

California Independent System Operator

May 5, 2003

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

> California Independent System Operator Corporation, Docket No. ER02-1656-009, 010 and 011 and Investigation of Wholesale Rates of Public Utility Sellers of Energy and Ancillary, Services in the Western Systems Coordinating Council, Docket No. EL01-68-017

**Dear Secretary Salas:** 

Re:

Enclosed for filing in the above-captioned dockets, please find the Status Report of the California Independent System Operator Corporation ("ISO") that will be released to the public.

Simultaneous with the instant filing, the ISO is submitting a version of the Status Report that contains confidential information. In the instant version of the Status Report, the confidential information, *i.e.*, **Attachment A**, has been redacted. In all other respects, the version of the Status Report to be released publicly is identical to the version of the Status Report that contains confidential information.

Respectfully submitted,

Charles F. Robinson Anthony J. Ivancovich

The California Independent System

Anthor J. Ivacou. I Jam

Operator Corporation 151 Blue Ravine Road

Folsom, CA 95630

Attorneys for the California Independent System Operator Corporation

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

California Independent System Operator Corporation	) ) )	Docket No. ER02-1656-000
nvestigation of Wholesale Rates of Public Utility Sellers of Energy and Ancillary Services in the Western Systems Coordinating Council	)	Docket No. EL01-68-017

## STATUS REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The California Independent System Operator Corporation ("ISO")1 respectfully submits this monthly progress report ("Report") in compliance with the Commission's November 27, 2002 "Order Clarifying The California Market Redesign Implementation Schedule", 101 FERC ¶ 61,266 (2002) ("November 27 Order"), issued in the above-referenced dockets.

The November 27 Order required the ISO to file reports on the first Monday of each month, beginning in January 2003, to update the Commission on the ISO's progress in designing and implementing the ISO's Market Redesign ("MD02"). The Commission directed the ISO to file a full MD02 implementation plan, including a detailed timeline with the sequential and concurrent nature of the design elements, the software and vendors (once selected) to be used and the cost estimates for each element. The November 27 Order required that the

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

first report include explanations of the following: (1) any alternative methods of developing MD02 elements; (2) the ISO's progress in developing MD02 elements; (3) the action required to establish such elements; and (4) a detailed breakdown of the total start-up costs.<sup>2</sup> The Commission directed the ISO to update the MD02 implementation plan on a monthly basis, indicating the progress made and the upcoming steps.

On January 10, 2003, the ISO filed its first Status Report in compliance with the November 27 Order. Subsequent to the first filing, the ISO has continued to file monthly Status Reports with the Commission on the first Monday of each month. The instant Report is intended to satisfy the monthly reporting requirement in the November 27 Order, update the information included in prior Status Reports and generally advise the Commission of the current status of MD02 implementation.

### I. MAY STATUS REPORT

Section A includes a narrative of the significant changes to the "MD02 Program Plan – High Level" schedule that have occurred since the filing of the April 7, 2003 Status Report. Section B includes a narrative regarding the MD02 budget along with an updated Budget Tracking and Status Report.<sup>3</sup> The Budget Tracking and Status Report is contained in Attachment A. Attachment A continues to remain confidential at least until the ISO has negotiated and contracted with bidders for significant portions of the required functionality. In

November 27, Order at P 9.

The narrative includes only non-confidential information.

that regard, it would not be commercially prudent to reveal estimates of vendor costs prior to negotiation and contracting with successful bidders. Section C identifies the ISO's key MD02 implementation issues including the previous month's accomplishments, major milestones, upcoming activities, issue resolution with stakeholders and items requiring timely resolution by the Commission in order to meet the project schedule.

### A. Current Project Timeline

Phase IB: In the April 7, 2003 Status Report, the ISO reported that the vendor and the ISO had agreed on final design details and that software development was underway. Phase IB implementation continues, and the vendor is developing code for the real-time security constrained economic dispatch ("SCED"), which will replace the current real-time imbalance energy dispatch system. Further, internal developers are working on uninstructed deviation penalty software. The ISO currently is developing test cases for the integration of both elements, along with the accompanying settlements changes, for the testing phase of the project. The projected Phase IB implementation date continues to be October of 2003.

