   capacity on the Lugo-IPP branch group went unused, it was

1 "stranded."

2 **Q WHAT ACTIONS HAS THE ISO TAKEN TO ADDRESS THIS**  
3 **PROBLEM?**

4 A After the discussions with LADWP, Anaheim and Riverside, the ISO  
5 concluded that it could merge the Mona and IPP Scheduling Points, so  
6 that there will be only one branch group. The total capacity of the  
7 branch group will be 530 MW (reserving 4 MW for schedules from  
8 Gonder), although the status of the IPP generating units can reduce  
9 STS capacity from 534 MW to 222 MW when both IPP generating units  
10 are offline. Anaheim and Riverside will retain their scheduling priority  
11 for their IPP generation through the use of their FTRs.

12 **Q IF ANAHEIM AND RIVERSIDE COMBINED HAVE ONLY 475 MW OF**  
13 **CAPACITY FROM MONA TO IPP, HOW CAN THE CAPACITY OF**  
14 **THE BRANCH GROUP BE 530 MW? IN OTHER WORDS, WHAT IS**  
15 **TO PREVENT A SCHEDULING COORDINATOR FROM**  
16 **SCHEDULING 530 MW WITH AN INPUT AT MONA?**

17 A This involves a number of considerations. First, the ISO's share of the

1 import capacity of the STS is 540 MW with both of the units of the  
2 Intermountain Generation Station online, 383 MW with one unit online,  
3 and 222 MW with both units unavailable. The import capacity of the  
4 NTS from Mona is 475 MW. Because the new Lugo-IPP/Mona Branch  
5 Group includes both the NTS and STS components, the total capacity  
6 ordinarily would be limited physically to 475 MW. If both units are  
7 operating, however, Anaheim and Riverside will receive 370 MW of  
8 Energy from the IPP generation units, and Anaheim and Riverside  
9 have FTRs that they can use to schedule that Energy. Transmission of  
10 that Energy does not require use of the NTS component of the Branch  
11 Group.

12 In other words, during the period that Anaheim and Riverside  
13 possess FTRs, the actual capacity available on the NTS portion of the  
14 Branch Group should never exceed 475 MW because Anaheim and  
15 Riverside must take the IPP Energy. When the IPP generating units  
16 are available, Anaheim's and Riverside's exercise of FTRs in the Day-  
17 Ahead Market should reduce the 540 MW total capacity below 475

1 MW. When the IPP generating units are unavailable, the total capacity  
2 will be either 383 MW or 222 MW. LADWP agrees with this  
3 methodology and will, as the actual path manager, assure that no  
4 section of the NTS or STS is overscheduled.

5 **Q WHAT IF ANAHEIM OR RIVERSIDE SOLD THE ENERGY TO**  
6 **ANOTHER PARTY? THE OTHER PARTY WOULDN'T HAVE THE**  
7 **SCHEDULING PRIORITY, SO WOULDN'T THAT CREATE A**  
8 **PROBLEM?**

9 A As Mr. Alaywan testified, Anaheim or Riverside could arrange an Inter-  
10 Scheduling Coordinator Trade, in which case Anaheim or Riverside  
11 would still Schedule the Energy using their FTRs. Such sales would  
12 not affect the scheduling procedures.

13 With regard to other sales, Mr. Alaywan explained that, under  
14 ISO procedures, with appropriate notice, another party could arrange  
15 to input Energy from the Intermountain Generating Station. It is my  
16 understanding, however, that under the IPP contracts, transfers of  
17 Energy from the Intermountain Generating Units cannot take place at

1 the IPP substation, but only at the LADWP Control Area boundary.

2 Therefore, Anaheim or Riverside would still schedule the transaction  
3 on the Lugo-IPP/Mona Branch Group.

4 **Q MR. ALAYWAN TESTIFIED THAT MERGING THE BRANCH**  
5 **GROUPS WOULD LIMIT THE CAPACITY AVAILABLE ON THE NTS**  
6 **AND STS. WHY IS THAT NOT THE RESULT HERE?**

7 **A** As I discussed above, the capacity of the combined transmission lines  
8 is limited to the lowest capacity of each transmission line. Therefore, it  
9 is indeed correct that, under typical circumstances, merging all three  
10 Branch Groups (Lugo-Gonder, Lugo-Mona, and Lugo-IPP) would have  
11 limited the capacity to 43 MW, and merging Lugo-Mona and Lugo-IPP  
12 would have limited the capacity to 475 MW. One way to avoid this is  
13 manual work-arounds, but such work-arounds are not generally a  
14 practical solution. In this case, after the discussions with Anaheim,  
15 Riverside, and LADWP, the ISO determined Anaheim's and  
16 Riverside's FTRs would sufficiently control the distribution of the  
17 injection of Energy to the system that the Mona and IPP (but not

