UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	)))	Docket No. ER00-2019-006, ER01-819-002, and ER03-608-000

PREPARED REBUTTAL TESTIMONY OF DEBORAH A. LE VINE ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

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SUMMARY OF PREPARED REBUTTAL TESTIMONY OF DEBORAH A. LE VINE ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Ms. Le Vine responds to the Answering and Cross-Answering Testimony of Intervenors and Commission Trial Staff. Ms. Le Vine limits her testimony to circumstances where it is necessary to provide factual information in rebuttal, to establish or clarify the ISO's position, or to respond to incorrect or misleading statements. She does not address legal and policy arguments that will be addressed in brief. Ms. Le Vine discusses whether Amendment No. 27 constituted a compromise; alleged discrimination against facilities of New Participating TOs; the costs and benefits of participation in the ISO; allocation and accounting issues regarding Firm Transmission Rights ("FTRs") and Usage Charges; the High/Low Voltage Split; and the definition of Transmission Revenue Credit.

Ms. Le Vine notes that, although Amendment No. 27 was not a settlement, the majority of the ISO Governing Board considered it a balance among competing interests. Of particular importance, it had the support of the end-user classes.

Ms. Le Vine agrees that the ISO's proposal does treat different types of transmission facilities differently, but explains that the impact of that treatment does not necessarily discriminate against New Participating Transmissions Owners or their customers. Moreover, the temporary disparate impacts of the differing treatment of types of facilities is justified by the transition to a Grid-wide Access Charge and the need for new transmission facilities. She also rebuts assertions that charges for which New Participating TOs are not held harmless are substantial and explains how the Transition Charge ensures that San Diego Gas & Electric Company shares the cost shift burdens that all Original Participating TOs were intended to share.

Ms. Le Vine expresses the ISO's agreement with recommendations regarding the definition of Transmission Revenue Credit offered by a witness for Southern California Edison Company, and joins arguments made by that witness against recommendations for netting Usage Charge revenues against Usage Charges. She disagrees with arguments by other parties that the ISO Tariff should set forth a specific, transparent, methodology for the determination of the allocation of FTRs to New Participating TOs. Ms. Le Vine explains that it would be difficult, if not impossible, to set forth a methodology that would accommodate them all. She points out that interested parties will be able to protest the allocation when it comes before the Commission. Ms. Le Vine also explains that other issues regarding

Existing Contracts that are raised by witnesses for the State Water Project are not related to the transmission Access Charge.

Ms. Le Vine indicates that the ISO does not object to recommendations that the ISO's methodology for assigning facilities as High Voltage or Low Voltage be included in the ISO Tariff. She states the ISO's opposition, however, to Staff's proposal for allocating the costs of transformers, and adopts the reasoning of Pacific Gas and Electric Company's witness in that regard. She also states the ISO's opposition to other proposals that essentially imply functionality tests. Such tests would be too complex to apply.

Finally, Ms. Le Vine opposes Staff's proposed revision of the definition of Transmission Revenue Credit to reflect the Commission's Opinion No. 458 because the relevent aspect of the definition of Transmission Revenue Credit is not involved in this proceeding.

Q1. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A1. My name is Deborah A. Le Vine, and I am the Director of Contracts for the California Independent System Operator ("ISO"). My business address is 151 Blue Ravine Road, Folsom, California 95630.

Q2. ARE YOU THE DEBORAH A. LE VINE THAT HAS PREVIOUSLY TESTIFIED IN THIS PROCEEDING?

A2. Yes I am.

Q3. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A3. The purpose of my testimony is to respond to the Answering and Cross-Answering Testimony of Intervenors and Commission Trial Staff ("Staff").

Q4. DO YOU INTEND TO ADDRESS ALL ISSUES RAISED IN THE ANSWERING AND CROSS-ANSWERING TESTIMONY OF OTHER PARTIES IN THIS PROCEEDING?

A4. No. A number of those issues are addressed in the Supplemental Testimony of Lonnie Rush and in the Rebuttal Testimony of Keith Casey and Johannes Pfeifenberger. In addition, the ISO does not intend to address through testimony a number of issues that have been raised in Answering and Cross-Answering Testimony that pertain to policy and legal issues.

One example involves the background I provided in my Direct Testimony regarding Amendment No. 27. I described the ISO's interpretation of its responsibilities under California legislation regarding the development of the transmission Access Charge. This interpretation has

been challenged. I think we can leave it to the lawyers to debate the meaning of the legislation and whether it has any relevance to the issues in this proceeding.

Similarly, while Mr. Pfeifenberger discusses the costs and the benefits that derive from the ISO's proposal, Dr. Casey rebuts criticisms of his analysis of phantom Congestion, and I previously explained that the proposal filed by the ISO was developed by the End-Use Customers, there is little more that a witness can contribute to a debate about the appropriate level of a cost cap. The ISO will thus address the arguments raised on this issue in answering and cross-answering testimony in its brief.

Another example is the positions set forth by various parties on whether New Participating TOs should receive FTRs associated with the Converted Rights or should be required to purchase FTRs in the auction and on the period of time during which New Participating TOs should receive FTRs. In fact, Mr. Brozo, on behalf of the Transmission Agency of Northern California ("TANC"), appears to have gone beyond the ISO's proposal and argued that all Load serving entities should be given FTRs associated with their transmission facilities and Entitlements—essentially attempting to preempt the ISO's Market Redesign efforts through the Access Charge proceeding. See Exh. Nos. TNC-1 at 33:3–4, TNC-2 at 22:11–23:4. There is little more that witnesses can contribute to this debate; it is a policy issue best left for the briefs.

Other than a general observation about the need to focus on the real issues in this proceeding, I would like to limit my testimony to circumstances where I believe it is necessary to provide factual information in rebuttal, to establish or clarify the ISO's position, or to respond to incorrect or misleading statements. The fact that the ISO has decided not to respond to a particular piece of testimony, however, should not be taken as agreement. The ISO will fully address all legal and policy arguments in its brief.

Q5. WHAT GENERAL OBSERVATION DID YOU WISH TO MAKE?

A5. Although there are many considerations that guided the development of Amendment No. 27, the ISO intended by its proposal to ultimately achieve a single grid-wide High Voltage Access Charge and to attract additional Participating Transmission Owners. The first provides nondiscriminatory pricing of access over the long run, and the second promotes the availability of more transmission for the markets at non-pancaked rates, a reduction of Congestion costs, increased competition and streamlined transmission operations due to improved "seams".

In much of the testimony about the ISO's proposals to achieve these goals, however, parties are focusing excessively on semantics and legalisms at the expense of the real issues presented by the plan to achieve these results. For example, the simple fact is that because the ISO proposes a change from a situation where each Transmission Owner's rate payers paid rates based on that Transmission Owner's Transmission Revenue Requirement to a situation where all the Participating TOs' rate payers pay

the same rate based on a combined Transmission Revenue Requirement for High Voltage Transmission Facilities, some rate payers will bear a greater portion of the combined cost than they did previously and some will bear less. That simple fact remains true regardless of whether you call it a cost-shift or a nondiscriminatory distribution of the costs of the combined system. The real issue is not what you call this fact, but whether it is just and reasonable to limit, for a period of time, the additional expense that some parties must bear.

A related matter involves the fact that, because the high voltage transmission facilities of the various Transmission Owners in California were built at various times, those that built early have lower costs today, but their facilities may need more additions and upgrades. In contrast, those Transmission Owners that built transmission facilities in the last ten years have high cost transmission but may need little or no transmission additions and upgrades. Both sets of transmission system are needed to provide regional transmission service by the ISO, and there is no opposition to their inclusion in the eventual single ISO Grid-wide High Voltage Access Charge. Nonetheless, the differences between these facilities inevitably raises a number of issues regarding their treatment, including possible incentives to motivate the construction of more transmission and the improvement of the reliability of the ISO Control Area, such as the Access Charge proposal to immediately include the cost of all New High Voltage Facilities in the ISO Grid-wide component of the Access Charge. Whether this proposal is just

and reasonable should not be argued by accusations of discrimination, but by an analysis of whether the benefits justify the policy, which the ISO believes they do.