Phases II and III: In the April 7, 2003 Status Report, the ISO reported that, on March 26, 2003, all three of the pre-qualified vendors submitted responses for the services under the Integrated Forward Market/Locational Marginal Pricing using the Full Network Model Request For Proposals ("IFM/LMP RFP") on March 26, 2003. Four ISO business unit teams currently are evaluating the responses to the IFM/LMP RFP and additional vendor questions were sent

out on April 18, 2003. The ISO has scheduled interviews with each bidder's references for April 30, 2003 through May 5, 2003. Additionally, vendor interviews are currently scheduled for May 20-22, 2003.

Other Phase II work efforts are focused on determining the scope of changes required for the Master File (the repository of resource and load characteristics) and underlying changes to transactional data storage in the Market Transaction System. The Phase III teams are performing studies for both Locational Marginal Pricing ("LMP") and Congestion Revenue Rights ("CRR"). See infra detailed discussion of the LMP and CRR studies in Sections C.3 and 4, respectively.

### B. MD02 Budget Update

Attachment A -- the Budget Status and Tracking Report (which remains confidential) -- compares actual expenditures to forecast expenditures.

Specifically, Attachment A shows the budgeted amounts, the amounts authorized by the ISO Board of Governors ("Board"), the amounts that have been approved through the internal ISO accounting process, and actual expenditures to date.

The Budget for the MD02 program continues to operate within the forecasted amounts and the ISO 2003 capital budget and unbudgeted items currently are under evaluation. Some of the unbudgeted items include the LMP cost/benefit analysis and replacement of the Settlements system. Both these items are additions to the original MD02 budget and eventually will be incorporated as additions.

### C. Key Issues

### 1. Settlements Request for Proposal

In the April 7, 2003 Status Report, the ISO reported that on March 7, 2003 a Request for Information ("RFI") for Phase II and Phase III Settlements and Market Clearing Systems was posted to its website.

The ISO released the Phase II and Phase III Settlements and Market Clearing Systems Request for Proposals on April 24, 2003 to potential vendors that the ISO determined are qualified to provide such a system. The ISO will keep the Commission apprised of the vendor selection process in subsequent Status Reports.

### 2. Phase IB Technical Issues

On March 11, 2003, the Phase IB team began conducting bi-weekly conference calls to discuss issues that arise and to keep stakeholders apprised of the implementation of Phase IB. The ISO continues to work with Market Participants through bi-weekly conference calls. Topics discussed in April included Uninstructed Deviation Penalty ("UDP") Aggregation Criteria, settlements for real-time ties, and minimum load cost compensation.

### 3. Locational Marginal Pricing Studies

In the April Status Report, the ISO reported that a third LMP price dispersion study was underway that would show projected pricing area differentials that could be expected given a certain set of parameters. The current study will use an alternating current ("AC") power flow model to more

closely replicate the underlying model expected to be used in production. Further, this study will use 2002 cost data.

## 4. Congestion Revenue Rights Study

A Congestion Revenue Rights study has been initiated to determine how many CRRs will be available for load serving entities ("LSEs"). There still appears to be some reluctance by certain Market Participants to release source and sink information that is required to make the study meaningful. Even if the required information were provided to the ISO immediately, the ISO expects that the study would be completed no earlier than May 31, 2003.

# 5. LMP Cost-Benefit Analysis

In the April Status Report, the ISO reported that, in response to a request from California State Legislators, the ISO Board of Governors directed that a "peer reviewed" cost-benefit analysis of LMP be performed. The ISO has interviewed four nationally recognized consulting firms that have performed, or are capable of performing, a LMP cost-benefit analysis. The four consulting firms interviewed offer a mix of expertise, both in the area of technical modeling of system pricing (to address the quantitative elements of such a study) and in market design (to address the qualitative aspects of the study).

# 6. Stakeholder Participation

In the April Status Report, the ISO reported that the ISO conducted stakeholder meetings from April 1-4, 2003 to present the overall design with a focus on elements that have changed since the original proposal filed in May of

2002. Preliminary feedback from stakeholders indicates that, while they appreciated the opportunity to hear about design details and how such details would be integrated into the overall market design, many still felt that there should be additional opportunity for policy discussion. Some of the questions raised by stakeholders involve implementation details that need to be considered prior to making a conceptual market design filing with the Commission.

In other efforts to keep stakeholders abreast of MD02 activity, the ISO is producing a newsletter, "WATT's New With MD02", and posting such newsletter on the ISO website. The first two issues are provided in Attachment B. The focus of the newsletter is on implementation schedule activity, as well as providing answers to frequently asked questions. While not intended to be a replacement for the technical information typically posted on the website in the form of white papers and presentation material, the newsletter will provide a higher-level, less technical consolidated overview of current activity.

