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December 15, 2003

## Via Electronic Filing

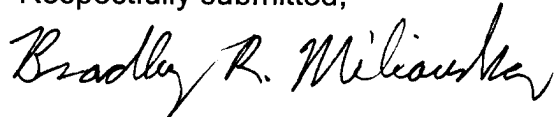
The Honorable Magalie R. Salas  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: San Diego Gas & Electric Company, et al.  
Docket Nos. EL00-95-082 and EL00-98-070**

Dear Secretary Salas:

Please find attached the Motion for Clarification, Request for Rehearing, Motion for Stay, and Motion for Expedited Consideration of the California Independent System Operator Corporation, filed today in the captioned proceedings. Please contact the undersigned with any questions concerning the filing.

Respectfully submitted,



David B. Rubin  
Bradley R. Miliauskas

Counsel for the California  
Independent System Operator  
Corporation

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

<b>San Diego Gas &amp; Electric Company,</b>	)	
	)	
<b>Complainant</b>	)	
	)	
v.	)	<b>Docket No. EL00-95-082</b>
	)	
<b>Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange,</b>	)	
	)	
<b>Respondents</b>	)	
	)	
<b>Investigation of Practices of the California Independent System Operator and the California Power Exchange</b>	)	<b>Docket No. EL00-98-070</b>
	)	

**MOTION FOR CLARIFICATION,  
REQUEST FOR REHEARING, MOTION FOR STAY, AND  
MOTION FOR EXPEDITED CONSIDERATION OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

Pursuant to Section 313(a) of the Federal Power Act, 16 U.S.C. § 825l(a), and Rules 212 and 713 of the Rules of Practice and Procedure of the Federal Energy Commission ("Commission"), 18 C.F.R. §§ 385.212, 385.713, the California Independent System Operator Corporation ("ISO")<sup>1</sup> submits this motion for clarification and request for rehearing in the captioned dockets. The ISO

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<sup>1</sup> Capitalized terms not otherwise defined herein are used in the sense given in the Master Definitions Supplement, Appendix A to the ISO Tariff.

respectfully requests that the Commission grant clarification and rehearing of its order issued November 14, 2003, 105 FERC ¶ 61,196 ("November 14 Order") as follows:

- (1) that the Commission clarify and reaffirm that the ISO is only required to pay Minimum Load Costs for a unit when the unit is supplying minimum load energy in accordance with the Commission's must-offer requirement and has not already sold and forward scheduled its output in a bilateral transaction; and
- (2) that the Commission grant rehearing and rescind its directive to the ISO to develop a means for Scheduling Coordinators to forward schedule minimum load energy provided pursuant to the must-offer requirement and to submit a modification to the ISO Tariff to show that minimum load energy that is forward scheduled will still be compensated for its Minimum Load Costs.

The ISO asks for expedited consideration of this pleading, in particular its rehearing request. As explained below and in the attached affidavit of Donald Fuller, the ISO's existing systems provide an effective means for ensuring proper tracking and payment of Minimum Load Costs. To provide a new ability to forward schedule this energy would require more than four months of development time at a cost that may exceed half a million dollars. As this function is not required presently, was not contemplated in the ISO's Phase 1B MD02 modifications, and will be superseded in Phases 2 and 3 of MDO2, the ISO respectfully submits that its staff and financial resources would be far better

applied towards implementation of the approved market redesign work and other more pressing matters such as completion of the market re-runs needed before the final re-run in the California refund proceeding. Expeditious consideration is required so the ISO can direct its resources towards those efforts that provide the greatest benefit to all Market Participants.

## **I. MOTION FOR CLARIFICATION**

### **A. Scope of the Must-Offer Obligation**

On April 26, 2001, the Commission issued its “Order Establishing Prospective Mitigation and Monitoring Plan for the California Wholesale Electric Market and Establishing an Investigation of Public Utility Rates in Wholesale Western Energy Markets.”<sup>2</sup> The Commission established a “must-offer” obligation “to ensure that all units that are able to run but are not already scheduled to run (with the exception of hydroelectric power [ ]) are in fact made available to the ISO in the real-time market.”<sup>3</sup>

On June 19, 2001, the Commission issued an order on rehearing in which it modified its proposed mitigation plan.<sup>4</sup> The Commission found that the mitigation plan requires those generators with Participating Generator Agreements (“PGAs”), as well as non-public utility generators in California selling through the ISO markets or using the ISO’s transmission lines, to offer the ISO all of their capacity in real time during all hours if it is available and not already

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<sup>2</sup> *San Diego Gas & Electric Co., et al.*, 95 FERC ¶ 61,115 (2001).

