

Memorandum

To: ISO Board of Governors

From: Steve Berberich, Vice President, Corporate Services

Deborah Le Vine, Director of Market Services and MRTU Program Manager

Nancy Traweek, Director of Operations Support and MRTU Readiness Lead

Date: October 22, 2008

Re: **Decision for FERC 60-Day Filing to Support January 31, 2009 MRTU Go-Live**

This memorandum requires Board action.

EXECUTIVE SUMMARY

In this memorandum, Management describes the status of the Market Redesign and Technology Upgrade (“MRTU”) project through October 2008 and proposes a plan for going live on January 31, 2009. In addition, Management requests authority from the Board of Governors to file the required MRTU readiness certification with the Federal Energy Regulatory Commission (“FERC”) no later than sixty days before January 31, 2009. This request is consistent with the Board resolution at the September 9th Board meeting directing Management to prepare a 60 Day Readiness filing with the Federal Energy Regulatory Commission. That resolution was based on progress to-date and assumed further satisfactory progress. We have made that progress and this memorandum will affirm our advancement toward *go-live*.

The ISO staff has implemented final MRTU functionality and stabilized the market simulation environment, providing a rich testing environment for market participants. The day-ahead market is running consistently and meeting the production timeline for publishing results with a few exceptions. For example, the additional time needed to set up scenarios for testing sometimes delays publication of day-ahead market results. The hour-ahead scheduling process (“HASP”) has been finishing on time and meeting the availability and timeline requirements in the tariff for publishing results. The 15-minute Real-Time Pre-Dispatch (“RTPD”) and 5-minute Real-Time Dispatch (“RTD”) are also finishing on time and dispatching within the availability and timeline objectives in the tariff. Almost all settlement charge codes have been bid-to-bill validated. The ISO grid operators are meeting their training on the MRTU processes and systems, including running the day-ahead market in both the Update 2 simulation environment and the Grid Operations test environment.

LECG has issued a final report on the quality of solutions in market simulation. The report concludes that there are no substantial unresolved issues preventing the ISO software systems from calculating prices

consistent with the ISO tariff and locational marginal pricing (LMP) methodology, and there are no material unresolved issues preventing the software systems from committing and dispatching load and generation based on least cost bid dispatches. Since their last report to Board of Governors issued on July 1, 2008, LECG has continued to evaluate the results, focusing on issues involving the implementation of forbidden regions, intertie price calculations, energy limits, cascading ancillary service prices and testing cases that included binding nomogram and contingency constraints, wheeling transactions, and multi-hour block transactions. Management will continue to validate cases using the methods and tools provided by LECG and consult with LECG if any anomalies are observed.

Market participants continue to have concerns about implementation readiness. Most notably, these concerns relate to questions about pricing, including parameter tuning, solution quality, and Residual Unit Commitment (“RUC”). Concerns also include their ability to validate settlement charge codes in their own systems and residual system variances.

The ISO will continue testing the system with participants through the fall in preparation for starting pre-production on January 1, 2009. In order to start MRTU on January 31, 2009, the ISO must file certification of MRTU readiness with FERC no later than December 1, 2008.

Below is additional information detailing the ISO’s current state of MRTU market readiness and our ongoing efforts to prepare for the market launch, organized as follows:

- I. Technology Readiness
 - a) Day-Ahead Market
 - b) Real-Time Market
 - c) Scenario Testing
 - d) Quality of Solution
 - e) Settlements
 - f) Remaining MRTU Activities
- II. Internal Business Unit Readiness
- III. External Readiness
- IV. Reporting and Upcoming Events

Proposed General Session motion:

Moved, that the ISO Board of Governors directs Management to file, on or before December 1, 2008, the MRTU Readiness Certification with the Federal Energy Regulatory Commission (FERC); and

Moved, the ISO Board of Governors will continue to monitor status of the MRTU program until MRTU go live is achieved.