### 7. MD02 Conceptual Filing With The Commission

In the April Status Report, the ISO reported that the Board of Governors would be reviewing and authorizing a conceptual market design filing. The ISO recognizes that there is a need to provide a comprehensive overview of the current design to the Commission, respond to questions raised by stakeholders, and address concerns expressed by certain legislators before proceeding with a conceptual comprehensive market design filing.

While the ISO believes that implementing the proposed market design elements is critical to stabilizing the current electricity market in California, the

ISO feels compelled to make sure that the design submitted to the Commission

is well thought through and understood by key policy makers and Market

Participants. The ISO will continue to provide information in these monthly

reports regarding the status of the filing.

II. CONCLUSION

In Section I of this Report, the ISO has responded to the Commission's

request for specific information on progress, critical issues, budget and

alternative methods for the MD02 implementation effort. The ISO appreciates

having the opportunity to comment and report on the progress being made in

MD02.

Respectfully submitted,

Anthony J. Wancovich

Counsel for the California Independent

**Operator Corporation** 

Dated: May 5, 2003

8

### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon the Public Utilities Commission of the State of California, upon all parties of the official service lists maintained by the Secretary for Docket Nos. ER02-1656-000 and EL01-68-017.

Dated at Folsom, California, this 5th day of May 2003.

Anthony J. Ivancovich
The Collision In Inches

The California Independent System

**Operator Corporation** 

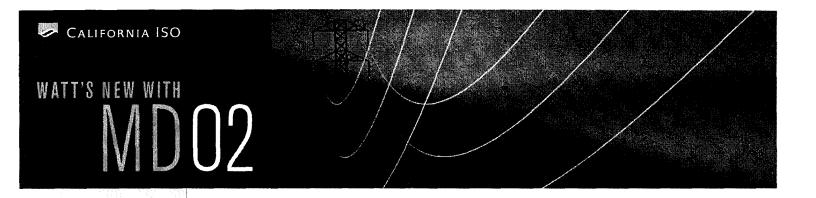
151 Blue Ravine Road

Folsom, California 95630

# ATTACHMENT A

Privileged Information Has Been Redacted Pursuant to 18 C.F.R. § 388.112





March 31, 2003 Issue Nº: 1

IN THIS ISSUE....

Welcome

LMP — In English, Please.

LMP Studies

FTRs vs CRRs

MD02 Communication Channels

# WELCOME

Watt's New with MD02 is the California ISO's latest endeavor to communicate the many complexities of market design. This is our version of headline news — giving you news-you-can-use in a quick-reading format that we think will help you stay on top of Market Design 2002 developments. Why do we keep calling it MD02 when it is 2003? The "02" in MD02 is, of course, the year in which the California ISO officially launched the overhaul of its markets in response to an energy crisis that none of us shall soon forget. MD02 serves as a reminder of when work began on the ISO's redesign.

Every other week, we will provide a few highlights — perhaps feature a design element or two. In addition, we will give you a look ahead — flagging all the big dates coming up such as important milestones and meetings.

We will also reserve a section for key contacts at the ISO and how your voice can be heard as we develop and implement a program designed to:

- Fix flaws in the original market design
- Stabilize the wholesale electricity spot market
- Help foster investment in energy infrastructure (such as new supply and transmission capacity)
- Minimize the size and role of the ISO spot market (to about 5% of the total wholesale energy market)
- Ensure safe and reliable operation of the grid

Read Watt's New with MD02 online at www.caiso.com.

PROBLEM	SOLUTION
Current design prone to price spikes & manipulation	Integrated Forward Market secures resources BEFORE real time, with more transparency, meeting consumers' electricity needs reliably and at the lowest cost
Cannot adequately manage electron traffic jams before they occur	New tools to catch Enron-like games & ensure power schedules are possible
Existing system provides for only limited demand response	Creation of a day-ahead market with hourly price signals will enable consumers to conserve electricity during peak demand
Demise of CA Power Exchange leaves gaping hole for trading wholesale power	24-hours before electricity is consumed, the ISO will accurately match lower cost power with forecasted demand for electricity
Computer/software systems are seven years old and outdated	Computer infrastructure streamlined and strengthened

