UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	))	**Docket No. ER02-1656**

INITIAL COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Pursuant to the request of the Staff of the Federal Energy Regulatory Commission ("Commission") at the technical conference held in the captioned proceeding on September 13, 2005 ("Demand Response Technical Conference"), the California Independent System Operator Corporation ("CAISO") hereby submits its Initial Comments regarding the Demand Response Technical Conference.

In support hereof, the CAISO respectfully states as follows:

I. BACKGROUND

Pursuant to the Commission's July 1, 2005 order in the captioned proceeding,[1] the Commission Staff convened a technical conference in San Francisco on September 13, 2005. The following issues were discussed at the technical conference: (1) Special Case Nodal Pricing ("SCNP"); (2) the establishment of load aggregation zones for individual wholesale customers; and (3) demand response in California and under the CAISO Tariff. At the conclusion of the conference, Staff requested that the parties submit initial comments on these issues by September 27, 2005.

[1] *California Independent System Operator Corporation,* 112 FERC ¶61,013 (2005)("July 1 Order").

The instant Initial Comments set forth the ISO's positions on the aforementioned issues. In addition, the Initial Comments describe the CAISO's wholesale demand response program under MRTU and provide certain information requested by Commission Staff at the technical conference.

II. STATEMENT OF ISSUES

(1) The Commission should not order the implementation of SCNP simultaneously with implementation of Release 1 of MRTU, but should defer consideration of this issue until after the CAISO gains adequate experience with Locational Marginal Pricing ("LMP"). That is the approach the Commission followed with respect to SCNP implementation in ISO New England. SCNP is a new issue that the CAISO and stakeholders have not fully studied or discussed. Therefore, a Commission order directing the CAISO to implement SCNP in MRTU Release 1 would require the CAISO to divert staff resources from other time-critical MRTU efforts in order to design such a program and conduct a stakeholder process. This would add risk to the planned MRTU start-up date for a program that, in light of the availability of a sufficient alternative, is not needed in Release 1. In that regard, the party that has requested implementation of SCNP, *i.e.,* the California Department of Water Resources, State Water Project ("SWP"), will have the same treatment under the CAISO's Participating Load program that it would have under an ISO-NE style SCNP program. Specifically, Participating Loads, including SWP's pump facilities, will be settled at nodal energy prices for their final schedules in the Day-Ahead Integrated Forward Market ("IFM"), as well as for any deviations from these schedules after the Day-Ahead, including responses to CAISO dispatch instructions. The CAISO submits that, rather than order the CAISO to include a brand new program in its MRTU Release 1 design, the more prudent course of action would be for the Commission to direct the CAISO to file a report with the Commission after one-year's experience with LMP analyzing the results and evaluating SCNP and load zone configuration. That will allow the CAISO to evaluate these issues in a comprehensive manner just like ISO New England.

(2) The Commission should not permit individual wholesale customers to opt out of load aggregation. A no-opt-out requirement is necessary to avoid the adverse cost impacts to consumers in congested areas that exist as a result of constraints in a transmission system that was designed under a different regulatory regime in which nodal pricing was not contemplated. Significant cost shifting and increased price volatility could occur if customers at lower priced nodes are permitted to opt out of load aggregation. Based on the CAISO's latest congestion revenue rights

("CRR") study, which the CAISO will formally file with the Commission on September 30, 2005, there is no evidence showing that the effect on congestion hedging of a three load aggregation zone approach requires a departure from the CAISO's original load aggregation proposal.

III. COMMENTS

A. The Commission Should Not Approve SCNP At This Time

In its July 1, 2005 Order, the Commission directed Staff to convene a technical conference to discuss, *inter alia,* the issue of special case nodal pricing.[2] *California Independent System Operator Corporation,* 112 FERC ¶61,013 at P 39 (2005) ("July 1 Order"). The Commission recognized in the July 1 Order that there was no record regarding implementation of SCNP in California and the effects it might have.

The Commission should not require the CAISO to implement SCNP in MRTU Release 1. SCNP is a new issue in California. The CAISO has not previously considered the issue, and the issue has not been vetted with stakeholders, except for the brief discussion at the Demand Response Technical Conference. No comprehensive study has been undertaken to determine how SCNP would impact markets in California or what the applicable specifications for a SCNP program in California should be.[3] It would be premature and imprudent to impose SCNP in California under these circumstances.

SWP is the primary proponent of SCNP. However, it is not necessary for the CAISO to implement SCNP in order for SWP to avail itself of nodal pricing. In

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[2] The Commission's directive was in response to a request by SWP that the CAISO be directed to implement SCNP for large loads as the Commission approved for ISO New England.