<sup>3</sup> *Id.* at 61,357.

<sup>4</sup> *San Diego Gas & Electric Co., et al.*, 95 FERC ¶ 61,418 (2001).

schedule their minimum load energy from units that are under the Must-Offer Obligation, we reiterate that the ISO must compensate a generator for its Minimum Load Costs for all hours that it is under the Must-Offer Obligation, including when the generator forward schedules the minimum load energy.

The ISO is concerned that the quoted language could be misinterpreted to mean that the ISO is required to pay Minimum Load Costs for a unit *even when* the unit's minimum load energy has already been sold and forward scheduled in a bilateral transaction. Such a misinterpretation would be contrary to the Commission's earlier directives in this proceeding concerning the scope of the must-offer requirement and appropriate principles of cost recovery.

Soon after the Commission instituted the must-offer obligation, it directed that the ISO must compensate a unit for its actual costs (i.e., its Minimum Load Costs) during each hour when that generator is (1) not scheduled to run in a bilateral agreement; (2) not on a planned or forced outage; and (3) running in compliance with the must-offer obligation but not dispatched by the ISO.<sup>7</sup> (Because the ISO is not a party to bilateral contracts, and therefore cannot know the terms of delivery, the ISO recognizes a forward schedule as evidence of a bilateral contract.)

The Commission *did not* require the ISO to pay a unit its Minimum Load Costs when the unit's minimum load energy has already been sold in a bilateral transaction; requiring this would have meant that the unit would be paid its Minimum Load Costs twice – once when the minimum load energy was sold in a bilateral transaction and a second time by the ISO. Indeed, the Commission has

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<sup>7</sup> *San Diego Gas & Electric Co., et al.*, 97 FERC ¶ 61,293, at 62,363 (2002).

found, in similar contexts in this same proceeding, that units are not entitled to receive double recovery of their costs.<sup>8</sup> The ISO respectfully submits that the Commission could not have reasonably intended for paragraph 17 to mean that units are to receive such a double payment. However, the ISO wishes to ensure that no party misunderstands the Commission's meaning.

To the extent that the ISO's request for clarification is not granted and for the reasons presented above, the ISO would respectfully ask rehearing of any determination that output sold by Generating Units under bilateral transactions and scheduled in the ISO's forward market be eligible for Minimum Load Cost compensation.

## **II. REQUEST FOR REHEARING**

### **A. Background Concerning Compensation for Minimum Load Energy that is Forward Scheduled**

In an order issued in this proceeding on October 31, 2002, the Commission stated:

With regard to Mirant's protest, we agree that the Scheduling Coordinators should forward schedule energy from those units under the Must-Offer Obligation that are running at minimum load. Additionally, we also agree with Mirant that the ISO has not explained how it will treat generators that are running at minimum load and dispatched for instructed energy. Therefore, the ISO

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<sup>8</sup> *San Diego Gas & Electric Co., et al.*, 101 FERC ¶ 61,112, at P 12 (2003) ("We find that, once a unit is awarded Ancillary Services for any hour, it is ineligible for Minimum Load Costs for that hour because the output of that unit is now reserved for use. We will not allow a unit receiving compensation for providing Ancillary Services to also receive payment for Minimum Load Costs, as such payment would constitute double recovery of Minimum Load Costs for that interval"); *San Diego Gas & Electric Co., et al.*, 97 FERC at 62,369 ("We reject parties' claims that they should be paid by the ISO for all emissions and start-up costs including those costs associated with bilateral transactions. These parties are free to recover emissions and start-up fuel costs as part of bilateral transactions and thus, any recovery of emissions and start-up fuel costs from the ISO could result in a double recovery of such costs").

should clarify, in a further compliance filing, how it will treat generators in this situation.<sup>9</sup>

The ISO recognizes and apologizes that, in its December 2, 2002 compliance filing, it did not address more clearly the issue of forward scheduling of minimum load energy provided pursuant to the must-offer requirement, stating only that “...the ISO will compensate Must-Offer Generators for Minimum Load Costs for all hours such generat[ing units]...do not have a Final Hour-Ahead Schedule.”<sup>10</sup> This was necessary because the ISO’s existing systems would not provide a means to distinguish between forward schedules submitted as part of bilateral transactions, and, as explained above, not eligible for must-offer Minimum Load Cost compensation and potentially forward-scheduled minimum load Energy which would be eligible.