Another example involves what both the ISO and the Commission have called phantom Congestion. Arguments about whether the ISO has a legal right to use the unscheduled capacity represented by Existing Contracts ignores the underlying issue. The ISO's forward scheduling shows Congestion because of the Existing Rights when there would be no Congestion if the actual planned schedules were known and the capacity were available to the ISO in the forward markets. That Congestion imposes costs on Market Participants. If the holder of the Existing Rights became a Participating TO, phantom Congestion and its associated costs would be mitigated because the Existing Rights holder would be scheduling in accordance with the ISO timelines. Whether the ISO is "reserving" the capacity or simply does not have any right to use it does not change that fact. This is not to say that the ISO agrees with the position that it does not have the right to provide service over unused capacity reserved for Existing Rights, only that it is not necessary to address this issue as part of the evaluation of the Access Charge proposal. For the purpose of evaluating the ISO's transmission Access Charge proposal, the issue is not the legal rights of the ISO, but the benefits that would result if the capacity represented by the Existing Rights were under the ISO's Operational Control and scheduled in accordance with the ISO scheduling timelines.

When the issues in this proceeding are examined free of tangential arguments, they are mostly straightforward. Nonetheless, some of the parties may disagree about my characterization of their arguments, believing that the way they are cast has legal or policy significance. In any event, the response is more appropriately handled in brief than by a witness.

Q6. WHAT AREAS DO YOU WISH TO COVER IN YOUR TESTIMONY?

A6. I intend to discuss where Amendment No. 27 constituted a compromise; alleged discrimination against facilities of New Participating TOs; costs and benefits of participation in the ISO; allocation and accounting issues regarding Firm Transmission Rights ("FTRs") and Usage Charges; the High/Low Voltage Split; and the definition of Transmission Revenue Credit.

Q7. AS YOU TESTIFY, WILL YOU BE USING ANY SPECIALIZED TERMS?

A7. Yes. I will be using terms defined in the Master Definitions Supplement, Appendix A of the ISO Tariff.

I. BACKGROUND OF AMENDMENT NO. 27

Q8. WHAT DID YOU WISH TO DISCUSS REGARDING AMENDMENT NO. 27?

A8. A number of parties have argued that Amendment No. 27 should not be considered a compromise, citing (1) the fact that it was not a settlement (Exh. No. VER-13 at 2:1–3:14) and (2) the votes against Amendment No. 27 by the ISO Governing Board members representing San Diego Gas & Electric Company ("SDG&E") and four municipal utilities (Exh. Nos. TNC-21 at 5:13–16 & TNC-1 at 9:6–20). Once again, I think the facts are more important than how one defines "compromise." These parties are correct that

Amendment No. 27 was not a settlement, it was a unilateral filing by the ISO based on a ISO Governing Board vote that included 16 votes for the compromise proposal, 5 votes against it, and 1 abstention. The abstention was a power marketer representative. Exhibit No. ISO-2 provides the vote of each ISO Governing Board member.

As I described in my direct testimony, however, the majority of the ISO Governing Board considered Amendment No. 27 a *balance* among competing interests. Several groups of stakeholders compromised their interests in order to reach a balance. For example, the Cross-Answering Testimony of Mr. Cuillier on behalf of Southern California Edison Company ("Edison") and of Mr. Weingart on behalf of Pacific Gas and Electric Company ("PG&E") describe the compromises made by the Investor Owned Utilities. Exh. Nos. SCE-13 at 3:19–4:10, PGE-4 at 4:23–5:29. I think it is particularly important that the final proposal was unanimously proposed and supported by the representatives of the End-User Classes. These representatives voted for a proposal that would have the effect of increasing the transmission rates paid by many of their members based on the belief that by attracting additional Participating TO and using the grid more efficiently these expenses would be more than offset by lower overall Energy costs.

Q9. WHAT WERE THE END-USER CLASSES?

A9. As I have explained in my direct testimony, Amendment No. 27 was based on the "End-User's compromise proposal" which, as shown in Exhibit ISO-2,

was supported by the votes of all end-user representatives present at the meeting. The ISO Governing Board at the time of the Access Charge vote was made up of twelve End-User representatives which included representation for commercial, industrial, residential and agricultural user groups, public interest groups, end-users at large and non-market participants. Significantly, governmental entities and municipal utilities as well as Investor Owned Utilities serve these End User classes. Thus, the representative of the municipal utilities may not have voted for the proposal; however, representatives of groups that included their customers did.

In this regard, I think it is particularly appropriate to consider the contemporaneous remarks of the Utility Reform Network ("TURN"), an end-user participant in the negotiations, that were filed with the Commission:

> It would be but small exaggeration to characterize the negotiations which lead to the instant filing as the California equivalent of the Middle East peace talks. The long-held and deeply-rooted animosities between the California [investor-owned utilities ("IOUs")] and the [governmental entities ("GEs")] reach back into early 20th Century history, before most of the current combatants were even born. To find compromise in this milieu appeared at times to be a fool's errand, yet an uneasy and delicate compromise has at last been reached.
>
> All voices are not yet unanimous, however. This Commission will hear from at least some of the GEs that the pot is not yet sweet enough, and that joining Cal ISO would be a money-losing proposition from their perspective. Similarly, the Commission may hear from one or more of the IOUs that this proposal imposes too great a cost shift burden on their customers. These extremist posturings must be taken with a grain of salt. If anything is certain, it is the observation that getting the entire California electric market playing by the same set of rules will result in increased efficiencies and cost

> savings that can be SHARED by both the IOUs and the GEs. But if there are net gains to be made, how can it be that both sides are made worse off by the compromise??? The answer is simple—they are NOT worse off. Neither side came away with as large a share of the net benefits as they would have liked. People are unhappy, perhaps, but they are NOT worse off. The end-user group that put forward the ultimate compromise, of which TURN's counsel was an active member, carefully weighed the potential benefits to IOU customers of broader ISO participation and concluded that the promise of future market benefits was worth the risk of the more certain cost shift in transmission fixed cost responsibility. Since the IOU customers (and not the company's shareholders) are offering to pay up to an additional $72 million per year in transmission costs if the GEs join, it is difficult to see how the GEs, at least collectively, could be worse off. In fact, this compromise is as close to a "win-win" scenario as this Commission is ever apt to see in matters of this much complexity and contentiousness.

II. DISCRIMINATION AGAINST TRANSMISSION FACILITIES OF NEW PARTICIPATING TOS.

Q10. WHAT ARGUMENTS HAVE PARTIES MADE ABOUT DISCRIMINATION AGAINST THE TRANSMISSION FACILITIES OF NEW PARTICIPATING TOS?

A10. Witnesses for New Participating TOs and potential New Participating TOs have contended that Amendments No. 27 and No. 49 discriminate against the transmission facilities of New Participating TOs in three ways: First, by including New Transmission Facilities immediately in the ISO Grid-wide component of the Access Charge but not the Existing High Voltage Facilities of New Participating TOs (see, e.g., Exh. Nos. TNC-1 at 18:1, VER-13 at 19:9–21:14); second, by excluding New High Voltage Facilities from the calculation of the Transition Charge (see, e.g., Exh. Nos. MID-1 at 28:19–

29:4, TNC-1 at 19:1–22, VER-1 at 32:18–33:1, VER-13 at 21:21–23:11); and third, through the cost-shift cap (see, e.g., Exh. Nos. SC-3 at 18:19–19:12; TNC-1 at 14:4–17:13, TNC-21 at 11:16–20:29).

Q11. HOW DO YOU RESPOND?

A11. The issue is not really about discrimination against facilities. Ratemaking is not intended to protect transmission facilities against discrimination. I realize that witnesses may just be using this phrase as short-hand, but such a short hand avoids the real questions: how are the facilities treated differently; what is the rate and revenue impact of treating facilities differently; and is the differential treatment justified?

Q12. ON THAT BASIS, LET'S START WITH THE IMMEDIATE INCLUSION OF NEW HIGH VOLTAGE FACILITIES IN THE ISO GRID-WIDE COMPONENT OF THE HIGH VOLTAGE ACCESS CHARGE.

A12. The High Voltage Access Charge distinguishes between facilities placed in service prior to a Transmission Owner becoming a Participating TO, and those placed in service thereafter. The costs of the former are recovered through that portion of the Transmission Revenue Requirement that undergoes the transition from a TAC Area component of the High Voltage Access Charge to a Grid-Wide component of the High Voltage Access Charge. In 2003, this split is 30% ISO Grid-wide and 70% TAC Area. In contrast, the costs of New High Voltage Facilities (i.e., Participating TO's newly-constructed transmission facilities, additions and upgrades) are recovered immediately through the ISO Grid-wide component of the High

Voltage Access Charge. As discussed previously, this immediate incorporation into the ISO Grid-wide component facilitates additions and upgrades to Existing High Voltage Facilities and encourages New High Voltage Facilities to be built. This treatment of New High Voltage Facilities however, does not distinguish between the New High Voltage Facilities of New Participating TOs and those of the Original Participating TOs. It applies equally to both. In addition, whether New Participating TOs plan new transmission investments, as some witnesses assert they do not, does not factor into the distinction. A party cannot fairly claim discrimination based on a decision not to engage in a course of conduct it is free to undertake.