1 Gonder) Scheduling Points could be merged.

2 **Q IF THE ISO WAS ABLE TO COME UP WITH THESE SOLUTIONS**  
3 **NOW, WHY DID IT NOT DO SO EARLIER?**

4 **A** There are a couple of factors. First, as Ms. Le Vine testified, the ISO  
5 was concerned with the prevention of gaming. Establishing a separate  
6 Lugo-IPP Branch Group, with limited scheduling rights, provided  
7 additional transparency that reduced an opportunity for gaming. The  
8 ISO did not anticipate that this decision would engender the  
9 controversy that has arisen in this proceeding.

10 Second, as Mr. Alaywan testified, the ISO was concerned that a  
11 merged branch group would be difficult to manage because the ISO  
12 could not control the redistribution of OTC when there is a curtailment.  
13 The ISO now believes in light of the control it has through the FTRs  
14 discussed above, in combination with the operational experience it has  
15 gained over the past 18 months working with LADWP scheduling these  
16 paths, that this will not present a significant issue.

17 Finally, as Mr. Alaywan also testified, the original models were



1           considered interim, until the ISO moved forward with its market  
2           redesign, which the ISO at the time expected to implement much  
3           sooner than has been the case. In light of the Commission's  
4           directives, the primary focus of the ISO's marketing and scheduling  
5           operations has been on market redesign. We address other problems  
6           as they come to our attention. In the case of the NTS and STS,  
7           although Anaheim and Riverside expressed concerns when the  
8           procedures were developed, there had been no indication of problems  
9           with the interim procedures in practice. Until this proceeding, no one  
10          had raised any complaints about the operation of the models. There  
11          was no significant Congestion on the branch group, which means that  
12          no one who wanted to Schedule on the branch group was being  
13          denied the opportunity. The problems that were brought forward in this  
14          proceeding simply were not on the radar screen of the ISO.

15          **COUNTER SCHEDULING RESTRICTIONS**

16          **Q     YOU INDICATED EARLIER THAT THE CHANGES ALSO ENFORCE**  
17          **CONTRACT BASED TRANSMISSION LINE LIMIT REQUIREMENTS**

1           **OF THE LADWP AND WAPA. PLEASE EXPLAIN.**

2    A       Some of the LADWP and WAPA contracts prohibit netting schedules  
3           with counter flows. In other words, they do not allow an entity to  
4           submit schedules that, when viewed individually, exceed the import or  
5           export capacity under the contract. For example, if an entity has 200  
6           MW of export capacity and 100 MW of import capacity, it cannot  
7           schedule 300 MW of exports and 100 MW of imports based on a net  
8           export of 200 MW. To enforce these limitations, under the new  
9           scheduling procedures each Scheduling Point, with the exception of  
10          the Lugo-Market Place branch group, will have a separate branch  
11          group for import and one for exports, each with a corresponding  
12          capacity. Exhibit No. ISO-13 shows the branch groups and their  
13          capacity under the new network model.

14       **IMPLEMENTATION**

15    **Q       WHAT IS THE ISO'S SCHEDULE FOR IMPLEMENTING THESE**  
16       **CHANGES?**

17    A       Implementation will require approximately six to eight weeks for

1 modeling the network, testing it, releasing it to production, providing  
2 appropriate market notices, conducting a stakeholders meeting to  
3 involve stakeholders in the successful implementation, and training for  
4 appropriate ISO personnel.

5 **Q MR. ALAYWAN HAD TESTIFIED REGARDING MORE EXTENSIVE**  
6 **CHANGES TO THE ISO'S MODELING PROCESS AND**  
7 **CONGESTION MANAGEMENT, WHICH WOULD INVOLVE A**  
8 **STAKEHOLDER PROCESS. YOU HAVE DESCRIBED A FAIRLY**  
9 **MODEST CHANGE THAT WAS WORKED OUT BETWEEN A**  
10 **LIMITED NUMBER OF PARTIES. CAN YOU RECONCILE THIS**  
11 **WITH MR. ALAYWAN'S TESTIMONY?**

12 **A** We consider the current changes to be "Step 1" changes, which are  
13 intended to address the most easily resolved issues that surfaced in  
14 this proceeding. From here, the current plan is to move on to Step 2,  
15 which would still employ a radial model, but a more detailed model. It  
16 would not be based on branch groups, but would have the capability of  
17 point-to-point-like scheduling in addition to providing alternative paths