While one party protested the ISO’s failure to proposed a method by which minimum load energy can be scheduled into the ISO’s markets,<sup>11</sup> the Commission’s March 13, 2002 order did not discuss this issue further.<sup>12</sup> In the November 14 Order, however, in response to a subsequent protest, the Commission directed the ISO to submit “a modification to its tariff to show that minimum load energy that is forward scheduled will still be compensated for its Minimum Load Costs.”<sup>13</sup>

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<sup>9</sup> *San Diego Gas & Electric Co., et al.*, 101 FERC ¶ 61,112, at P 13.

<sup>10</sup> See Compliance Filing, Docket Nos. EL00-95-071, *et al.* (filed Dec. 2, 2002).

<sup>11</sup> Protest to California Independent System Operator Corporation’s Compliance Filing of Williams Energy Marketing & Trading Company, Docket Nos. EL00-95-071, *et al.* (filed Jan. 2, 2003), at 5.

<sup>12</sup> *California Independent System Operator Corporation*, 102 FERC ¶ 61,285 (2003).

<sup>13</sup> November 14 Order at P 17.

**B. Grounds for Rehearing and Specification of Error Regarding the November 14 Order**

The ISO requests rehearing of the directive that it develop a means to forward schedule minimum load energy provided pursuant to the must-offer requirement. Such a requirement will require an unwarranted expenditure of resources that provides no additional benefit and will be rendered moot by the Commission's approved market redesign.

**1. Implementation Will Be Time Consuming and Costly**

As described in the attached affidavit of Don Fuller, implementation of the forward scheduling functionality would require substantial modification to the ISO's existing settlements software. The ISO would need to create approximately 200 separate and distinct Demand ID points – one for each generating unit subject to the must-offer obligation – so that the Demand that will be Scheduled to these special-purpose Demand ID points is not intermingled with any actual Demand that may be scheduled or metered. The ISO must be able to distinguish in its systems forward schedules for bilateral transactions that are not part of the must-offer requirement and not paid Minimum Load Costs from any forward schedules of minimum load energy. The ISO would need to add these new Demand ID points to its network model through change management procedures designed to ensure that the change is appropriately designed and implemented and does not adversely effect ISO systems. The large number of proposed added Demand ID points may also require that the database be re-sized.



The ISO would also need to modify the application it uses to determine if minimum load energy is eligible to receive payment from the ISO and to set the price of that energy based on the unit's heat rate and the proxy gas cost and to modify the Real-Time Market Applications software or create a new "after-the-fact" settlement process so that energy scheduled to the special-purpose Demand ID points will be settled as approved by the Commission as part of Amendment No. 54 (the MD02 "Phase 1B" modifications).<sup>14</sup>

The ISO estimates it may cost over half a million dollars to implement this modification and take at least four months to complete. This means the ISO would be able to implement the Tariff modification by April 2004 at the earliest. In comparison, the ISO's current schedule calls for implementation of Phase 1B in February 2004. The requirement to implement a forward scheduling functionality for minimum load energy would have an adverse effect on implementation of Phase 1B.

## **2. There Is No Current Benefit To Requiring Forward Scheduling of Must-Offer Energy**

The ISO's current systems provide for appropriate tracking and payment of Minimum Load Costs. Moreover, there is limited value in creating a system that cannot and does not match minimum load energy with real Demand, and