The next issued I mentioned was impacts. The distinction made between New and Existing High Voltage Facilities in connection with the Grid-wide component does not affect the amount of the costs of the transmission facilities that the Participating TOs recover. The revenue requirements of both Existing and New High Voltage Facilities are fully recovered through the High Voltage Access Charge. This distinction does affect rates—during the transition period only—but not in a manner that treats New Participating TOs differently from Original Participating TOs. Rather, it affects the rates of one TAC Area differently from those of another TAC Area. For example, suppose an Original Participating TO in the Northern TAC Area builds a New High Voltage Facility. If the New High Voltage Facility is immediately included entirely in the ISO Grid-Wide component of the High Voltage Access Charge, the High Voltage Access

Charges for all Participating TOs will increase by the same amount. If the New High Voltage Facility were not immediately included in the ISO Grid-Wide component of the High Voltage Access Charge and instead were to be included in the TAC Area component, the High Voltage Access Charges of both New Participating TOs and Original Participating TOs in the Northern TAC Area would increase by *the same*, but a greater, amount; similarly, the High Voltage Access Charges of both New Participating TOs and Original Participating TOs in the other two TAC Areas would increase by *the same*, but a lesser, amount. This would be due to the cost allocation during transition that was previously discussed, currently—a 30%/70% split. Thus, while there is different rate treatment, it is not between New and Original Participating TOs. Moreover, during the Transition Period, if a New Participating TO has High Voltage Access Charge costs that are greater than it would have paid as a utility-specific rate, then the New Participating TO is held harmless from any such increase through the Transition Charge.

Finally, there are good reasons for the distinction between Existing and New High Voltage Facilities. The TAC Area rates exist solely to facilitate a transition to the ISO Grid-wide rate. The inclusion of New High Voltage Facilities in the TAC Area rates would inflate that portion of the rate, slowing the transition. It would also potentially reduce the effectiveness of the transition by magnifying the increase that would occur at the end of the transition period.

Moreover, as explained in greater detail by Mr. Cuillier on behalf of Edison and Mr. Weingart on behalf of PG&E (see Exh. Nos. PGE-4 at 22:14–23:3, SCE-13 at 10:17–11:11), existing facilities were planned and built specifically with the needs of a particular Transmission Owner in mind and its relationship with surrounding Transmission Owners. Today, New High Voltage Facilities are planned in accordance with ISO procedures, to serve the needs of the entire ISO Control Area.

Q13. WHAT ABOUT EXCLUDING NEW HIGH VOLTAGE FACILITIES FROM THE CALCULATION OF THE TRANSITION CHARGE?

A13. The distinctions between the facilities are the same as in the previous discussion. The impacts and reasons for the different treatment of New High Voltage Facilities under Amendments 27 and 49 are discussed further in the testimony of Mr. Pfeifenberger.

Q14. WHAT ABOUT ALLEGED DISCRIMINATION THROUGH THE COST CAP?

A14. The alleged distinction here is between the newer, and therefore costlier, transmission facilities of the New Participating TOs and the older, and therefore less expensive (and more depreciated) facilities of the Original Participating TOs. The contention apparently is that once that cost cap is reached, the New Participating TOs will need to recover a portion of their Transmission Revenue Requirement from their native Load (retail rate payers), while the Original Participating TOs will not, and therefore the cost cap discriminates against the New Participating TO's transmission facilities. (See, e.g., Exh. No. VER-26 at 26:1–30:4)

The actual distinction is not much different. Only the cost of the facilities, not the age, is relevant. In addition, it is only those New Participating TOs whose Transmission Revenue Requirement is greater than average (proportional to Gross Load) that will be affected by the cost cap.

Q15. WHAT ARE THE RATE AND REVENUE IMPACTS OF THE DISTINCTION?

A15. As I have noted, if the cost cap is reached, New Participating TOs with a greater than average Transmission Revenue Requirement will no longer recover its entire Transmission Revenue Requirement from the ISO. Since cost shifts limits only affect the Transition Charge, there will be no impact on the ISO's Access Charge for any customer. The impact on the native Load of the affected Participating TOs is hard to discern. As shown in my Direct Testimony and that of Mr. Pfeifenberger, New Participating TOs with greater than average Transmission Revenue Requirements enjoy a considerable reduction in transmission costs upon becoming a Participating TO. If this reduction is passed on to their native Load, the native Load could be paying much lower transmission rates than under utility-specific rates. If and when the cost shift limit is reached, the benefits that the New Participating TOs' customers would enjoy from a pass-through of the savings would be smaller than without the cost cap, but still significant (i.e., up to $72 million annually among all New Participating TOs). Data requests and testimony by Edison and PG&E, however, have called into question whether those savings have been passed on to the native Load of the New Participating TOs. See Exh.

No. SCE-1 at 14:3–5; Responses to PGE-ANA-17, PGE-BAN-17 & PGE-RIV-17. I therefore have no basis to speculate about the affect of the cost cap on the native Load of New Participating TOs. Also, because I have no data upon which to evaluate the plans of potential New Participating TOs, I cannot evaluate the impact on their native Loads.

Q16. IS THIS DISTINCTION JUSTIFIED?

A16. There is no question that during the transition period the cost cap treats New Participating TOs with greater than average Transmission Revenue Requirements (proportional to Gross Load) differently from the Original Participating TOs, and New Participating TOs with less than average Transmission Revenue Requirements (proportional to Gross Load) differently from other New Participating TOs and the Original Participating TOs. I have to accept the Commission's statement, however, that cost caps may be justified. If that is correct, then the question is not whether the cost cap treats parties differently, but whether the particular costs and benefits involved in Amendment No. 27 justify a cost cap. As I have noted, the ISO has previously presented its evidence on this issue and will present its arguments in brief.

Q17. DO YOU HAVE ANY FINAL COMMENTS ABOUT THE DISCRIMINATION ISSUES?

A17. Yes. I think much of this discussion about discrimination ignores the actual origin of the transition and the cost cap. The potential New Participating TOs fail to consider that it is their native Load that pays these transmission costs

today, the same as the native Load of the New and Original Participating TOs prior to their joining the ISO. No one asserts that those circumstances constituted discrimination. It has always been accepted that it is the responsibility of the retail rate payers to pay a portion of the Transmission Owner's transmission revenue requirement that reflected service to native Load. As part of California's movement to a unified transmission grid, the Original Participating TOs have agreed to accept a portion of the Transmission Revenue Requirement responsibility of the native Load of New Participating TOs. The cost-shift cap merely established a limit, which was defined by the rate payers of the Original and New Participating TOs as the maximum cost above their current Transmission Revenue Requirement burden that they would be willing to bear during the transition to a single rate for the ISO Controlled Grid. As Mr. Pfeifenberger's testimony shows, it is the customers of the New Participating TO's that are enjoying the most immediate financial benefits from the ISO's transmission Access Charge proposal, and claims of discrimination must therefore ring hollow.

III. COSTS AND BENEFITS OF PARTICIPATION IN ISO

Q18. WHAT TESTIMONY DO YOU WISH TO DISCUSS REGARDING THE COSTS AND BENEFITS OF PARTICIPATION IN THE ISO?

A18. I would like to address statements regarding the benefits of increased ISO participating made by Messrs. Hansen, Weingart, and Jones on behalf of Edison, PG&E, and the California Department of Water Resources – State

Water Project ("SWP"), respectively, as well as certain contentions made by Mr. Brozo on behalf of TANC and by Mr. Lucero on behalf of SDG&E.

Q19. PLEASE START WITH MESSRS. HANSEN, WEINGART AND JONES.

A19. These witnesses assert that the ISO has not identified any benefits from the addition of New Participating TOs. See Exh. No. SCE-5 at 38:8-39:11; Exh. No. PGE-1 at 21:3-10; Exh. SWP-72 at 11:12-14. Although the ISO did not previously have concrete data supported such benefits, such analysis has recently become available.

While the transmission increase in the California-Oregon Intertie and Nevada-Oregon Border interties was immediate upon the City of Vernon becoming a New Participating TO, the increase in new transmission paths outside the ISO Control Area was not accomplished until the Southern Cities became New Participating TOs on January 1, 2003. With the implementation of the new transmission paths, the ISO added five new Branch Groups to the ISO Controlled Grid. As demonstrated in Exhibit No. ISO-34, setting aside the Lugo-Gonder Branch Group that is only 4 MW, three of the remaining paths had usage by non-New Participating TO Scheduling Coordinators. Analyzing from January 1, 2003 through September 28, 2003, the total MWh scheduled by non-New Participating TO Scheduling Coordinators on the Lugo-Mona path was 571,515 MWh and on the Lugo-Westwing path was 212,884 MWh. These two paths combined are the equivalent of a new 120 MW Generating Unit serving the ISO Control Area. Moreover, these results demonstrate that efficiencies can be achieved by giving FTRs to the New

Participating TOs and absent scheduling by the New Participating TOs in the Day-Ahead Market the transmission is available to all Scheduling Coordinators in the Day-Ahead Market.