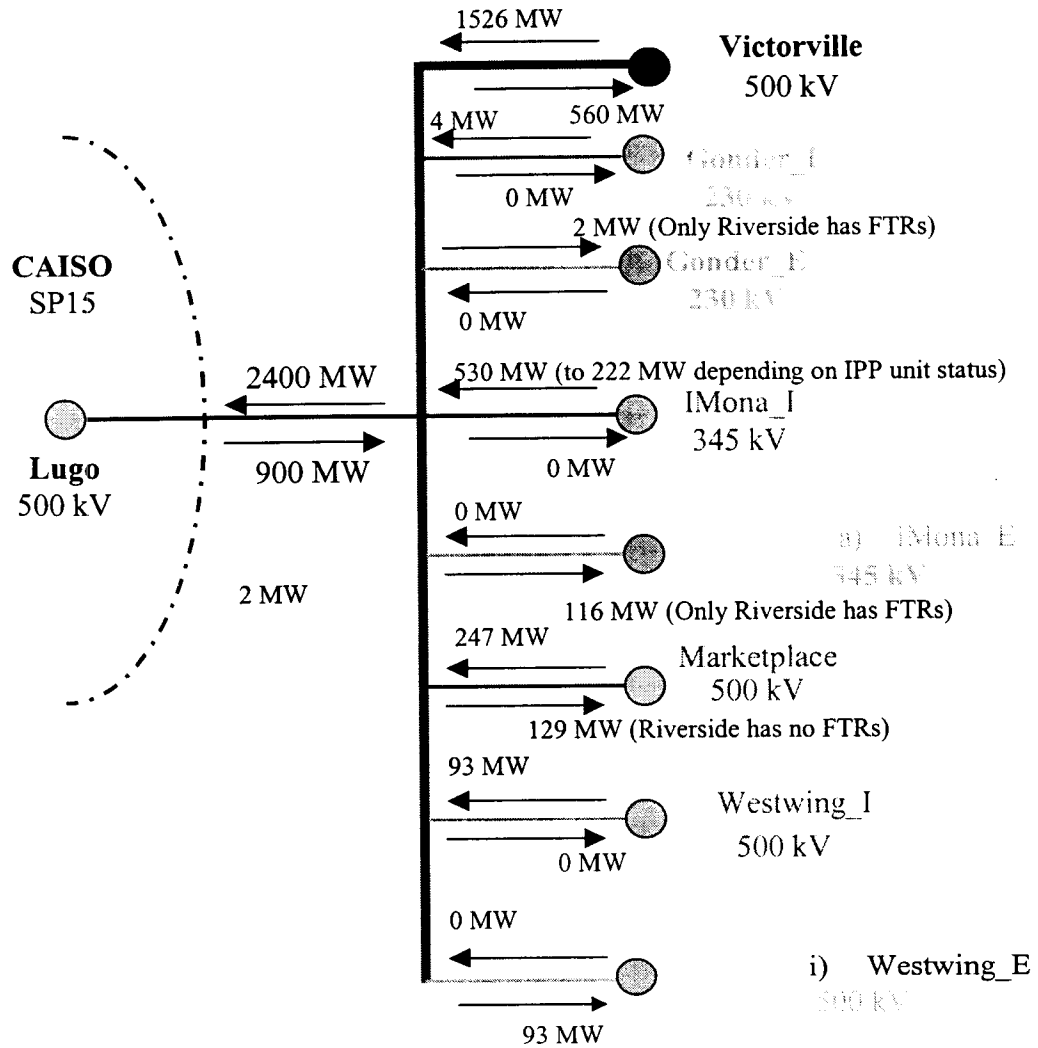
1           for scheduling in and out of SP15 to accommodate certain emergency  
2           situations. Step 3 would abandon the radial model and would model  
3           the Entitlements as a loop network with point-to-point capability that is  
4           consistent with physical operational practices. Under Steps 2 and 3,  
5           the ISO would hope that the entire contractual capacity of the  
6           Entitlements could be scheduled.

7   **Q    THANK YOU. I HAVE NO MORE QUESTIONS.**

8



**Step 1 New PTO contract rights design**

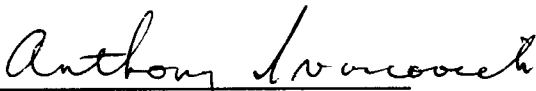


**Note: Victorville is an LADWP Scheduling Point.**

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing documents upon each person designated on the official service list compiled by the Secretary in these 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 at Folsom, CA on this 16<sup>th</sup> day of June, 2004.

  
Anthony Ivancovich *AI*