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<sup>14</sup> As approved under Phase 1B, minimum load energy will be deemed to be instructed imbalance energy and paid the imbalance energy price. If that price is less than the unit's per-MW cost, the unit will be paid an uplift payment so that it recovers its Minimum Load Costs. Either the Real-Time Market Applications ("RTMA") or the new settlements "after-the-fact" process must recognize that Demand scheduled at the special-purpose Demand IDs in a Final Hour-Ahead Schedule is settled differently than other Demand appearing in Final Hour-Ahead Schedules. Whether the ISO modifies the RTMA, or creates a new "after-the-fact" settlements system, this work will delay the implementation of the Phase 1B modifications. The approved Phase 1B modifications cannot be put into effect until these changes – required to mesh the settlement of minimum load energy under Phase 1B as unscheduled but instructed imbalance energy with the system in which minimum load energy will be forward scheduled – are complete.

therefore does not alleviate the effects of minimum load energy on the imbalance energy market.<sup>15</sup>

There are several possible benefits to forward scheduling the minimum load energy. One is if the supplier had a contract that linked payment to a forward schedule. As minimum load energy has already been sold in a bilateral transaction and, by the Commission's prior order, would not be eligible to recover its Minimum Load Costs from the ISO, this does not provide a justification for imposing a forward scheduling requirement.

A second justification would be to make the ISO aware of the minimum load energy so the ISO can account for that energy as it plans the next day's operations. However, since minimum load energy is being produced because the ISO has either denied or revoked a must-offer waiver, the ISO is already aware of this energy without the need for the energy to be forward scheduled.

Third, if this minimum load energy was scheduled against actual Demand, it would provide that the real-time imbalance energy market is just that – a market in which the prices reflect true real-time imbalances, not artifacts from the forward scheduling processes. For example, at a July 29, 2003 technical conference, a recurring concern was that minimum load energy should be forward scheduled so as not to influence real-time energy prices. The effect on real-time prices can only be mitigated, however, if the minimum load energy is scheduled against actual Demand. Similarly, any adverse potential reliability

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<sup>15</sup> While the ISO recognizes the importance of forward schedules in ensuring system reliability, forward schedules that do not match real Demand with real supply do not provide any reliability benefit other than making the ISO aware of the expected supply or Demand – something that the ISO is already aware of.

effect, such as the problems associated with going into real-time with a substantial imbalance – can only be addressed by matching Demand and supply in the forward markets.

The problem is that following the demise of the California Power Exchange there is no forward auction market to match supply and Demand. Until new forward markets are created, the only way to ensure minimum load energy is scheduled against real Demand is to implement a trade between a Scheduling Coordinator with supply and a Scheduling Coordinator with Demand. That is what the ISO proposed to do to match unsold RMR Contract Energy with Demand in Amendment No. 56. That proposal was rejected and instead the ISO was required to create a means for scheduling RMR Contract Energy without mandating that the energy be matched with actual Demand. The ISO complied by creating a scheduling mechanism that required RMR Contract Energy to be balanced with “artificial” Demand. Such a mechanism meets the Commission’s Scheduling directive but provides no incremental benefit towards ensuring that real time prices reflect true real-time imbalances.

Thus, if the purpose of a Schedule is to satisfy a contract term for delivery and payment, the delivery should be under a bilateral transaction and not eligible for Minimum Load Cost payment (unless the Commission intended that such energy be paid for twice). If the purpose of a Schedule is to inform the ISO of the minimum load energy, the ISO is already aware of the minimum load energy because the ISO ordered that energy to be produced. And if the purpose of a Schedule is to mitigate any reliability effects or effects on prices in the imbalance

energy market, such effects cannot be avoided unless the minimum load energy is matched with actual Demand. Thus, the added requirement to allow suppliers to forward schedule their minimum load energy provides no benefits from the perspective of settlements, system reliability, or ensuring the accuracy of real time prices.

### **3. MD02 Will Supersede the System Modifications**

Moreover, even if the ISO were to spend the time and money to implement forward scheduling of must-offer energy in the current market structure, such a feature would be superseded by Phases 2 and 3 of MD02 as approved by the Commission. Minimum load energy from a unit committed in the Integrated Forward Market will be scheduled against Demand in that market. Minimum load energy from a unit committed through the Residual Unit Commitment process will be bid into the Hour-Ahead market as a price-taker to provide the greatest likelihood that the minimum load energy will be scheduled against Demand in that market. If there isn't enough Demand Hour-Ahead market to clear the minimum load energy, the minimum load energy will be bid into the real-time imbalance energy market as a price taker. In either case, if the price paid for the energy is less than the energy's bid price, the ISO will pay an uplift payment to ensure the unit's owner recovers its costs. Under MD02, every effort will be taken to Schedule the minimum load energy against actual Demand.