[3] It should not be assumed that the specifications for SCNP adopted by ISO New England are the appropriate specifications for SCNP in California. In any event, the CAISO has not had the opportunity to discuss the design of any SCNP program with stakeholders.

that regard, SWP will obtain nodal pricing for its load to the extent (1) SWP receives service under existing transmission contracts ("ETCs"), and (2) SWP participates in the CAISO's Participating Load Program.[4] SWP's load in NP15 is served by ETCs until 2014. Under MRTU, ETC load will be priced nodally. Because SWP's load in NP15 will already be priced nodally under MRTU, the only benefit SWP might receive from SCNP is nodal pricing for its load in SP15. However, SWP does not need SCNP to obtain nodal pricing for its Southern California load because SWP is a Participating Load. As discussed *infra,* under MRTU, Participating load scheduled in the Day-Ahead will pay the Day-Ahead nodal price, and any demand response in Real-Time will be priced at the Real-Time nodal price.

The CAISO is building the flexibility into its MRTU software to accommodate nodal pricing of load[5] and, therefore, no additional systems or software would need to be developed to implement SCNP. However, the CAISO would still need to define the product and the associated business rules for SCNP, implement these rules in the MRTU scheduling interface ("SIBR") and the settlement systems, and then test them.[6] The introduction of a new design element into MRTU Release 1 at this time would still require significant

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[4] SWP and Helms are the two active participants in the CAISO's Participating Load Program.

[5] The CAISO notes that simply having this software capability does not mean that implementing full nodal pricing for loads will be without challenges. For example, some parties have pointed out that LSEs with loads over multiple nodes will have to schedule at the nodal level in the IFM in order to effectively hedge price risks between Day-Ahead and Real-Time. Developing the capability to do this – which has not been needed to date – will require considerable effort and is more complex for LSEs with loads spread over larger geographic areas. *See* Request for Rehearing of Southern California Edison Company referred to in the July 1 Order at PP 13, 21.

[6] Entities eligible for SCNP also would need ISO Metering. That would provide the CAISO with the necessary control over the meter and direct polling capability.

dedication of human resources both to the design effort and the associated stakeholder process. Because it would add a new risk to the February 2007 MRTU implementation date, the Commission should not require the CAISO to implement SCNP in MRTU Release 1.

Finally, SCNP was not implemented simultaneously with implementation of LMP in ISO New England.[7] Likewise it should not be implemented simultaneously with implementation of LMP in California. The CAISO submits that the prudent course of action would be for the CAISO to gain at least one-year's experience with LMP and then file a report with the Commission analyzing the results and evaluating the Load Zone configurations and SCNP. That will allow the CAISO, just like ISO New England, to evaluate the issue in a comprehensive manner and fully vet the issue with stakeholders.

B. The Commission Should Not Grant Individual Wholesale Customers the Option of Establishing Separate Zones for Purposes of Aggregating Load

In its July 22, 2003 MRTU Filing ("July 22 Filing"), the CAISO proposed that loads within the CAISO Control Area that are not served under ETCs would

[7] By order issued September 20, 2002, the Commission approved ISO New England's proposal for zonal pricing for load on an interim basis. *New England Power Pool and ISO New England, Inc.,* 100 FERC ¶61,287 (2002). On December 20, 2002, the Commission modified its prior order and directed ISO New England to implement full nodal pricing for all load within 18 months of the September 20, 2002 order. By order issued on January 28, 2004, the Commission directed ISO New England to study two alternatives to full nodal pricing for load: (1) the potential reconfiguration of ISO New England's eight approved Load Zones; and (2) SCNP for load in defined circumstances and then to submit a filing before July 1, 2004 reporting on the results of that study. *New England Power Pool and ISO New England, Inc.,*106 FERC ¶61,059 (2004). ISO New England submitted its comprehensive study of these issues to the Commission on July 1, 2004. On December 21, 2004, the Commission (1) approved the implementation of SCNP in ISO New England as an alternative to load zone reconfiguration or full nodal pricing. *New England Power Pool and ISO New England, Inc.,* 109 FERC ¶ 61,322 (2004). The Commission did not establish a specific target date for implementation of SCNP but directed ISO to make a compliance filing by June 30, 2005 addressing, *inter alia,* a proposed timeline for SCNP implementation. Thus, ISO New England has operated under an LMP regime for more than two years without having yet implemented SCNP.