I. TECHNOLOGY READINESS:

The ISO is currently executing the final phase of market simulation, known as Integrated Market Simulation Update 2 (Update 2). In this phase, all MRTU systems have been integrated, allowing market participants to test all MRTU applications end-to-end and verify all market functionality that will be available at MRTU *go live*. The market simulation has run continuously since August 18 until the week of downtime that began on October 17. The ISO implemented a rigorous change management process on October 1 to address system changes. The tables in the sections that follow demonstrate how the day-ahead market is running; the level of participation by market participants and the high availability of market systems; and how the real-time market is running and the quality of solutions.

a) Day-Ahead Market Status

Bidding in the day-ahead market closes at 10 a.m. The market is then run, with results expected to be published by 1 p.m. Failure to meet this publication timeline is generally associated with scenario execution, human error or solution infeasibilities associated with participant bids. We need to improve performance of the day-ahead market so that, if necessary, we can re-run the market and still publish by 1:00 pm. We have received performance fixes from our prime vendor and will evaluate them when we resume simulation on October 26.

**Day-Ahead Market Performance
August 18th – October 17th**

	Requirement	Market Simulation Results
Publish Results	Daily	100%
Without scenario	By 1300	29 of 41 days
	By 1330	7 of 41 days
	By 1400	4 of 41 days
	After 1400 (at 1409)	1 of 41 days
With participant scenario running	By 1300	7 of 20 days
	By 1330	6 of 20 days
	After 1400	7 of 20 days
Quality of Solution	Alternating Current	98%

**Day-Ahead Market Participation and System Availability
August 18th – October 17th**

Market Participation		
Participation by Generators	Average over period	85.2%
	Weekending October 17 th	99.2%
Participation by Load	Average over period	77.4%
	Weekending October 17 th	98.1%
System Availability		
Availability to submit bids	Graphical User Interface	96.53%
	Automated Programmatic Interface	96.07%
Ability to submit bilateral trades	Graphical User Interface	96.53%
	Automated Programmatic Interface	96.07%

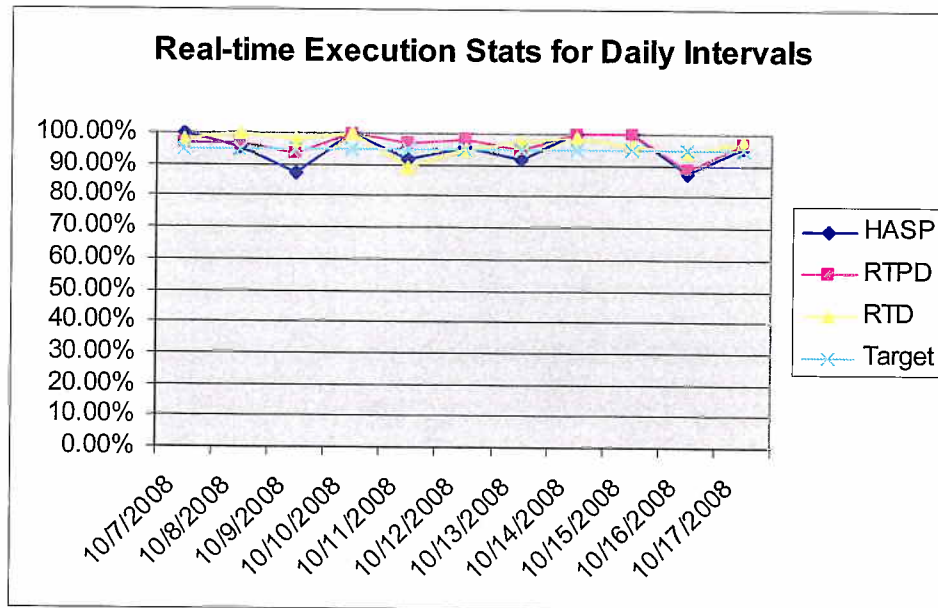
b) Real-time Market Status

The real-time market has also been consistently running and publishing results. The performance of the HASP, the 15-minute RTPD and the 5-minute RTD continue to be stable. The ISO reviews all results to ensure that all necessary data from real-time systems are available, appropriately published and passed correctly to downstream systems.

In addition, the real-time market is now integrated with the Energy Management System (“EMS”) simulator using State Estimator solutions. Although achieving an integrated solution with the EMS simulator is a major accomplishment it has certain limitations. For example, simulation does not necessarily reflect actual plant performance and system telemetry. These limitations result in some unrealistic imbalance and pricing solutions, which cannot be fully resolved in a simulation environment. We have implemented a process to produce a daily pricing report that demonstrates when abnormal pricing behavior occurs because of such simulation limitations.