For these reasons, the ISO respectfully requests the Commission to rescind its directive.

### **III. MOTION FOR STAY AND MOTION FOR EXPEDITED CONSIDERATION**

#### **A. Motion for Stay**

The ISO respectfully requests an immediate stay of the requirement to develop the systems necessary to allow forward scheduling of minimum load Energy. Unless the Commission grants such a stay, the ISO will need to deploy its scarce resources to make the necessary system modifications. A stay is justified because such a redeployment would be unwarranted and wasteful. The revised system does not benefit the current market and will be superseded by ongoing redesign efforts. Any efforts at compliance will only add unnecessary and irretrievable costs. Moreover, the added complications and diversion of key personnel will delay beneficial Commission-approved changes in MD02 Phases 1B and 2 and 3.

#### **B. Motion for Expedited Consideration**

Because the ISO needs to know how best to deploy its scarce resources in the upcoming weeks and months, the ISO respectfully requests expeditious consideration of this pleading. Many of the personnel that are currently involved with implementation of Phase 1B would need to be diverted to develop a means of forward scheduling the minimum load energy.

**IV. CONCLUSION**

For the reasons described herein, the ISO respectfully requests that the Commission provide the clarification requested in this motion, grant an immediate stay, and grant rehearing, on an expedited basis, as requested above.

Respectfully submitted,

*Anthony J. Ivancovich* <sup>BAJ</sup>

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Dated: December 15, 2003

**ATTACHMENT**

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

<b>San Diego Gas &amp; Electric Company</b>	)	
	)	
<b>v.</b>	)	<b>Docket No. EL00-95-___</b>
	)	
<b>Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange</b>	)	
	)	
	)	
	)	
	)	
	)	
<b>Investigation of Practices of the California Independent System Operator and the California Power Exchange</b>	)	<b>Docket No. EL00-98-___</b>
	)	
	)	

**AFFIDAVIT OF DONALD FULLER  
ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR  
CORPORATION CONCERNING THE IMPLEMENTATION OF A SYSTEM TO  
FORWARD SCHEDULE MINIMUM LOAD ENERGY FROM MUST-OFFER  
GENERATING UNITS**

1. My name is Donald Fuller. I am employed by the California Independent System Operator ("ISO") as the Director of Billing and Settlements. My business address is 151 Blue Ravine Road, Folsom, California 95630.
  
2. I oversee the operation of the ISO's financial settlement systems to ensure that sellers, buyers and other parties interacting with the ISO markets are paid and charged appropriately according to the settlement provisions of the ISO Tariff. In my current position I oversee a staff of 33 professionals and analysts who are responsible for settling the wholesale electricity activities for all of the ISO's participants, and producing preliminary and final settlement statements and invoices. In addition, my staff is often called upon to produce estimates of the



impacts of various hypothetical changes in the ISO's Settlement procedures or in various inputs to the settlement process and to develop the algorithms and processes required to implement changes to the ISO Tariff. In my previous position with the ISO, I was Director of Client Relations for four years. My responsibilities in that position included working directly with Scheduling Coordinators on dispute related matters that impacted the ISO's settlement and billing systems.

Prior to joining the ISO, I was employed for over twenty years at Westinghouse Electric Corporation in its power generation businesses. I held various management positions during this time, most recently as Manager of Subsidiary Operations where I had direct profit/loss responsibility. I hold a B.S. degree in Electrical Engineering from Oregon State University in Corvallis, Oregon and an MBA with an emphasis in finance from Widener University in Chester, Pennsylvania.

The purpose of my affidavit is to describe the scope of the changes needed to allow Scheduling Coordinators to forward schedule minimum load energy for generating units operating in accordance with the must-offer obligation. I will also provide the ISO's preliminary estimate of the time and cost required to implement such a system.