schedule, bid and settle at one of three LAPs corresponding to the service territories of the thee investor owned utilities ("IOUs") in California. For purposes of running the Integrated Forward Market ("IFM"), the CAISO proposed to distribute submitted load bids and self-schedules to individual nodes using Load Distribution Factors ("LDFs"). Once the IFM determines the final schedule, the CAISO would then re-aggregate nodal load schedules to the LAP level for the purpose of providing these schedules to Scheduling Coordinators and for settlement. The CAISO proposed to make its load aggregation mandatory so that loads would not have the option to "opt-out" of the aggregation. In its October 28, 2003 order addressing the July 22 Filing,[8] the Commission accepted the CAISO's proposal to aggregate prices for load over the three existing IOU service territories finding that "the CAISO's approach to aggregate prices for load over the three existing service territories provides a reasonable and simplified approach to introduce locational marginal pricing ("LMP") while minimizing its impact on load." October 28 Order at P 65.

In the CAISO's May 13, 2005 MRTU Filing, while retaining the basic concept of aggregating load prices over the three existing IOU service territories, the CAISO proposed a revised methodology for clearing load bids to remedy a problem identified by LECG in their report on the comprehensive MRTU design (which was filed with the Commission as an attachment to the CAISO's May 13 filing). Specifically, the CAISO proposed to clear LAP-level load bids based on LAP prices. Thus, the LAP-level demand curve would not be distributed to nodes for clearing in the IFM, but instead, would be cleared against the aggregated LAP

[8] 105 FERC ¶ 61,140 (2003) ("October 28 Order").

prices to produce a final LAP-level load schedule that is consistent with the accurate LDFs used initially to allocate load to nodes. This change was deemed necessary to ensure that the re-aggregation of nodal schedules does not result in infeasible zonal schedules and that LSEs are able to manage their exposure to high prices in the Day-Ahead and Real-Time markets. Transmittal Letter at 19-20.

In the July 1 Order, the Commission approved the CAISO's proposal to modify its methodology for clearing load bids in order to clear those bids at the LAP level. July 1 Order at P 34. However, in response to comments arguing for the disaggregation of LAP zones beyond the three zones corresponding to the IOUs, the Commission directed the CAISO to increase the number of currently proposed load aggregation zones. Although the Commission recognized that the appropriate number of zones to disaggregate to was an issue for further discussion between the CAISO and Market Participants, the Commission indicated that, at a minimum, "each wholesale customer should have the option of establishing, as a separate zone, the set of nodes where it receives energy." July 1 Order at P 37. By doing so, the Commission effectively granted customers the ability to "opt out" of the CAISO's load aggregation scheme, thereby reversing course from the findings in its October 28, 2003 Order. On August 1, 2005, the CAISO filed a request for rehearing of the Commission's determination. The Commission did not act on this issue in its September 1, 2005 Order on

Rehearing,[9] but instead deferred a decision on this matter to a future order addressing issues discussed at the Demand Response Technical Conference.

As discussed in its Request for Rehearing of the July 1 Order, the CAISO continues to believe that it is important to the overall LMP market design that Participants not be permitted to opt out of load aggregation upon implementation of LMP. Permitting customers to opt out of load aggregation undermines the fundamental reason for instituting load aggregation in the first place – to blunt the potential for severe cost impacts to consumers in congested areas that exist as a result of constraints in a transmission system that was designed and constructed under an entirely different regulatory regime that did not anticipate competitive generation markets and nodal pricing. As the CAISO explained in its July 22, 2003 Filing, it is appropriate to prohibit Market Participants from establishing separate LAP zones upon implementation of LMP because it will preclude loads at low-priced nodes from opting-out and thereby raising the prices at the remaining nodes. This danger is particularly acute for entities serving load in transmission-constrained areas of the grid, or "load pockets," such as the San Francisco Bay Area.

As the CAISO has noted previously, California's transmission infrastructure was designed and constructed under an integrated utility industry regime and regulatory framework that never anticipated either locational pricing or the unbundling of the generation function of electricity from the transmission function. Under this framework, decisions to build transmission were based on the presumption that: (1) consumers would not be charged different rates based

[9] *California Independent System Operator Corporation,* 112 FERC ¶61,310 (2005).