**Real-time Market Performance
October 7 – October 17**

	Target	10/7	10/8	10/9	10/10	10/11	10/12	10/13	10/14	10/15	10/16	10/17
HASP	90%	100%	95.83%	87.5%	100%	91.67%	95.83%	91.67%	100%	100%	87.5%	95.83%
RTPD	90%	96.88	96.88%	93.75%	100%	96.88%	97.92%	94.79%	100%	100%	88.54%	96.97%
RTD	90%	98.26%	100%	97.92%	100%	88.89%	94.79%	97.22%	98.61%	96.18%	94.44%	97.22%



c) Scenario Testing

During September and October, the ISO staff executed and analyzed market participant-defined operational scenarios from bid-to-bill. The scenarios centered on testing various operational conditions that may exist once production starts including:

- Impact to supply, demand and existing contracts when there is a transmission derate;
- Insufficient energy, RUC or ancillary service bids or self-schedules and relaxation of limits;
- Insufficient bids to relieve congestion and the impact on prices;
- Pump impacts, pseudo tie performance, tie scheduling priority, over generation conditions, and load flow; and
- Exceptional dispatch, extremely long start units, and nomogram implementation.

The scenarios test the impact on the various applications when one of the events described above occurs. Scenarios are scheduled for the day-ahead market, the real-time market or both. This information helps market participants test bidding strategies and understand the financial outcomes when similar operational events occur in production. We tested high priority scenarios in September and began the first round of lower priority scenarios in early October. We will test the remaining scenarios by mid-November and will publish companion reports regarding scenario results. In addition, some participants have asked the ISO to re-run some scenarios to facilitate testing of their software, which we will do in November. The table below identifies the current status of the scenario testing, including the number that passed testing and those that require reruns.

	Executed	Passed	Rerun	Remaining To be Rerun	Draft Posted	Final Posted
Priority 1 (25)	25	21	3	1	23	2
P2 – Pre-Down (3)	3	1	1	1	1	0
P2 – Post-Down (6)	0					