1. Currently, minimum load energy produced by units operating under the must offer obligation is not scheduled but treated as uninstructed imbalance energy. While the ISO has consistently advocated forward scheduling, scheduling

minimum load energy provides a real benefit only when the energy is scheduled against actual Demand. Without a forward energy market, and without the ability to compel Inter-Scheduling Coordinator trades, the ISO cannot require minimum load energy to be scheduled against real Demand. The ISO is aware of the minimum load energy through its logging systems and will adjust its imbalance energy procurement in real time to account for the minimum load energy. This is why in Phase 1B of MD02, the ISO has proposed not to forward schedule minimum load energy but to settle it as instructed imbalance energy. In Phases 2 and 3 of MD02, minimum load energy under the must offer requirement will be forward scheduled either through the integrated forward market or, to the maximum extent possible, by bidding the minimum load energy of any units committed through the Residual Unit Commitment process into the Hour-Ahead market using a price-taker bid to provide the greatest opportunity for the energy to be matched with Demand in that market.

2. To provide even a temporary system to allow Scheduling Coordinators to forward schedule minimum load energy, this system must 1) ensure that the minimum load energy is eligible for minimum load cost recovery; 2) settle the minimum load energy as already approved by the Commission; and 3) eliminate the potential for paying the same quantity of minimum load energy twice by eliminating the payment for any Demand deviation resulting from a Scheduling Coordinator scheduling Demand that does not actually exist.
3. To accomplish these requirements, the ISO would need to create approximately 200 separate and distinct Demand ID points - one for each generating unit subject to the must-offer obligation. The ISO must create separate Demand IDs so that the

Demand that will be Scheduled to these special-purpose Demand ID points is not intermingled with any actual Demand that may be scheduled or metered – i.e., the ISO must be able to distinguish in its systems the forward schedules for bilateral transactions (not part of the must offer requirement and not paid minimum load costs) from any forward schedules of minimum load energy. The ISO would need to add these new Demand ID points to its network model through existing change management procedures designed to ensure that the change is appropriately designed and implemented and does not adversely affect ISO systems. The large number of proposed added Demand ID points may also require that the database be re-sized.

4. The ISO would also need to modify the application it uses to determine if minimum load energy is eligible to receive payment from the ISO and to set the price of that energy based on the unit's heat rate and the proxy gas cost. This application must be modified to recognize that minimum load energy that has been forward scheduled to special-purpose Demand ID points is eligible to be paid its minimum load costs, while energy that is forward scheduled to a different Demand ID has already been sold in a bilateral transaction and is not eligible to be paid its minimum load costs.
5. The ISO must modify its existing scheduling system to validate that any minimum load energy scheduled to a special-purpose Demand ID does not exceed the unit's specified minimum load level.
6. The ISO would need to modify the Real-Time Market Applications (RTMA) software or create a new "after the fact" settlement process so that energy scheduled to the special-purpose Demand ID points will be settled as approved by the Commission as part of Amendment No. 54 (the MD02 "Phase 1B" modifications). As approved under Phase 1B, minimum load energy will be deemed to be instructed imbalance energy and paid the imbalance energy price.

If that price is less than the unit's per-MW cost, the unit will be paid an uplift payment so that it recovers its minimum load costs. Either the RTMA or the new settlements "after-the-fact" process must recognize that Demand scheduled at the special-purpose Demand IDs in a Final Hour-Ahead Schedule is settled differently than other Demand appearing in Final Hour-Ahead Schedules. Whether the ISO modifies the RTMA, or creates a new "after-the-fact" settlements system, this work will delay the implementation of the Phase 1B modifications. The approved Phase 1-B modifications cannot be put into effect until these changes – needed to mesh the settlement of minimum load energy under Phase 1-B as unscheduled but instructed imbalance with the system in which minimum load energy will be forward scheduled - are complete.

7. Under the approved Phase 1B settlement rules, the minimum load energy for which the Demand is scheduled at the special-purpose Demand IDs is accounted for as Instructed Imbalance Energy and is paid the imbalance energy price. In addition, the ISO will pay an imbalance energy payment to Demand that is scheduled in the forward markets but not metered in real time. Because the Demand scheduled at the special-purpose Demand IDs is not actual load, and will be metered in real time at zero MWh, such Demand deviation, absent a change to the proposed Phase 1B design of the ISO's settlements' systems, would also be paid the imbalance energy price. Under those conditions, the minimum load energy would effectively be paid twice – once as imbalance energy and a second time as a Demand deviation. The ISO must modify its

market settlements systems so that any Demand deviation appearing at these special-purpose Demand IDs is not paid.