on the impact of transmission constraints, and (2) the integrated utility should plan investment in generation and transmission infrastructure in an integrated fashion, substituting one for the other as appropriate. As a result, the structure in certain areas of the grid unduly limits the ability of consumers in those areas to benefit from the primary objective of electric restructuring, namely, access to competitive generation supplies. Moreover, the original design of the CAISO and the California Power Exchange markets retained the practice of settling internal loads at wholesale prices that were calculated for large geographic areas rather than locally. Because of this legacy, large numbers of consumers are still situated within load pocket constraints. Under these circumstances, it would be patently unfair immediately upon changing the CAISO's market design to LMP, to subject these consumers to locational prices when they are unable to enjoy the benefits of competition. Requiring all Market Participants to participate in load aggregation, as the CAISO has proposed, will allow Market Participants to become comfortable with LMP and mitigate any concerns about the potential adverse impacts of nodal pricing. The CAISO also notes that, upon implementation of MRTU, the Energy bid cap will increase to $500/MWh and System AMP will be eliminated. This could result in increased price volatility, whose impact on consumers in constrained areas would only be aggravated by allowing customers at lower cost nodes to opt out of load aggregation.

Finally, requiring the CAISO to provide an opt-out mechanism would add significant complexity and risk to the MRTU Release 1 implementation schedule. An opt-out mechanism would require the CAISO to initiate a brand new MRTU

project. That would require a substantial effort on the part of both CAISO staff and stakeholders to develop a workable design, determine rules and requirements for participation, and specify business rules to govern the scheduling and settlement of entities opting out of load aggregation. These requirements, comprising both high-level policy issues and lower-level design details, would need to be completed so that the CAISO could then specify the associated changes needed to the MRTU software and systems. Moreover, the CAISO expects that the stakeholder process associated with this effort would face considerable resistance because the written stakeholder comments the CAISO has received to date indicate a preponderance of support for the CAISO's original proposal not to allow opt-out of LAP scheduling and settlement. There are numerous issues and questions to be resolved in creating an opt-out mechanism all of which the stakeholders will rightfully want to scrutinize with great care to ensure against unintended adverse impacts. The CAISO simply cannot afford to divert resources to a significant new project at this time and views inclusion of an opt-out mechanism in MRTU Release 1 as adding considerable risk to implementation of MRTU prior to summer 2007.

Finally, although the Commission ordered implementation of SCNP in ISO New England for individual end use customers, the Commission did not approve any opt out mechanism for individual wholesale customers and did not modify ISO New England's existing load zone configuration. Likewise, the Commission should not approve an opt-out in California and should not modify the three load-zone scheme that it conceptually approved in the October 28, 2003 Order.

However, the CAISO believes that it would be appropriate for the CAISO to put together a report after one-year's experience with LMP evaluating possible load zone reconfiguration and the appropriate number of load zones (in addition to an evaluation of SCNP) just as ISO New England did. This will allow the CAISO and stakeholders to comprehensively evaluate the issue based on actual experience with LMP.[10]

C. Demand Response Under MRTU

MRTU offers opportunities for Participating Loads to participate in CAISO markets as resources that augment and compete with supply resources.[11] As

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[10] Based on the concerns raised by LECG and certain Market Participants with respect to the granularity of the LAP zones, the CAISO has been exploring further the issue of the possible creation of additional LAP zones beyond the three zones corresponding to the IOUs' service territories. On September 15, 2005, the CAISO posted a White Paper on this subject entitled *Granularity of Load Aggregation Points (LAPs) for Spot Market Scheduling and Settlement.* The White Paper is attached hereto as Attachment A. At this time, the CAISO has not yet had an opportunity to discuss this issue fully with its stakeholders, but the issue will be vetted at a future stakeholder meeting. However, stakeholders have provided written comments to the CAISO regarding the LAP issue, which comments reflect broad support for retaining the CAISO's original proposal. As indicated in the White Paper, the CAISO proposes to retain the three-load aggregation zone design proposed in the July 22, 2003 Filing with no opportunity to opt out. As the White Paper recognizes, one of the primary reasons for considering greater LAP granularity was the concern expressed by LECG that the three LAP configuration could adversely affect the ability of loads to hedge congestion costs. However, based on the final CRR Study 2 Report prepared by LECG and released on August 25, 2005, the CAISO found no evidence to suggest that the effect on congestion hedging of the three-LAP approach requires a change in the CAISO's original proposal. The CAISO will be filing the CRR Study 2 Report in this docket on September 30, 2005. The CAISO also notes that the written comments submitted by stakeholders overwhelmingly support retention of the three LAP model without provision for opting out of the load aggregation. Under these circumstances, the Commission should not require the CAISO to increase the number of currently proposed LAP zones or provide for an opt-out of load aggregation.