Q20. WHAT CONTENTIONS WERE MADE BY MR. BROZO?

A20. Mr. Brozo takes issue with Mr. Pfeifenberger's statement that customers of a New Participating TO are held harmless from cost shifts, citing increased costs from Neutrality Charges, Unaccounted for Energy, and the Grid Operations Charge. Exh. Nos. TNC-1 at 24:12–19, TNC-6 at 5-7 (Pfeifenberger deposition at 34:13–36:10). I also discussed holding the customers of a New Participating TO harmless in my testimony. See Exh. No. ISO-1 at 60:14–61:14. However, Mr. Brozo mischaracterizes this testimony.

Mr. Pfeifenberger never stated New Participating TOs bore no new costs. He simply stated that the customers of New Participating TOs were held harmless from cost shifts *due to the transmission Access Charge.* I was even more specific. I stated in my direct testimony that the New Participating TOs were *not* held harmless from market charges that every Market Participant pays on a comparable basis, mentioning specifically Unaccounted for Energy and Neutrality. See Exh. No. ISO-1 at 61:7–14.

The fact is that these costs do not significantly detract from the cost-shift benefit enjoyed by New Participating TOs. A recent analysis by the ISO showed that the charge for Unaccounted for Energy, Neutrality, and the Grid Operations Charge can vary among Scheduling Coordinators depending

upon a number of factors including use of the markets, metering and the zone the Scheduling Coordinator serves. During the first half of 2003 this value ranged from $0.04 to $0.10/MWh. During 2002, for a Scheduling Coordinator in NP15, this value was closer to $0.24/MWh.

Q21. WHAT ABOUT THE OTHER BENEFITS TO THE ORIGINAL PARTICIPATING TOS THAT MR. BROZO MENTIONS, LIKE ADDITIONAL DELIVERY AND RECEIPT POINTS, INCREASED SCHEDULING CAPABILITY, AND INCREASED WHEELING REVENUES?

A21. These benefits accrue equally to New Participating TOs and Original Participating TOs. They cannot, therefore, be said to affect the balance of benefits and burdens between Participating TOs.

Q22. WHAT DID YOU WISH TO DISCUSS REGARDING MR. LUCERO'S TESTIMONY?

A22. Mr. Lucero's cross answering testimony notes that SDG&E recommends that the cost-shift cap should be eliminated because it has the "unintended consequence" of imposing a "secondary cost shift to SDG&E." Exh. No. SDGE-2 at 10:20–11:16. He testifies that due to this "unintended consequence" costs are shifted to SDG&E "that should more properly be borne by Edison and PG&E ratepayers." *Id.* at 10:25–27.

What Mr. Lucero refers to as an "unintended" cost shift, however, is the provision that, during the transition period, the cost shift burden on customers of the three Original Participating TOs should be proportional to the cost-shift burden identified for each Original Participating TO in the ISO

Tariff. These values were specifically determined by the End-User Compromise Proposal addressed in my direct testimony. This "proportionality provision", which imposes a cost shift burden on the Original Participating TOs of approximately the same $/MWh, up to the cap of $32/$32/$8 million—which is equal to approximately $0.4/MWh of the Original Participating TOs Gross Load. This proportionality provision is far from an "unintended consequence," but a conscious design element of the Access Charge methodology's transition mechanism.

Q23. MR. LUCERO ALSO NOTES THAT ELIMINATION OF THE COST-SHIFT CAP AND "PROPORTIONALITY PROVISION" IS JUSTIFIED BECAUSE THE ELIMINATION OF THESE MITIGATION ELEMENTS RESULTS IN ONLY "SMALL" COST SHIFT IMPACTS THAT "WILL NOT ADVERSELY IMPACT SCE'S AND PG&E'S END USE CUSTOMERS" (EXH. NO. SDGE-2 AT 11–14). DO YOU AGREE WITH MR. LUCERO'S ARGUMENT?

A23. No. Mr. Lucero recommends the elimination of the cost shift cap and proportionality provision because they "unfairly shift additional costs…onto SDG&E's ratepayers." Exh. No. SDGE-2 at 6:5–7. However, as I just explained, these provisions simply mean that, during the transition period, the cost shift burden on Edison, PG&E and SDG&E's customers is approximately the same. Since Mr. Lucero feels that the imposed cost shift burden is small enough to "not adversely impact" Edison and PG&E, it logically follows that the proposed transition mechanism does "not adversely impact" SDG&E. This again highlights that the proposed Access Charge

methodology is a well-balanced compromise that does not unduly burden the customers of the Original Participating TOs, while reducing the barriers to increased ISO participation by Transmission Owners. Moreover, a reason that SDG&E is now supporting the elimination of the cost shift cap and proportionality provision could be because SDG&E's utility-specific high voltage rate is greater than the TAC Area rate for the southern area. As is demonstrated in the ISO's information filing for the High Voltage Access Charge and Wheeling Access Charge rates effective October 1, 2003, SDG&E's utility-specific high voltage rate is $2.8704/MWH whereas the TAC Area rate for the southern TAC Area is $2.6278/MWH. This is a benefit to SDG&E of $563,780 prior to application of the cost shift cap and the proportionality provision.

IV. ALLOCATION AND ACCOUNTING ISSUES REGARDING FIRM TRANSMISSION RIGHTS AND USAGE CHARGES

Q24. WHAT ISSUES DO YOU WISH TO ADDRESS CONCERNING FTRS AND USAGE CHARGES?

A24. I would like to discuss some recommendations of a witness on behalf of Edison with which the ISO agrees and to respond to arguments raised by witnesses for the SWP, Staff, and TANC.

Q25. WHAT IS THE RECOMMENDATION OF EDISON'S WITNESS?

A25. In Amendment No. 49, the ISO proposed to revise the definition of Transmission Revenue Credit such that New Participating TOs that are given FTRs in accordance with Section 9.4.3 of the ISO Tariff are required to credit

against their TRR only the positive difference between the Usage Charges paid and the Congestion revenue received. Mr. Cuillier recommends that the definition also be revised (1) to reflect that the Original Participating TOs often have two roles, transmission owners and energy supplier, and (2) to address the subtraction of charges attributable to a Participating TO, but not to the FTR holder, under Section 7.3.1.7 of the ISO Tariff. Exh. No. SCE-1 at 30:5–32:23. These changes were part of a settlement of the proceeding involving the Transmission Revenue Requirement of the City of Vernon ("Vernon"). The ISO agrees that the changes to the definition of Transmission Revenue Credit are necessary for the reasons described by Edison.

Mr. Cuillier also recommends an amendment to Section 7.3.1.6 of the ISO Tariff, regarding the distribution of Net Usage Charge Revenue. Exh. No. SCE-1 at 32:24–34:12. Edison's recommendation is best explained by an example. Suppose an Inter-Zonal Interface of 100 MW is owned by a single Participating TO. There is an Existing Contract for 5 MW, the holder of which becomes a New Participating TO. Under Section 9.4.3, the New Participating TO receives FTRs for the 5 MW.

If the ISO auctions off FTRs for 90 MW, the proceeds of the auction go to the Original Participating TO. The ISO then determines the distribution of Usage Charges for the Inter-Zonal Interface. Of this revenue, 95% goes to the holders of FTRs: 5% to the New Participating TO and 90% to those that purchased FTRs at the auction. Under Section 7.3.1.6 as currently written,

the remainder would be split between the Original Participating TO and New Participating TO in accordance with their entitlements: 95:5. The Original Participating TO would thus receive compensation for 90% of the capacity interface from the FTR auction and 4.75% from Usage Charge revenues, for a total of 94.75%, even though it has rights to 95% of the Inter-Zonal Interface capacity. The New Participating TO would receive compensation for 5.25% of the capacity, even though it has rights to only 5% of the Inter-Zonal Interface capacity. Under Edison's proposed language, each would be compensated for its appropriate share. The ISO supports this revision to Section 7.3.1.6.

Q26. WHAT IS THE ARGUMENT OF SWP'S AND STAFF'S WITNESSES?