8. The changes to computer systems that require developing new code – i.e., the changes to the Must-Offer Calculator, RTMA and settlements systems that go beyond simply adding new Demand ID points – must also go through a process intended to ensure the software changes are accurately scoped, coded and tested. This process begins with gathering requirements for the new software, moves to the development of a detailed scope of work statement, advances to the coding of the new software and ends with rigorous testing.
9. The ISO must conduct an end-to-end test of all aspects of the new system in an environment intended to simulate actual market conditions. This “market simulation” allows Scheduling Coordinators to verify the scheduling and settlement process before the proposed changes are put into effect.
10. Finally, the ISO must implement the new software, again adhering to a rigorous change management to ensure that existing systems are not adversely affected. Adverse effects on existing systems could disrupt ongoing operations and reduce grid reliability.
11. Figure 1 below shows all of these processes. While some of these processes could theoretically be done at the same time (i.e., in parallel), key ISO staff are currently heavily involved in development and testing of the Phase 1B systems as well as in scoping and development of the other market design changes brought on by the MD02 effort, such as negotiating vendor contracts, writing scope of work statements, etc., in addition to the activity associated with the preparatory and California refund proceeding re-run activity, which is scheduled to

commence publishing to Scheduling Coordinators on December 18, 2003 and last for several months. As a result, the ISO cannot devote a full complement of staff resources to developing and implementing the system for scheduling minimum load energy without adversely affecting this other important work. The ISO estimates that it will take at least four months to implement the proposed system to schedule minimum load energy.

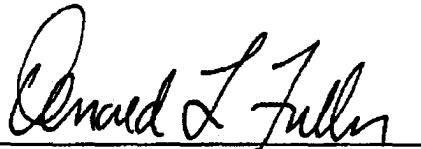
**FIGURE 1**

Week	Demand IDs	MLCC Calculator	Real-Time Market Applications (RTMA)	Settlements: Update 1B treatment for minimum load energy and to eliminate payment for Demand deviation
1	Define	Define requirements	Define requirements	Define requirements
2	Add to master file and network model	Define requirements	Define requirements	Define requirements
3	Add to master file and network model	Development	Define requirements	Define requirements
4		Unit testing	Development	Development
5		Scenarios – System tests	Development	Development
6			Development	Development
7			Development	Development
8			Unit testing	Unit testing
9			Unit testing	Unit testing
10			Scenarios – System tests	Scenarios – System tests
11			Scenarios – System tests	Scenarios – System tests
12		Integration testing	Integration testing	Integration testing
13			Integration testing	Integration testing
14	Market Simulation			
15				
16	Deployment	Deployment	Deployment	Deployment
Est. Cost			\$500 K	\$200 K

- The ISO estimates that the direct external costs of implementing these systems will be at least \$200,000 and could be greater than \$700,000, depending on whether the RTMA must be modified. The settlements systems changes alone are estimated to cost \$200,000. The estimated cost of modifying the RTMA, if necessary, is \$500,000. These costs are the costs of external vendors needed

to code changes to the software systems. These estimates do not reflect the internal staff time costs, such as the cost for changes to the Must-Offer Calculator and the cost for creating new Demand IDs.

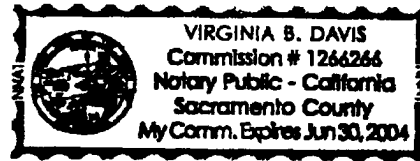
13. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.



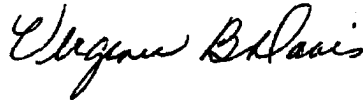
Donald L. Fuller  
Director of Settlements

Executed on December 15, 2003.

Subscribed and sworn to before  
me on this 15th day of December, 2003.



Notary Public:

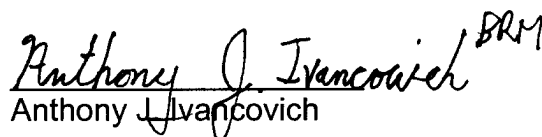


My Commission Expires: 6-30-04

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing documents upon each person designated on the official service list compiled by the Secretary in the above-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 15<sup>th</sup> day of December, 2003.

  
Anthony J. Ivanovich