[11] The CAISO began developing of Demand Programs after the summer of 1998 when Demand Response was identified as a resource that could help resolve the shortage of Ancillary Services supply. With much stakeholder input, the CAISO created the Participating Load Program ("PLP"). The CAISO filed the *pro forma* Participating Load Agreement with the Commission in December 1999. In the first summer of the Participating Load Program (*i.e.,* summer 2000) the CAISO saw levels of 600-700 MWs of market participation. Participation levels were greatly reduced in the 2001 to a level of approximately 100 MWs. The CAISO believes that the combination of the creditworthiness concerns and adverse hydro conditions contributed to the lower participation in 2001. Since 2001, the California Public Utilities Commission has worked with the three Investor Owned Utilities to expand enrollment in existing Demand Response

designed by the CAISO, the only Participating Loads in MRTU Release 1 will be pumps.[12] Participating Loads will essentially be modeled as pumped-storage hydro generators (with only pumping operating mode and not generating operating mode) not as loads *per se*. To be eligible, loads or aggregated loads must execute a Participating Load Agreement. Participating Loads that wish to engage in demand bidding opportunities are required to demonstrate their effective dispatch capability. The minimum size for Real Time dispatch as a Participating Load is 1 MW; however, individual loads of less than 1 MW may be aggregated as dispatchable load. Participating Loads are eligible to participate in the Ancillary Services markets, thereby receiving a capacity price for providing non-spinning reserve.[13] In the Integrated Forward Market, if a Participating Load is scheduled, its energy consumption will be charged the Day-Ahead locational marginal price at the pump node. Similarly, in the Real-Time market, Participating Loads that are dispatched by the CAISO for purposes of demand reduction will earn the Real-Time nodal price (rather than the load aggregation price) for that portion of load reduction that is dispatched in Real-Time. Thus, SWP's pump load -- which is a Participating Load -- will be priced nodally under Release 1 of MRTU. This should obviate SWP's need for SCNP.

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programs, as well as to approve the implementation of new programs. This has provided Loads to have more choice in program participation. This has resulted in a shift of some participation from the CAISO's PLP program into the State of California sponsored programs, specifically the California Power Authority' Demand Reserve Partnership program. The CAISO observed an average of 77 MWs of Participating Load participating in the Ancillary Services market during peak times in the summer of 2004. For the summer of 2005, there was an average of 30 MWs bidding non-spin ancillary services.

[12] The CAISO's existing Participating Loads are pumps.

[13] Participating Loads will have relaxed telemetry requirements for Non-Spinning Reserve (one-minute updates from the Participating Load to the Scheduling Coordinator's server as opposed to four-second updates from generators and waiver of telemetry requirements for supplemental energy). Only interval metering and ability to receive and follow dispatch instructions are necessary to supply supplemental energy.

The CAISO submits that the Participating Load program that will be in place upon implementation of MRTU is adequate for purposes of promoting wholesale demand response until further demand response refinements can be made in subsequent releases of MRTU.

IV. CONCLUSION

For the reasons set forth herein, the Commission (1) should not require SCNP for Release 1 of MRTU, and (2) should not permit individual wholesale loads to opt-out of the CAISO's proposed load aggregation scheme.

Respectfully submitted,

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ATTACHMENT A

California ISO White Paper

Market Redesign and Technology Update (MRTU)

Granularity of Load Aggregation Points (LAPs) for Spot Market Scheduling and Settlement

September 15, 2005

Granularity of Load Aggregation Points (LAPs) for Spot Market Scheduling and Settlement

Statement of the Issue

The CAISO's July 2003 comprehensive MRTU market design filing proposed that loads will be scheduled and settled using aggregations of individual network nodes called Load Aggregation Points or LAPs.[1] The July 2003 filing provided for three LAPs corresponding to the transmission service territories of the three IOUs (PG&E, SCE, and SDG&E), and explicitly required that all loads within these LAPs (with a few narrow exceptions[2]) would be subject to load aggregation with no opportunity to opt out. Since that time some entities have raised issues and concerns with the coarseness of the LAPs, and have indicated the desire to move to more granular LAPs. The following questions are relevant to this issue:

1. Should the CAISO retain the existing three large LAPs or move to more granular LAPs for spot market scheduling and settlement in the initial MRTU implementation?
2. If more granular LAPs are adopted, what should be the number and geographic definition of the LAPs?
3. Should participants be allowed to opt out of LAP scheduling and settlement, and if so, what would be the appropriate geographic granularity at which they could request scheduling and settlement for their loads?