# LOCATIONAL MARGINAL PRICING — IN ENGLISH, PLEASE

You operate a chain of a 100 hotels up and down California. You know how many guests have reservations for tomorrow, and how many rooms you have in total, but your reservation system doesn't tell you which guests want to stay at which hotel. You only know how many guests are staying in each of three regions; Northern, Central and Southern California. You can't really plan anything until they show up at the front desk, and then you have to scramble to find rooms for them

all. Some guests may show up at a hotel that's already full, and you have to pay cab fare to get them to another hotel. You have to charge a higher room rate to all your guests to cover the cab fares. If you knew how many people wanted to stay at each hotel ahead of time, you could direct guests away from a full hotel to one that has rooms far more easily and at less cost.

continued on page 2...

### BIG DATES

Mark Your Calendar: Upcoming Meetings at the ISO

April 1-2, 2003: Integrated Forward Market "Bid-to-Bill"

April 3-4, 2003: LMP and CRR Issues

April 10, 2003: Market Issues Forum continued from page 1...

This is the concept behind the California Independent System Operator's (ISO) proposal for Locational Marginal Pricing (LMP). The ISO accepts energy schedules for the following day, and checks to see if those schedules will "fit" on the grid. But the current market design and computer systems only recognize transmission bottlenecks between the three large zones in the state. Bottlenecks within the same zone are essentially invisible. The ISO can't adjust those schedules until real time — when the customer is standing at the front desk waiting to check in. It is costly and risky at best.

Long-term contracts and new power plants have helped stabilize California's wholesale electricity market; however, one of the largest remaining threats is local market power that is created by the lack of space on the transmission grid. The problem could worsen when additional power plant units are added to the grid. LMP is the tool used to deal effectively with this problem. It makes the costs of transmission limitations transparent by giving hourly data on transmission impacts of locating power plants at any given point on the grid.

LMP, in conjunction with other aspects of the market redesign effort, will allow the ISO to recognize bottlenecks ahead of real time. The ISO will be able to adjust energy schedules a day ahead of time to fit onto the grid in the most efficient manner and at the least cost. LMP is in use in Pennsylvania, New Jersey, Maryland, New York, New England and several Midwestern states as well.

Based on analysis of the current flawed market structure in California and the experience of other grid operators that currently use LMP, the ISO believes that LMP has the potential to result in reduced wholesale electricity costs in California. While the ISO and the markets it runs do not directly impact retail rates paid by consumers, reducing wholesale costs should eventually lower retail costs as well.

The ISO is commissioning an independent study to evaluate the costs and benefits associated with LMP. In addition, the ISO is conducting several internal studies to pinpoint how LMP will affect the ISO wholesale markets.

# LMP STUDIES

There are a lot of assumptions about how MD02 and specifically Locational Marginal Pricing (LMP) can help fix flaws and reduce costs in the California Independent System Operator's (ISO) spot markets for energy. There is ample evidence from other system operators that LMP is the preferred method for dealing with transmission congestion. It will allow the California ISO to recognize and manage congested transmission lines in the day-ahead time frame, rather than in "real time." When there is congestion, the ISO obtains power from other sources to offset the power that can't be delivered as planned.

Doing that a day ahead of time, in addition to providing more stable and reliable grid operations, has the potential to lead to lower costs, but how can we be sure? In order to make sure, the ISO is embarking on an extensive set of studies based on real operating data to see how LMP would have affected costs under real conditions. One of these studies is already complete. It shows relatively little impact on prices, but it was done using data at a time when prices were relatively low already. It's available at: http://www.caiso.com/docs/2003/02/05/2003020513210610375.pdf

Two more LMP studies are planned, and will use data from other time periods, and a more comprehensive methodology. In addition, the ISO is commissioning an independent third party consultant to examine the costs and benefits associated with LMP. That process is still in the earliest stages, but we will work to see that the independent report will be available as soon as practical. The ISO believes LMP, in conjunction with the other elements of the overall market redesign, offers many opportunities to reduce costs and enhance reliability.