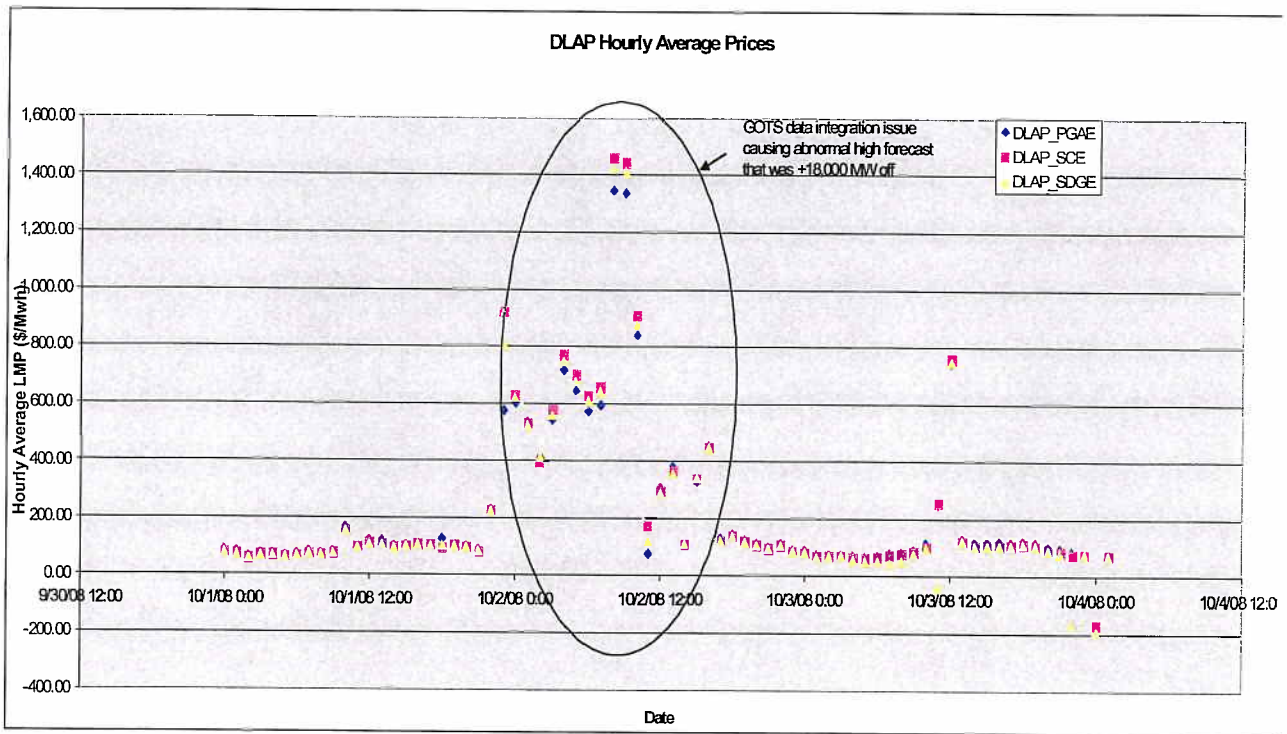
d) Quality of Solution

During this time, the ISO has analyzed the day-ahead and real-time prices to ensure that they are justified based on the participant bids received, the simulated conditions and the binding constraints. Overall, we have seen good and verifiable market solutions. For the day-ahead, HASP and real-time markets, the ISO’s staff reviews the solution prior to publication. In addition, staff reviews all Real Time interval results on a daily basis. Staff uses a tool provided by LECG for reviewing pricing results. The ISO has been discussing price analysis on a weekly basis with participants since August 30th. In these reviews, the ISO discusses the following:

- The impact of scenario runs on pricing
- Causes for observed pricing excursions
- Day-ahead market
 - The price gap associated with the mixed integer programming (“MIP”) solution (a measure of solution quality)
 - Daily performance metrics on energy, ancillary services, objective cost, RUC and other solution components
 - Average LAP peak and off-peak prices
 - Minimum, maximum and average nodal prices
 - Hourly RUC prices and average costs associated with RUC awards for each day
- Real-time market
 - General status and any observed high prices
 - Daily performance metrics for nodal, LAP and Ancillary Service prices
 - Real-time HASP prices distribution by interval count
 - Real-time dispatch LAP price distribution by interval count
 - Real-time dispatch nodal price distribution by interval count

Almost all intervals (daily, hourly, 15-minute and 5-minute) have been solved with an alternating current solution using simulated power flows with the EMS simulator. This allows for a better quality of solution than a direct current solution. Moreover, the solution quality has improved over time as the final patches have been applied to the market engine. In addition, the ISO staff reviews solutions to ensure that all necessary data from the integrated forward market systems are available, appropriately published and passing the correct data to downstream systems.

We have seen a few issues that contribute to pricing excursions. With the exception of an inertia issue that was recently fixed¹, the excursions are generally related to simulation-related issues such as running specific scenarios, congestion, modeling and load forecasting. An example of a simulation issue causing price excursions is one that arises when we switch from the EMS simulator to the less robust Siemens simulator. Over time we have reduced these issues to a minimum. The chart below illustrates price excursions arising from a simulation issue when the EMS simulator goes off line.