CAISO Proposal

The CAISO proposes to maintain the three-LAP design as proposed in the July 2003 filing, as well as the applicability of load aggregation as originally specified with no opportunity to opt out. There are three main reasons for this position.

First, the CAISO believes that the rationale for this position, as originally articulated in the July 2003 filing and recently summarized in a CAISO white paper on Congestion Revenue Rights (CRRs), is still valid. This rationale is summarized below.

Second, the primary motive for considering greater LAP granularity was the concern, first expressed in LECG's February 2005 report on the comprehensive MRTU design, that the three-LAP configuration could adversely affect the ability of loads within the CAISO control area to hedge the congestion costs associated with the LMP market design. The CAISO immediately acknowledged the legitimacy of this concern and noted that its forthcoming CRR Study 2 Report would provide some empirical evidence on the potential severity of this impact. Based on the

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[1] In general LAP scheduling and settlement must be commensurate. The only exception to this rule under the current MRTU design is Metered Subsystem (MSS) load. As currently contemplated, under MRTU MSS load will be scheduled at the MSS location but settled at the LAP price associated with the LAP in which the MSS load is located. There are potential inefficient bidding and scheduling behavior that may be induced because of this arrangement particularly with MSS that opt for net settlement, but the advantages of scheduling MSS load accurately are judged to outweigh the disadvantages of such potential inefficiencies.

[2] The exceptions are MSS, Existing Transmission Contracts (ETCs) and Transmission Ownership Rights (TORs). The CAISO is currently considering making Participating Loads another exception to the load aggregation provisions.

results reported in the Final CRR Study 2 Report, prepared by LECG and released on August 24, 2005, the CAISO finds no evidence to suggest that the effect on congestion hedging of the three-LAP approach is severe enough to require a change to the July 2003 proposal.

Third, the written comments submitted by stakeholders in response to the CAISO's explicit request to comment on the LAP issue overwhelmingly support maintaining the three-LAP model without provision for opting out of load aggregation.

Background

The CAISO's July 2003 Comprehensive Market Design Filing

It is important to revisit the reasons why the CAISO originally proposed, in the July 2003 MRTU filing, to schedule and settle internal loads using the 3-large-LAP design and not to allow any opt-out provisions. The main argument was to insulate customers from large locational price impacts of LMP based on the observation that these price impacts would derive primarily from the physical properties of a transmission system that was built under the prior regulatory framework.

The framework prior to restructuring of the California electricity market was based on geographically uniform retail pricing across each IOU's transmission service territory. Under the integrated utility framework the investment decisions of the major IOUs typically considered tradeoffs between generation and transmission in determining the most cost-effective way to meet their load-serving obligations reliably. With integrated utilities and geographically uniform pricing the customers located in constrained "load pockets" did not face any cost consequences.

The restructured paradigm departed from the integrated utility paradigm in two major respects. First, it introduced a competitive generation market, and second, it required open access to transmission service. However, the zonal pricing paradigm put in place in California at the start of the California market did not have a large differential impacts on consumers based on their locations within the zones. With locational pricing as proposed under MRTU (in the absence of LAP pricing and settlement) the customers in some load pockets would face higher costs simply as a result of the shift in market structure. The CAISO reasoned therefore that wholesale prices within each of the major IOU transmission territories should be uniform, at least for an initial period until transmission upgrades substantially eliminated the load pockets created under the former regulatory framework and enabled consumers throughout the CAISO control area to benefit from the competitive generation market.

In addition, the CAISO pointed out that locationally granular pricing for most customers was of secondary importance in implementing LMP. The primary benefits of the LMP design would be realized by applying the full network model in the day ahead and real time markets to ensure feasible schedules, and nodal pricing for supply resources to align scheduling and operating incentives with reliable grid operation. Experience with demand response programs elsewhere and associated research have shown that time-varying prices for customers result in greater response than locationally-varying prices. At the same time, to promote demand response from the limited set of customers who could respond (i.e., "participating loads") the July 2003 filing proposed to pay the LMPs for dispatchable real-time load reduction in response to CAISO dispatch instructions.

With regard to the ability of customers to opt out of the 3-large-LAP scheme, the July 2003 filing noted that extensive opting out by customers in areas where LMPs were on average lower than the LAP prices would defeat the purpose of large-area price aggregation by causing the LAP prices to increase over time. The CAISO therefore proposed not to allow opting out. At the time

of the July 2003 filing the CAISO understood that the provisions described above were generally – though not necessarily universally – supported by stakeholders.

FERC's October 28, 2003 and July 1, 2005 Orders

In its October 28, 2003 Order FERC approved the CAISO's July 2003 proposal of LAP pricing and settlement.