# FTRs vs. CRRs

The California ISO has been conducting annual Firm Transmission Rights (FTR) auctions since 1999. FTRs are instruments that are used as a hedge or insurance against congestion charges when scheduling energy in the Day Ahead market. FTR owners who choose not to utilize their FTRs may receive congestion rents from the ISO when others use the transmission space reservations to schedule energy. These FTRs are sometimes referred to as FTR "options" because owners have the option to schedule or not schedule their use. Owners who choose not to schedule their use do not lose money; rather the ISO markets may actually pay them if someone else needs the capacity. Under MD02,

the ISO also plans to auction a congestion-hedging instrument. Rather than use the term Firm Transmission Rights or FTRs, the ISO is adopting the more nationally recognized terminology of Congestion Revenue Rights or CRRs. These are similar to FTRs in that CRRS can be "options", but unlike FTRs some CRRs will be auctioned by the ISO as "obligations." That is, those who own these CRR obligations are obligated to use them in the Day Ahead Market or face the possibility of owing money to the ISO markets. CRR obligation owners could owe the ISO money if their decision not to schedule energy using the CRR results in congestion in the opposite direction of their right of use.



# MD02 COMMUNICATION CHANNELS

We want to make it easier to find answers to questions about MD02, so the ISO offers several avenues depending on the type of information you are requesting. Here is a brief list of some major MD02 information channels:

- First and foremost is the California ISO website. On the home page, http://www.caiso.com the MD02 icon links users to all the key sites associated with the new market design.
- Next, specific MD02 questions can be submitted to the MD02 Questions and Answers page located at http:// www1.caiso.com/discus/messages/736/736.html. To send a question, select the topic of your choice, type in the question and your name. Your question will appear on the website within 24 hours and a response will be posted within 10 business days.
- The California ISO also uses an innovative tool known as the Stakeholder Online Forum to solicit feedback on selected MD02 topics. To gain access to this site send an email to jpayton@caiso.com stating your first and last name, affiliation, email address and phone number. Your ID and password will be sent back to you within two business days.

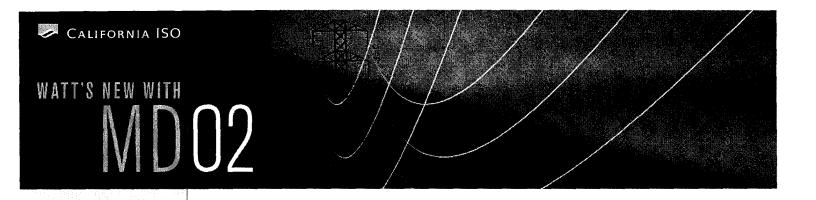
 Finally, there is always the telephone and e-mail. Here are some helpful hints:

Scheduling Coordinators — contact your assigned Account Manager. For a listing of Account Managers please go to http://www.caiso.com/docs/2003/02/14/200302141131236802.pdf

State Legislators and staff — contact Government Affairs; Mary McDonald at (916) 608-7011 memcdonald@caiso.com or Robin Smutny-Jones at (916) 608-7142 rsmutny-jones@caiso.com.

Federal Legislators and staff — contact Teri Moreland at (202) 295-8361 temoreland@swidlaw.com

News Media — contact Communications Department; Stephanie McCorkle (916) 351-2238 smccorkle@caiso.com or Gregg Fishman at (916) 608-7076 gfishman@caiso.com. Editors of Watt's New with MD02.



April 21, 2003 Issue Nº: 2

### IN THIS ISSUE....

ISO Starts Fifth Year of Operation with Four-Day Stakeholder Meeting

One-Stop Shopping for Last Minute Energy

AMP Update

Support for Marginal Pricing

MD02 Questions and Answers Web Page

Fast Facts on MD02

# ISO STARTS FIFTH YEAR OF OPERATION WITH FOUR-DAY STAKEHOLDER MEETING

"This is part of our ongoing

dialogue with those affected by

the new market."

The California Independent System Operator (ISO) held four days of stakeholder meetings on Market Design (MD02) as it marked its five-year anniversary the first week of April. While there have been extensive discussions about the concepts of MD02, these latest meetings took the discussion deeper into the nuts and bolts of the individual MD02 elements, detailing how market participants will interact with the ISO and with each other when the new market structure is in place. Turnout at the sessions was strong, and many people participated via telephone. Director of Client Relations Byron Woertz acted as meeting facilitator. "We want to make sure we're communicating effectively with our market participants," said Woertz.

The attendees represented a cross section of the energy industry, including, generators, utilities, municipals and state and federal regulatory agencies. "This is part of our ongoing dialogue with those affected by the new market,"

said Woertz. Topics included how wholesale prices may vary at locations throughout the state, the workings of the last minute real time markets, how local generating units will be compensated to keep the grid

operating, and how the ISO will check the ability of power plants owners to charge outlandish prices. The presentations are on the web at http://caiso.com/docs/2003/03/28/20030328174816392.html.