A26. Mr. Richard D. Jones (SWP) (having adopted Mr. Call's testimony), Mr. Weingart (PG&E), and Ms. Patterson (Staff) contend that the ISO Tariff should set forth a specific, transparent, methodology for the determination of the allocation of FTRs to New Participating TOs. Exh. Nos. SWP-70 at 14:25–15:2, SWP-72 at 61:8–23, PGE-1 at 29:3–13 and Exh. No. S-5 at 46:8–15.

Q27. DO YOU AGREE?

A27. No. Every New Participating TO, as well as every Existing Contract, brings different circumstances to the table. It would be difficult, if not impossible, to set forth a methodology that would accommodate them all. For example, Mr. Jones notes that PG&E has sold more rights to capacity on Path 15 than exists on Path 15. Exh. No. SWP-72 at 58:13–22. Obviously, the ISO would

have to assign some priority to the various capacity rights. Moreover, in stark contradiction to SWP's position favoring "cookie cutter" criteria, Mr. Jones objects to a "one-size fits all approach" and points to special attributes he believes SWP has under its Existing Contracts that it believes should be rewarded. Exh. No. SWP-70 at 16 at 1–26. Because the Existing Rights that could be converted vary from agreement to agreement—some firm, some non-firm and some in between—the ISO must have the flexibility to appropriately adjust the number of FTRs conferred. The establishment of a rigid methodology for the allocation of FTRs to New Participating TOs will hinder rather than facilitate the ISO's efforts to integrate new Transmission Owners.

Q28. DOESN'T THIS PROVIDE THE ISO WITH EXCESSIVE DISCRETION?

A28. Not at all. Because it affects rates, the allocation is filed with the Commission when the New Participating TO turns over Operational Control of the transmission facilities to the ISO. Now that the ISO will no longer make a filing under Section 203 for New Participating TOs, the allocation will be included with the Transmission Control Agreement. At that point, all interested parties will be able to protest the allocation, and the Commission will decide whether the FTR allocation is just and reasonable.

Q29. WERE THERE ANY ADDITIONAL ISSUES RAISED BY SWP REGARDING CONVERSION OF EXISTING CONTRACTS TO CONVERTED RIGHTS?

A29. Yes. Mr. Jones on behalf of the State Water Project raises the concern that FTRs will not provide SWP with a complete hedge against Congestion and

that therefore, upon conversion of SWP's Existing Contracts, SWP will be required to continue to provide in-kind reliability support without receiving adequate compensation in the form of firm transmission service. He contends that SWP's reliability services should thus be unbundled in the event of conversion of its Existing Contracts. Exh. No. SWP-70 at 17:3–22:2.

Q30. DO YOU AGREE WITH MR. JONES CONCERN?

A30. No. I believe that Mr. Jones' concern is misplaced and not relevant to the transmission Access Charge. The conversion of Existing Rights concerns only the transmission rights. If an Existing Right holder decides to change its Entitlements to Converted Rights, then the ISO can only give them the FTRs associated with the transmission capacity that is being converted and the revenues to which the ISO Tariff entitles the Existing Rights holder. Issues concerning the remainder of the Existing Contract are between the contracting parties.

The reliability support to which Mr. Jones refers appears to be primarily the terms and conditions in the Existing Contracts whereby SWP (1) sheds pump Load or Generation for various contingencies on the ISO Controlled Grid and (2) provides additional volt-ampere rating (VAR) support for the ISO Controlled Grid. In the first instance, the shedding of Load or Generation, the Scheduling Coordinator doing so is either charged or compensated by the ISO at the Uninstructed Deviation price. If there are issues regarding the appropriate compensation for SWP when it sheds Load

or Generation, these are issues between SWP and its Scheduling Coordinator(s).

While SWP's Existing Contract provides for SWP to provide VAR support, Section 2.5.3.4 of the ISO Tariff requires all Participating Generators to maintain a minimum power factor range within a band of 0.90 lag (producing VARs) and 0.95 lead (absorbing VARs). To date the ISO has not requested Participating Generating Units to produce VARS outside the power factor band established in the ISO Tariff, so SWP's concern has no practical significance regarding Voltage Support.

Q31. WHAT CONCERN DOES TANC RAISE?

A31. The definition of Net FTR Revenue allows a New Participating TO (for the purposes of determining the Transmission Revenue Credit) to net, on an hourly basis, Usage Charges assessed to it against Usage Charge revenues associated with FTRs is receives under Section 9.4.3. The definition, however, does not allow Usage Charges to be less than zero for a given hour, i.e., a New Participating TO may not accumulate Usage Charges over a period longer than an hour to be netted against later Usage Charge revenues. Mr. Brozo believes that this limitation is unreasonable. See Exh. No. TNC-1 at 37:12–38:3. SWP Witness Jones takes a similar position. See Exh. No. SWP-72 at 64:23–65:2.

Q32. DO YOU AGREE?

A32. No. Mr. Cuillier, on behalf of Edison, has very effectively rebutted these arguments. See Exh. No. SCE-13 at 25:2–30:5. Rather than further burden the record, I will just note my agreement with Mr. Cuillier's discussion.

V. HIGH VOLTAGE-LOW VOLTAGE SPLIT

Q33. TO WHICH DISCUSSIONS REGARDING THE HIGH-LOW SPLIT DO YOU WISH TO RESPOND?

A33. I would like to address certain recommendations to which the ISO does not object and then to respond to recommendations of Staff, PG&E and SWP, which the ISO does not support.

Q34. WHICH RECOMMENDATIONS DOES THE ISO CONSIDER UNOBJECTIONABLE?

A34. Staff recommends, along with other parties, that the provisions governing the division between high voltage and low voltage facilities be included in the ISO Tariff. Exh. No. S-1 at 16:9–28. Although it was the ISO's preference to avoid adding that additional amount of detail to the Tariff, the ISO will not object to Staff's proposal.

Q35. WHICH STAFF RECOMMENDATION DOES THE ISO OPPOSE?

A35. Staff recommends that the cost of transformers that serve high- and low-voltage facilities be split in the same manner as other facilities. The ISO proposed the current 50-50 split because it had been part of a previous settlement, but also because the ISO believes that a transformer that steps voltage up or down between high and low voltage can reasonably be described as serving the high and low voltage facilities equally. Mr. Filippi,

on behalf of PG&E, has provided an excellent explanation of the rationale for the equal split. See Exh. No. PGE-6 at 3:15–4:30. Although the ISO understands Staffs preference for consistency, it continues to believe that the proposal in Exhibit No. ISO-16 is preferable.

Q36. WHAT IS THE PG&E RECOMMENDATION?

A36. Witnesses for PG&E have argued that all "system (control area) interconnections" should be considered high voltage facilities. The ISO disagrees. PG&E makes these arguments because they have some Low Voltage Transmission Facilities in the Sierras that interconnect the ISO Control Area with PacifiCorp and Sierra Pacific Power. The ISO's Access Charge does not consider the functionality of the transmission line, although this was one option discussed early on in the development of the Access Charge rate design process. Rather, the foundation of the Access Charge proposal is based on a bright line test of transmission capacity at 200 kV. As is demonstrated in Exhibit No. ISO-35, three Branch Groups consisting of six transmission lines to neighboring Control Areas do not meet this bright line test. Instead of opening up the methodology to attack, and potentially requiring a functional analysis of every line in the ISO Control Area, the ISO has maintained the proposed Access Charge methodology with the bright line test of 200 kV. Moreover, the methodology does not include the process of a functionality test and the ISO does not see any benefit in such an analysis.

Q37. WHAT IS THE SWP PROPOSAL THAT THE ISO DOES NOT SUPPORT?

A37. When the Participating TO lacks voltage information regarding a piece of equipment, SWP witness Wilson recommends that the equipment be designated High Voltage or Low Voltage according to a functional analysis, rather than based on facilities data or gross substation investment as recommended by the ISO. Exh. No. SWP-67 at 50:9–23; 51:18–52:8. The ISO agrees entirely with Staff witness Gross (see Exh. No. S-1 at 20:2–23-12) in this regard and believes that Mr. Wilson's recommendation would add an unnecessary degree of complexity to the allocation, as well as open up fertile ground for dispute. Moreover, any type of functional analysis would require agreement by the stakeholders as to the methodology, criteria and process. Then, in each instance, a dispute resolution process would need to be available as the results of the analysis will impact some parties (i.e. those that only pay the High Voltage Access Charge like SWP) differently than other parties (i.e. those that are connected at Low Voltage Transmission Facilities). The ISO's proposed allocation is just and reasonable as is, without this new proposal.

VI. TRANSMISSION REVENUE CREDIT

Q38. YOU ALREADY DISCUSSED THE DEFINITION OF TRANSMISSION REVENUE CREDIT WITH REGARD TO FTRS. WAS THERE ANOTHER ISSUE YOU WISHED TO DISCUSS?