In its July 1, 2005 Order in response to the CAISO's proposal on a technical matter regarding how LAP-level demand bids are cleared in the energy markets, FERC approved the CAISO's proposal to clear demand bids at the large LAP level, but also agreed with some intervenors who had stated that the currently proposed LAP zones should be further disaggregated to provide more accurate price signals and assist market participants in the hedging of congestion costs. FERC indicated its support for an eventual move to nodal demand pricing, but accepted zonal demand pricing in the interim. However, FERC directed the ISO to increase the number of currently proposed demand zones (LAPs). FERC did not opine on the appropriate number of zones to disaggregate to, but left that issue to the ISO and market participants. FERC did state that, at a minimum, each wholesale customer should have the option of establishing, as a separate zone, the set of nodes where it receives energy. FERC also stated that, in reviewing the results of CRR Study 2, the ISO should consider how the sizing of the zones may impede the ability of market participants to effectively hedge congestion costs due to the reduced availability of congestion revenue rights ("CRRs") that result from the larger zone definition.

LECG's Comments on LAP Granularity

In their February 2005 report on the comprehensive MRTU design, LECG pointed out that the three-large-LAP approach could have detrimental impacts on the release of CRRs. The CAISO acknowledged the validity of this observation, discussed the problem with stakeholders at the public meetings beginning in March 2005, and agreed to conduct sensitivity analyses in CRR Study 2 to shed some light on the magnitude of the problem. The results of these analyses are discussed in LECG's Final CRR Study 2 Report.

The LECG report also indicated concerns with MSS settlement at the large LAP level prices.

CRR Studies with Different Levels of LAP Granularity

The CAISO's CRR Study 2, which was performed by LECG on behalf of the CAISO, included three approaches to LAP granularity for CRR allocation (based on the simultaneous feasibility test or SFT) and settlement, namely:

- Base Case: Enforce the SFT at the sub-LAP level and release CRRs that are defined to and settled at the LAPs. This option releases CRRs that were not properly subjected to the SFT and therefore are likely to result in CRR revenue inadequacy.
- Sensitivity 5 approach: Enforce the SFT at the LAP level, and release CRRs that are defined to and settled at the LAPs. This option can result in reduced amounts (MW) of CRR allocations compared to the other two approaches, but is consistent with the revenue adequacy of the released CRRs.
- Sensitivity 7 approach: Enforce the SFT at the sub-LAP level and settle the resulting CRRs at sub-LAP prices. This option ensures revenue adequacy, but does not maintain complete consistency between CRR settlements (which are at the sub-LAP level) and spot market energy settlements for loads (which are at the LAP level).

In comparing the results of these analyses, LECG stated the following in the Executive Summary of its Final CRR Study 2 Report:[3]

> Applying the simultaneous feasibility test at the LAP level (Sensitivity 5) had relatively little impact on the percentage of the congestion rents paid out to holders of CRRs (payout ratio) calculated using LMP Study 3b prices but reduced the number of CRRs awarded through the allocation process by about 6%, relative to the base case or Sensitivity 7. The overall difference was larger or smaller in individual months. The magnitude of the difference between the Sensitivity 7 and Sensitivity 5 outcomes in CRR Study 2 is neither so large as to provide a strong basis for awarding CRRs to hedge congestion to particular subzones [i.e., adopting the Sensitivity 7 approach] nor so small as to provide a strong basis for simplifying the allocation process by allocating CRRs only to the LAP as a whole [i.e., adopting the Sensitivity 5 approach].
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> ... the results also imply that although the Sensitivity 5 methodology reduces the number of CRRs that can be awarded to sink at the LAP, the reduction was relatively small, particularly in dollar terms.
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> ... The Sensitivity 5 methodology resulted in the award of more CRRs that are feasible to the LAP as a whole than would the other methodologies as they were applied in CRR Study 2.

The authors note that the above comments concern only the level of aggregation in CRR awards, and do not address the question of the appropriate level of aggregation in determining settlement prices for loads in the spot markets. Indeed, the common assumption throughout CRR Study 2 was that spot market settlement for loads would be at the three-LAP level. Thus although the Base Case and Sensitivity 7 analyses simulate the release of CRRs that are defined with greater granularity on the sink side than the three large LAPs, the CRR nominations by the participating LSEs were all at the LAP level. In spite of this fact the CAISO believes that the CRR Study 2 results are still informative on the question of LAP granularity in the spot markets, and moreover, reinforce the CAISO's proposal not to revise its July 2003 proposal to settle loads at the three large LAPs.