### New Congestion Revenue Rights (CRR) Study

One of the hottest topics at the stakeholder meeting was how the ISO intends to allocate space on the transmission lines ahead of time and deal with the financial transactions that result. The ISO is engaged in an extensive internal study now to examine these issues. Similar to placeholders or transmission line reservations, Congestion Revenue Rights

represent capacity on transmission lines that will be allocated or auctioned to market participants so they can hedge against "congestion" or transmission bottlenecks on the grid. The first study focuses on how to allocate these valuable assets, taking into consideration the pre-existing contractual rights held by some market participants. Results of the study could be out by late May or Early June.

#### Review the Basics of Congestion Revenue Rights

CRRs are "reservations" to move power from one place to another. The concept is to make sure if there is congestion on a line you will be indifferent to the cost of relieving congestion. If you knew you were going to be flying between Sacramento and Los Angeles every week, you might want to buy a bunch of tickets in advance at a guaranteed price. You call the airlines a day in advance to confirm a specific flight. If that flight is full, the airline is still obligated to get you to Los Angeles at the same price and on time, even if you have to go through

Fresno to get there (unlike an airplane, electricity travels at the speed of light, so a detour doesn't affect arrival time.)
Some CRRs may carry an obligation to use them, meaning there may be a

penalty if you make the reservation, but don't show up for the flight. CRRs can also be bought sold and traded in a secondary market place, separate from the ISO.

These "reservations" offer the flexibility to make sure market participants get access to "flights" they reserved, or get paid for letting someone else fly instead. The marketplace benefits by making sure that busy transmission lines carry every megawatt they can. Congestion Revenue Rights will become valuable commodities. Everyone involved wants to make sure they are allocated fairly. The ISO study that's underway will help ensure that.

#### BIG DATES

Mark Your Calendar: Upcoming Meetings at the ISO

ISO Board of Governors Meeting April 24 Starting at 10:00 a.m.

Market Issue Forum Meeting May 8 Starting at 9:00 a.m.

# ONE-STOP SHOPPING FOR LAST MINUTE ENERGY

Why do supermarkets also feature banks, pharmacies, photo developing and other services? Because a one-stop shop is more convenient. A major part of MD02 is the Integrated Forward Market (IFM)—a one-stop shop for energy, transmission space and reserve power (that cushion of surplus megawatts that helps the ISO maintain grid reliability in case a power plant trips off line). The three market "products" are what the ISO depends on to help it to keep the lights on in California. This new day-ahead market proposal gives market participants more options for selling their power and/or securing needed resources, and gives ISO operators the opportunity to have a more competitive means for balancing supply and demand.

Currently, the ISO runs markets for transmission capacity and ancillary services in the day-ahead, but it cannot obtain energy to balance the system until real time. The different time frames for the different products can leave the markets vulnerable to gaming. With the Integrated Forward Market, the ISO will run submitted schedules and bids through an "optimization program" that will obtain the perfect mix of all three products needed to meet the next day's needs. The ISO's computers will then rerun the optimization a couple of hours before real time to fine-tune supply and demand. When used in concert with an accurate electronic model of the grid, the fully optimized forward market will allow the ISO to make the most efficient use of the available resources.

# AMP UPDATE

The mainstay of Phase I of the ISO's market redesign — the Automated Mitigation Procedure or AMP — was implemented at the end of October 2002. A computer automatically lowers bids offered into the ISO markets that are considered too high as defined by predetermined criteria. It replaced the westwide mitigation tool FERC implemented in June 2001 that expired last October. The new system works by identifying bids that do not match up with recent bidding history and current market prices. Those bids are put through a three part test (see box). Generators in California must also offer all their available generation into the ISO (holdover from FERC mitigation regime) and there is also a \$250 damage control cap.

To date, bids have stayed under the thresholds where they would be mitigated. However, the California ISO's Department of Market Analysis reported to the Board of Governors at their last meeting that certain bidders failed the first automatic test — the Conduct Test 48 hours in February.

Of those hours, approximately four units that typically sell significant volumes of electricity through Real-Time Market failed the conduct test for the first time. This is due in part to the lag between the sudden increase in the price of natural gas in that week, which increased suppliers' operating and/ or opportunity costs, and the natural gas price adjustment of reference levels for thermal units, which typically occurs on or about the seventh day of the following month.