A38. Yes. Ms. Patterson, on behalf of Staff, recommends that the definition of Transmission Revenue Credit be revised to reflect the Commission's Opinion No. 458, 100 F.E.R.C. ¶61,156 (2002). Exh. No. S-5 at 39:10–40:6. Opinion

No. 458 involved the TO Tariffs. As Ms. Patterson notes, the Commission's rulings in Order No. 458 would make a portion of the definition of Transmission Revenue Credit irrelevant. *Id.* at 40:1–3. Opinion No. 458 is before the United States Court of Appeals for the District of Columbia Circuit on a Petition for Review and the ISO has intervened on behalf of Petitioners.

Nonetheless, the ISO opposes this recommendation. The ISO has not proposed anything in Amendments No. 27 or No. 49 that would affect that aspect of the definition of Transmission Revenue Credit. The Commission has not ordered the ISO to modify the definition and has not commenced a proceeding under Section 206 to modify it. There is no reason to make this modification in this proceeding.

Q39. THANK YOU, I HAVE NO MORE QUESTIONS.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

City of Folsom County of Sacramento	)	Docket Nos. ER00-2019-006, ER01-819-002, and ER03-608-000

DECLARATION OF WITNESS

I, Deborah A. Le Vine, declare under penalty of perjury that the statements contained in my Prepared Rebuttal Testimony on behalf of the California Independent System Operator Corporation filed in this proceeding are true and correct to the best of my knowledge, information, and belief.

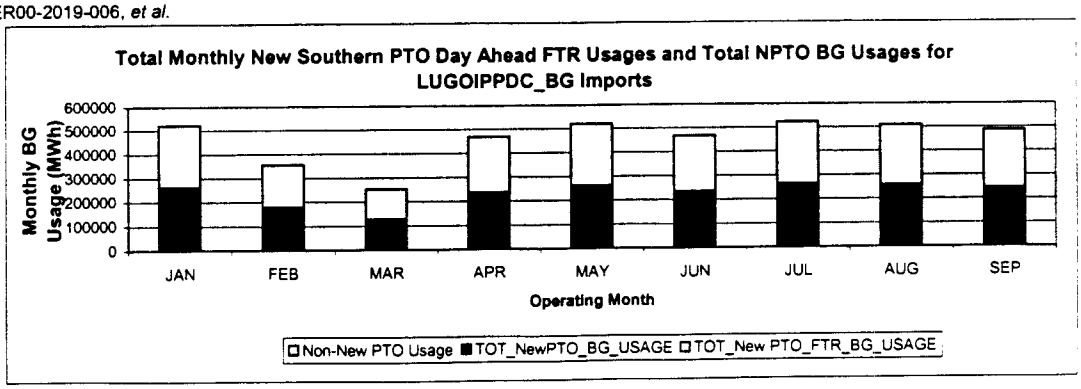
Executed on this 2 day of October, 2003.

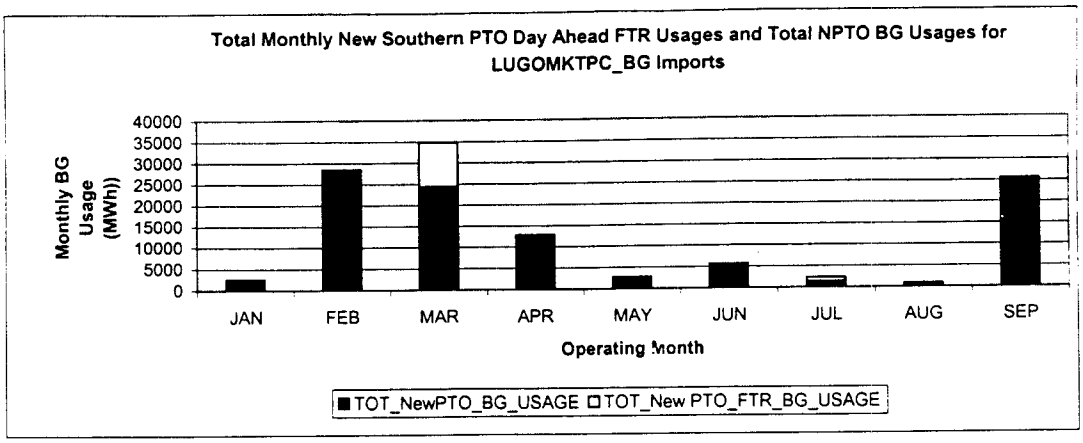
Deborah A. Le Vine

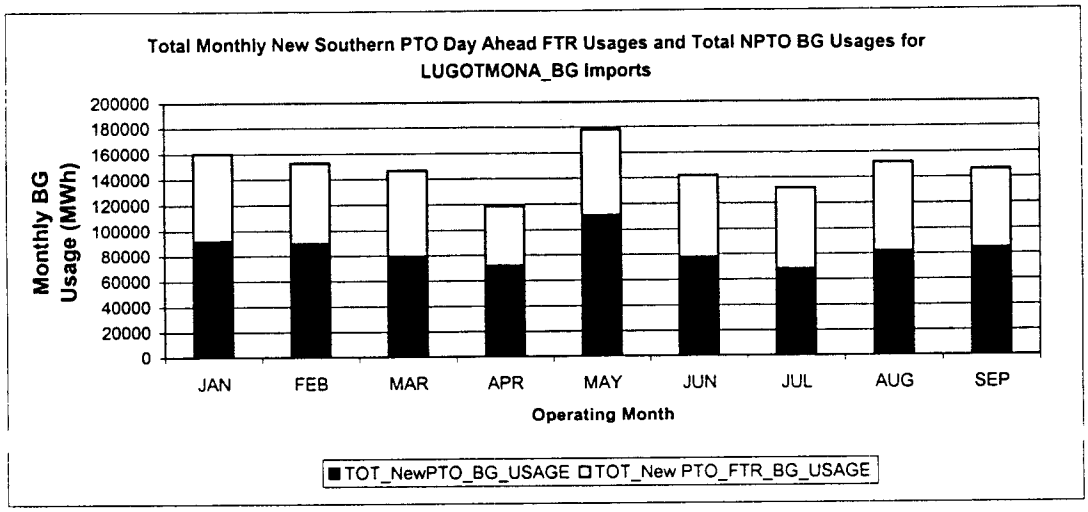
State of California
County of Sacramento
Subscribed and sworn (or affirmed) to before me this 2nd day of October, 2003
Virginia B. Davis
(Signature of Notary)

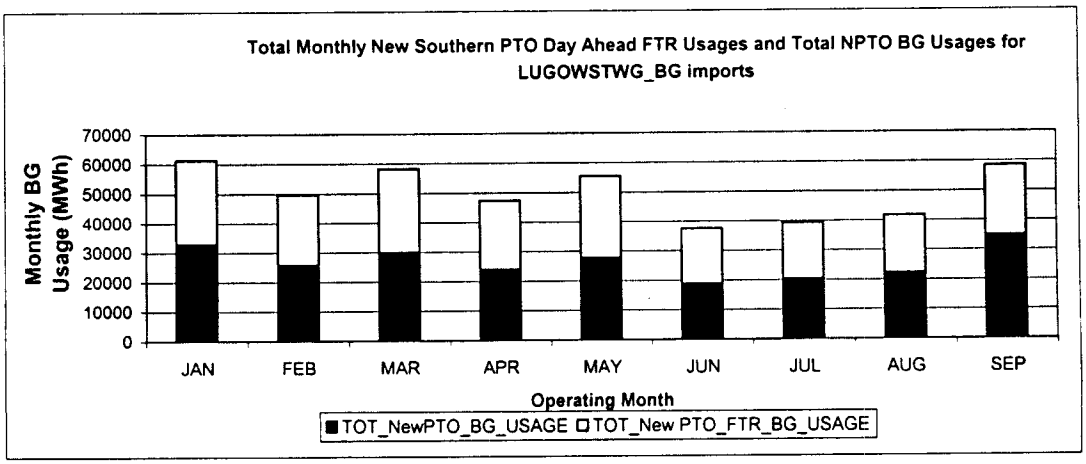
VIRGINIA B. DAVIS
Commission # 1266266
Notary Public - California
Sacramento County
My Comm. Expires Jun 30, 2004