To see the logic of this conclusion, suppose the spot market settlement were specified to be at the level of the 23 sub-LAPs used in CRR Study 2 (17 in the PG&E LAP, 5 in the SCE LAP and only 1 in the SDG&E LAP). This is a reasonable supposition because the basis for specifying the 23 sub-LAPs would probably be the same regardless of whether these sub-LAPs are used for CRRs or for spot market settlement. The CRR allocation would then use the same sub-LAPs for defining the CRR sink, and the results of the associated CRR release and settlement would be roughly the same as Sensitivity 7. Thus the comparison between Sensitivity 7 and Sensitivity 5 can be viewed as a good approximation of the results we would expect if the Sensitivity 7 CRR approach were combined with spot market settlements at the same sub-LAPs. The only variable not captured in CRR Study 2 comparison of Sensitivities 5 and 7 is the fact that LSEs, when faced with a sub-LAP spot market settlement rule, would probably submit different CRR requests than they did in CRR Study 2.

In conclusion, although the Sensitivity 5 approach is theoretically better than either the base case or Sensitivity 7 because it both enforces the SFT and matches the CRR settlement to the spot market settlement for loads, CRR Study 2 provides no compelling evidence that it would be significantly better in practical terms. Nor does the study provide evidence that the Sensitivity 7

[3] See "CRR Study 2 Evaluation of Alternative CRR Allocation Rules," prepared by Scott M. Harvey and Susan L. Pope, August 24, 2005, page 4, available from the CAISO's web site at: http://www.caiso.com/docs/2005/02/23/200502231634265701.pdf

approach, which simulates a potential move to greater granularity of LAPs, would significantly improve upon the Sensitivity 5 approach. If the impact of the three large LAPs on CRRs is viewed as the leading reason for going to greater granularity in the spot markets, the CAISO suggests that such a change does not appear to be justified based on CRR considerations, particularly in view of the overwhelming support expressed in the stakeholder comments for retaining the three-LAP approach.

Other Issues Related to LAP Granularity

As mentioned in the introduction some entities (MSS) are allowed to schedule at a more granular demand level, but are settled at the LAP level. LECG pointed out their concerns with potential inefficient arbitrage resulting from this arrangement. Going to more granular LAP settlement would be one way to alleviate this concern. There are, however, other ways to limit potential incentives for or the impact of such arbitrage. The CAISO is currently revisiting the MSS features under MRTU to remove the opportunities for inadvertent inefficient outcomes.

Stakeholder Comments and CAISO Responses

The CAISO notes that written comments received recently from stakeholders, representing many different types of load-serving entities and consumer interests, support maintaining settlement at the three LAPs. Most of these comments also support not having an opt-out provision. These entities specifically include: the Bay Area Municipal Transmission Group, the Energy Users Forum, the Northern California Power Agency, Pacific Gas & Electric, Silicon Valley Power, Southern California Edison and Strategic Energy.

State Water Project (SWP) has expressed concern about their pumps, which participate in the CAISO markets to provide demand response, having to schedule and settle at the LAP. In MRTU Release 1, the CAISO intends to model participating pumps and pump/storage facilities as generators with negative generation capabilities, and will therefore schedule and settle them at nodal prices. That is, pump/storage facilities can perform either as generators by injecting power into the grid, or as loads by consuming power from the grid, and therefore they are modeled in the CAISO markets as generators whose output can go negative when they are functioning as pumps. For Release 1 other participating loads such as pumps, which are always functioning as loads, will be modeled in the same manner as pump/storage facilities As a result, SWP's participating pump resources will be scheduled and settled at the individual nodal level rather than at the LAP level. The CAISO therefore believes that SWP's concerns are fully addressed. When the CAISO initiates its effort on the potential MRTU Release 2 elements in 2006, the CAISO will consider how, more generally, participating load that is not associated with pumps or pump/storage facilities will be modeled and settled as part of Release 2.

September 27, 2005

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

Re: California Independent System Operator Corporation
Docket Nos. ER02-1656

Dear Secretary Salas:

Enclosed please find an electronic filing of Initial Comments of The California Independent System Operator Corporation.

Thank you for your attention to this filing.

Respectfully submitted,

/s/ Anthony J. Ivancovich
Anthony J. Ivancovich

Counsel for the California Independent
System Operator Corporation

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list for the captioned proceeding, in accordance with Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California, on this 27th day of September, 2005.

/s/ Anthony J. Ivancovich
Anthony J. Ivancovich