No unit has yet failed the seond test — the Impact Test — a considerably stricter standard than the Conduct Test.

AMP (Automated Mitigation Procedure) Steps

- 1. Is the bid over \$91.87? If so, proceed to Conduct Test.
- 2. If it is over \$91.87, does the bid exceed its typical price by lesser of \$100/MWh or 200 percent over historical bids? If so, the bid fails the Conduct Test. Proceed to Impact Test.
- 3. If Conduct Test fails, bid is replaced by reference level bid and new Market Clearing Price (MCP) is determined. If new Market Clearing Price is at least \$50 or 200 percent below that price under original bid, Impact Test fails. The bid is then mitigated (to date, no bid has been mitigated).



# SUPPORT FOR LOCATIONAL MARGINAL PRICING

A lot of issues have been raised about Locational Marginal Pricing (LMP) as part of the ISO MD02 market redesign. This important aspect of MD02 allows the ISO to recognize and manage over-burdened transmission lines as part of the "day-ahead" scheduling process, rather than in real time as is the case now. It can also help determine where additional transmission lines are needed (for a full description of LMP see Issue #1 of Watt's New with MD02.) Although Locational Marginal Pricing is working well in other electricity markets, it is also a complex concept and there are concerns that the impact on wholesale electricity prices has not been fully explored.

The ISO's Market Surveillance Committee (MSC), an independent review panel of four academicians, recently issued a full report about LMP, addressing some of the concerns that have been raised. "However, we also feel that the ISO's most recent plan for testing and implementing its MD02 design, for the most part, satisfies the concerns that have been raised." The full MSC Report is available at http://www.caiso.com/docs/2003/04/07/2003040713192323878.pdf.

The report notes that simulating this type of wholesale pricing is useful, but simulations can't predict actual market

behavior. Testing it under real market conditions will provide a better analysis for potential impact of LMP on consumers. The ISO plans to do both, running a series of simulations, and also testing in between Phase II and Phase III of MD02 implementation. "...the proposal calls for running the new system in parallel with the existing system for at least several months before "plugging in" the new system to the market," wrote the Committee in its report. "To us, this constitutes the most reliable approach to testing the system." They emphasized that the market participants will have ample opportunity to analyze the impacts during this testing.

2002 Market Surveillance Committee

Frank Wolak (Chair)

Stanford University, Professor of Economics

#### Benjamin Hobbs

Johns Hopkins University, Professor of Geography & Environmental Engineering, and Mathematical Sciences

#### **Brad Barber**

University of California-Davis Graduate School of Management, Professor of Finance

#### Tames Bushnell

University of California-Energy Institute, Research Director

# MD02 QUESTIONS AND ANSWERS WEB PAGE

Did you know that the MD02 Q&A Web Page is the best place to get the "official" ISO response to your MD02 questions? It's convenient and easy to use. Choose the MD02 icon found on the CAISO Home Page (http://www.caiso.com) and then click on the Q&A icon, which brings you to the MD02 Questions and Answers page (also located at http://www1.caiso.com/discus/messages/736/736.html). Select the topic of interest and check out all of the questions and answers that have been posted previously. You may find that your question has already been answered! Otherwise enter your name and your question. The question will appear on the website within one business day and a response will be provided within ten business days. Here is an example of a Phase 1B question that was recently posted:

Please explain more precisely CAISO's proposal to make units that deviate from CAISO dispatch instructions ineligible to set MCP.

By Alan Comnes, Dynegy

To: Alan Comnes, Dynegy

Any otherwise eligible resource failing to perform within ten percent (10%) of its Dispatched Operating Point, as measured at the end of the Dispatch Interval, will not be eligible to set the relevant Market Clearing Price.

By Q&A Manager

Upcoming issues of "Watt's New" will highlight other questions that have been recently submitted to the MD02 Q&A web page.

# FAST FACTS ON MD02

New under the MD02 link on the California ISO website www.caiso.com is a resource for learning quick facts about market redesign. You can't miss it. Look for the bold FAQ next to the Q/A (Question/Answer) section. Click to a library

of fact sheets that detail elements of MD02. Keep watching for the addition of more "Frequently Asked Questions". The fact sheets will be giving you the latest information on our plans to improve the structure of the ISO markets.