Branch Group	Month	Total scheduled MWh	Non Muni's scheduled	Total Utilization %	Utilization Factor for Muni's scheduled %	Utilization Factor for non-Muni's scheduled %
LUGOIPPDC_BG	JAN	260422	0	95%	95%	0%
LUGOIPPDC_BG	FEB	177116	0	71%	71%	0%
LUGOIPPDC_BG	MAR	125586	0	45%	45%	0%
LUGOIPPDC_BG	APR	233944	0	88%	88%	0%
LUGOIPPDC_BG	MAY	259468	0	95%	95%	0%
LUGOIPPDC_BG	JUN	233446	0	87%	87%	0%
LUGOIPPDC_BG	JUL	261524	0	95%	95%	0%
LUGOIPPDC_BG	AUG	254384	0	92%	92%	0%
LUGOIPPDC_BG	SEP	243217	0	94%	94%	0%
TOTAL		**2,049,107**	**0**			
LUGOMKTPC_BG	JAN	2550	0	14%	14%	0%
LUGOMKTPC_BG	FEB	28400	0	17%	17%	0%
LUGOMKTPC_BG	MAR	24359	10480	13%	8%	5%
LUGOMKTPC_BG	APR	12650	160	7%	6%	<1%
LUGOMKTPC_BG	MAY	2783	0	1.50%	1.50%	0%
LUGOMKTPC_BG	JUN	5590	0	3%	3%	0%
LUGOMKTPC_BG	JUL	1360	960	1%	<1%	<1%
LUGOMKTPC_BG	AUG	456	456	1%	<1%	<1%
LUGOMKTPC_BG	SEP	25360	160	14%	13%	<1%
TOTAL		**103,508**	**12,216**			
LUGOTMONA_BG	JAN	91688	68375	77%	17%	60%
LUGOTMONA_BG	FEB	89664	62944	83%	29%	54%
LUGOTMONA_BG	MAR	79344	67208	66%	8%	58%
LUGOTMONA_BG	APR	71530	46906	62%	19%	41%
LUGOTMONA_BG	MAY	110935	66959	93%	35%	58%
LUGOTMONA_BG	JUN	77416	64313	67%	11%	56%
LUGOTMONA_BG	JUL	68019	63643	57%	2%	55%
LUGOTMONA_BG	AUG	81856	69616	68%	8%	60%
LUGOTMONA_BG	SEP	84315	61552	75%	22%	53%
TOTAL		**754,766**	**571,515**			
LUGOWSTWG_BG	JAN	32728	28568	47%	5%	42%
LUGOWSTWG_BG	FEB	25623	24023	41%	5%	36%
LUGOWSTWG_BG	MAR	29827	28347	43%	1%	42%
LUGOWSTWG_BG	APR	23883	23433	35%	<1%	35%
LUGOWSTWG_BG	MAY	27685	27621	40%	0%	40%
LUGOWSTWG_BG	JUN	18761	18761	28%	0%	28%
LUGOWSTWG_BG	JUL	20198	19071	29%	1%	28%
LUGOWSTWG_BG	AUG	22192	19488	32%	3%	29%
LUGOWSTWG_BG	SEP	34772	23572	53%	18%	35%
TOTAL		**235,669**	**212,884**			
TOTAL all BG		**3,143,050**	**796,616**			


Total Monthly New Southern PTO Day Ahead FTR Usages and Total NPTO BG Usages for LUGOIPPDC_BG Imports
Monthly BG Usage (MWh)
600000
500000
400000
300000
200000
100000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
Operating Month
Non-New PTO Usage
TOT_NewPTO_BG_USAGE
TOT_New PTO_FTR_BG_USAGE


Total Monthly New Southern PTO Day Ahead FTR Usages and Total NPTO BG Usages for LUGOMKTPC_BG Imports
Monthly BG Usage (MWh))
40000
35000
30000
25000
20000
15000
10000
5000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
Operating Month
TOT_NewPTO_BG_USAGE
TOT_New PTO_FTR_BG_USAGE


Total Monthly New Southern PTO Day Ahead FTR Usages and Total NPTO BG Usages for LUGOTMONA_BG Imports
Monthly BG Usage (MWh)
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
Operating Month
TOT_NewPTO_BG_USAGE
TOT_New PTO_FTR_BG_USAGE


Total Monthly New Southern PTO Day Ahead FTR Usages and Total NPTO BG Usages for LUGOWSTWG_BG imports
Monthly BG Usage (MWh)
70000
60000
50000
40000
30000
20000
10000
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
Operating Month
TOT_NewPTO_BG_USAGE
TOT_New PTO_FTR_BG_USAGE

BRANCH GROUP LISTING

BRANCH GROUP	BRANCHES	Line Name	kV	FROM ZONE	TO ZONE	INTERCONNECTING CONTROL AREA	TIE_POINT	ACTIVE / INACTIVE	Effective Date
COI _BG	MALIN_5_C1_RNDMTN_5_C1_1LN	Malin-Round Mountain #1	500	NW1	NP15	BPA	MALIN_5_RNDMTN	ACTIVE	
	MALIN_5_C2_RNDMTN_5_C2_1LN	Malin-Round Mountain #2	500						
	CAPTJA_5_C1_OLNDWA_5_C1_1LN	Captain Jack-Olinda	500				CAPJAK_5_OLINDA		
ɔ _BG	GATES_5_V5_LOSBNS_5_C1_1LN	Gates-Los Banos	500	ZP26	NP15	N/A		ACTIVE	February 1, 2000
	MIDWAY_5_C2_LOSBNS_5_C2_1LN	Midway-Los Banos	500						
	GATES_2_V2_PNOCHE_2_V2_2LN	Gates-Panoche #2	230						
	GATES_2_V2_PNOCHE_2_V2_1LN	Gates-Panoche #1	230						
	GATES_2_V2_HNRETA_2_#2_1LN	Gates-Mc Call	230						
	GATES_2_V2_HNRETA_2_#1_1LN	Gates-Gregg	230						
	S.MIGL_6_V7_COLNG1_6_V7_1LN	Coalinga #1-San Miguel	70						
	GATES_6_V7_HURON_6_V7_1LN	Gates-Huron	70						
	GATES_6_V7_HURON_6_V7_2LN	Schindler-Gates-Huron	70						
	GATES_6_V7_COLNG2_6_V7_1LN	Gates-Coalinga #2	70						
	GATES_6_V7_JACLTO_6_V7_1LN	Gates-Coalinga #1	70						
	SMYRNA_1_V1_ALPAUG_1_V1_1LN	Corcoran-Smyrna	115						
[redacted]	[redacted]	[redacted]							
SYLMAR-AC_BG	SYLMAR_2_LA_SYLMAR_2_#S_1LN	Sylmar LADWP-Sylmar SCE #1	230/220	LA1	SP15	LDWP	SYLMAR_2_LDWP	ACTIVE	
		Sylmar LADWP-Sylmar SCE #2	230/220						
NOB _BG	NOB_1_1R_SYLMAR_1_1I_1LN	Celilo-Sylmar DC	1000	NW3	SP15	BPA	SYLMAR_2_NOB	ACTIVE	
	NOB_1_2R_SYLMAR_1_2I_1LN	Celilo-Sylmar DC	1000						
CFE _BG	TJI-23_2_0#_MIGUEL_2_V2_1LN	Tijuana-Miguel	230	MX	SP15	CFE	IVALLY_2_23050	ACTIVE	
	ROA_2_##_IVALLY_2_V2_1LN	La Rosita-Imperial Valley	230				TJUANA_2_23040		
PARKER _BG	PARKR_2_##_GENE_2_V2_1LN	Parker-Gene	230	LC3	SP15	WALC	PARKR_2_GENE	ACTIVE	
LAUGHLIN _BG	LAUGHL_5_IN_MOHAVE_5_V5_1LN	Mohave SCE-Laughlin NEVP	500/70	NV3	SP15	NPC	MOHAVE_6_69KV	ACTIVE	
							MOHAVE_5_500KV		
[redacted]	[redacted]	[redacted]							
BLYTHE _BG	BLYTHE_1_##_BLYTHE_1_V1_1LN	Blythe SCE-Blythe WALC	220/161	LC2	SP15	WALC	BLYTHE_1_WALC	ACTIVE	
NSONGS _BG	SONGS_2_V2_SANTGO_2_V2_1LN	SONGS-Santiago #1	230	SP15	SP15	N/A		INACTIVE	
	SONGS_2_V2_SANTGO_2_V2_2LN	SONGS-Santiago #2	230						
	SONGS_2_V2_SERRAN_2_V2_1LN	SONGS-Serrano	230						
	CHINO_2_#2_SONGS_2_V2_1LN	SONGS-Chino	230						
SSONGS _BG	SANLUS_2_TP_SONGS_2_V2_1LN	SONGS-San Luis Rey-Mission #1	230	SP15	SP15	N/A		INACTIVE	
	MSSION_2_V2_SONGS_2_V2_1LN	SONGS-San Luis Rey-Mission #2	230						
	ENCINA_2_V2_SONGS_2_V2_1LN	SONGS-Encina	230						
	TALEGA_2_V2_SONGS_2_V2_1LN	SONGS-Talega #1	230						
	TALEGA_2_V2_SONGS_2_V2_2LN	SONGS-Talega #2	230						
WOR-N _BG	ELDRDO_5_V5_LUGO_5_V5_1LN	Eldorado-Lugo	500	SP15	SP15	N/A		INACTIVE	
	ELDRDO_2_V2_LUGO_2_V2_NLN	Eldorado-Lugo #1	230						
	ELDRDO_2_V2_LUGO_2_V2_SLN	Eldorado-Lugo #2	230						
	LUGO_5_V5_MOHAVE_5_V5_1LN	Lugo-Mohave	500						
	HINDS_2_V2_MIRAGE_2_V2_1LN	Julian Hinds-Mirage	230						
PALOVRDE _BG	PALVR1_5_DV_DEVERS_5_V5_1LN	Paloverde-Devers	500	AZ3	SP15	SRP	PVERDE_5_DEVERS	ACTIVE	
	PALVR2_5_NG_NGILA_5_&1_1LN	Hasayampa-North Gila	500				PVERDE_5_NG-PLV		
ɜE _BG	ELCNTR_2_V2_IVALLY_2_V2_1LN	El Centro-Imperial Valley	230	I2	SP15	IID	IVALLY_2_230S	ACTIVE	
: _BG	AVE42_2_V2_MIRAGE_2_V2_1LN	Ramon-Miraje	230	I1	SP15	IID	MIRAGE_2_COCHLA	ACTIVE	
	COACHL_2_#3_DEVERS_2_V2_1LN	Devers-Coachella Valley	230				DEVERS_2_COCHLA		
ELDORADO _BG	MOENKO_5_&3_ELDRDO_5_V5_1LN	Eldorado-Moenkopi	500	AZ2	SP15	APS	ELDORD_5_PSUEDO	ACTIVE	
							FCORNR_5_PSUEDO		
							MOENKO_5_PSUEDO		
							ELDORD_5_MOENKP		
INYO _BG	OWENS2_2_V2_INYO_2_V2_1LN	Inyo 230/115 #1	230/115	LA3	SP15	LDWP	INYOS_2_LDWP	ACTIVE	
SF _BG	MARTIN_2_RT_SANMAT_2_RT_1LN	San Mateo-Martin cable	230	SF	NP15	N/A		INACTIVE	
	MARTIN_1_V1_SANMAT_1_V1_2LN	San Mateo-Martin #3	115						
	ESTGRD_1_V1_SANMAT_1_V1_1LN	East Grand-San Mateo	115						
	SFAIRP_1_V1_SANMAT_1_V1_1LN	SF Airport-San Mateo	115						
	MILLBR_1_V1_SANMAT_1_V1_1LN	Millbrae-San Mateo	115						
	MIL-SF_1_V1_SANMAT_1_V1_1LN	San Mateo-Martin #6	115						
	SNTHLN_6_V6_CRYSTL_6_V6_1LN	Jefferson-Martin	60						
	BURLNG_6_V6_SANMAT_6_V6_1LN	Millbrae-San Mateo #2	60						
HUMBOLDT _BG	HUMBSB_1_V1_TRINTY_1_V1_1LN	Humboldt-Trinity	115	HUMB	NP15	N/A		INACTIVE	
	LOWGAP_1_V1_WILDWD_1_V1_1LN	Bridgeville-Cottonwood	115						
	MPLCRK_6_V6_GRSCRK_6_V6_1LN	Trinity-Maple Creek	60						
	KEKAWK_6_V6_LYTNVL_6_V6_1LN	Willits-Garberville	60						
PASADENA _BG	GOODRH_2_V2_GOULD_2_V2_1LN	Goodrich-Gould	230	SP15	SP15	N/A		INACTIVE	
	GOODRH_2_V2_LAGBEL_2_V2_1LN	Goodrich-Laguna Bell	230						
N.GILABK4_BG	N.GILA_5_&D_NGILA_5_V5_1LN	North Gila 500/70 #4	500/70	AZ5	SP15	APS	NGILA_5_NG4	ACTIVE	
	MEAD_2_##_ELDRDO_2_V2_2LN	Mead-Eldorado #2	230						
	MEAD_2_##_CAMNO_2_V2_ELN	Mead-East Camino	230						
	MEAD_2_##_CAMNO_2_V2_WLN	Mead-West Camino	230						
PATH26	VINCNT_5_&1_MIDWAY_5_V5_1LN	Midway-Vincent #1	500	SP15	ZP26	N/A		ACTIVE	February 1, 2000
	VINCNT_5_&3_MIDWAY_5_V5_2LN	Midway-Vincent #2	500						
	VINCNT_5_&5_MIDWAY_5_V5_3LN	Midway-Vincent #3	500						
MERCHANT _BG	MRCHNT_2_V2_ELDRDO_2_V2_1LN	Merchant-Eldorado	230	NV4	SP15	NPC	MRCHNT_2_ELDORD	ACTIVE	October 15, 1999
ELVTHRLY _BG	ELVERT_2_#W_ELVRTA_2_V2_1LN	Elverta tie breaker #1	230	SMDW	NP15	SMUD	ELVRTA_2_ELVRTW		June 18, 2002
	ELVERT_2_#W_ELVRTA_2_V2_2LN	Elverta tie breaker #2	230		NP15	SMUD			June 18, 2002
	ELVERT_2_#W_HURLE6_2_#W_1LN	Elverta-Hurley #1	230		NP15	SMUD	HURLEY_2_ELVRTW		June 18, 2002
	ELVERT_2_#W_HURLE6_2_#W_2LN	Elverta-Hurley #2	230		NP15	SMUD			June 18, 2002
	HURLE6_2_#W_TRCYPP_2_V2_1LN	Hurley-Tracy #1	230		NP15	SMUD			June 18, 2002
	HURLE6_2_#W_TRCYPP_2_V2_2LN	Hurley-Tracy #2	230		NP15	SMUD			June 18, 2002
RNCHLAKE _BG	RANCHO_2_V2_BELOTA_2_V2_1LN	Rancho Seco-Bellota #1	230	SMDE	NP15	SMUD	RANCHO_2_BELOTA		June 18, 2002
	RANCHO_2_V2_BELOTA_2_V2_2LN	Rancho Seco-Bellota #1	230		NP15	SMUD			June 18, 2002
	GOLDHL_2_V2_LAKE_2_V2_1LN	Gold Hill-Lake	230		NP15	SMUD	LAKE_2_GOLDHL		June 18, 2002
MEAD _BG	MEAD_2_##_ELDRDO_2_V2_1LN	Mead-Eldorado #1	230	LC1	SP15	WALC	MEAD_2_WALC	ACTIVE	April 1, 1998
MCCULLGH _BG	MCLLGH_5_V5_ELDRDO_5_V5_1LN	Eldorado-McCullough	500	LA2	SP15	LDWP	ELDORD_5_MCLLGH	ACTIVE	April 1, 1998
VICTVL _BG	VICTVL_5_V5_LUGO_5_V5_1LN	Victorville-Lugo	500	LA4	SP15	LDWP	LUGO_5_VICTVL	ACTIVE	April 1, 1998
LUGOWSTWG_BG	WSTWNG_5_V5_LUGO_5_V5_1LN	Westwing-Victorville-Lugo	500	AZ6	SP15	APS	LUGO_5_WSTWNG	ACTIVE	January 1, 2003
LUGOMKTPC_BG	MKTPLC_5_V5_LUGO_5_V5_1LN	Marketplace-Victorville-Lugo	500	LC4	SP15	WALC	LUGO_5_MKTPLC	ACTIVE	January 1, 2003
LUGOIPPDC_BG	IPPDC_5_V5_LUGO_5_V5_1LN	IPPDC-Victorville-Lugo	1000/500	LA5	SP15	LDWP	LUGO_5_IPPDC	ACTIVE	January 1, 2003
TMONA_BG	MONA_5_V5_LUGO_5_V5_1LN	Mona-Victorville-Lugo	345/500	PC1	SP15	PACE	LUGO_5_MONA	ACTIVE	January 1, 2003
GONDR_BG	GONDER_2_V2_LUGO_5_V5_1LN	Gonder-Victorville-Lugo	230/500	SR4	SP15	SPP	LUGO_5_GONDER	ACTIVE	January 1, 2003

Yellow - Branch groups for inactive Zones.
Blue - Branch groups between active Zones.

Green - Branch groups with other Control Areas at 200 kV and above.
Bright Green - Branch groups with other Control Areas below 200 kV.

Network Model

Effective 1/1/2003