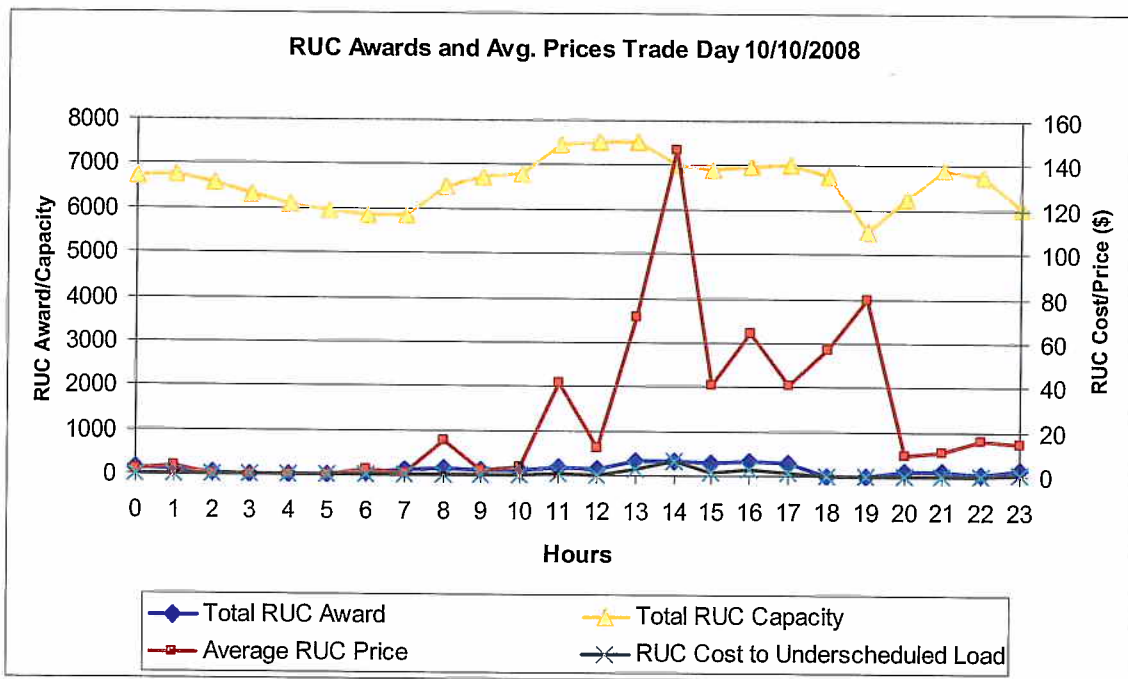


For the Market Simulation period of September 29 through October 3, the IFM prices were stable and within a reasonable range. The average load aggregated price (“LAP”) and trading hub price in the IFM ranged from \$55.26/MWh to \$63.53/MWh during peak hours and from \$15.23/MWh to \$27.08/MWh during off-peak hours. However, during limited intervals some nodal prices have been in excess of \$4,000/MWh. Such local price excursions reflect the marginal economic solution to resolve the system condition, including local congestion conditions, and affect a very limited quantity of load or generation. Thus, they have a limited effect on average LAP or trading hub prices. Our analysis of these prices shows

¹ September market results showed a high inertia in real-time market. This was a software variance that was fixed in October and inertia prices now seem to be consistent with the system conditions.

that they are correct. However, in Management's view, these levels justify adjustments as addressed by Management's proposal on uneconomic bid adjustments being presented at the October Board meeting.

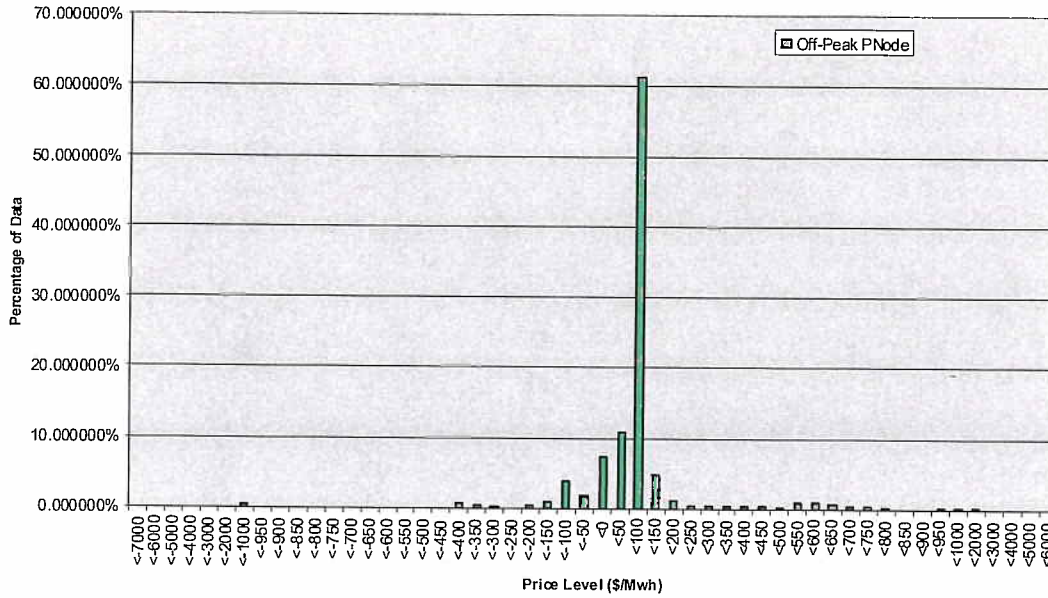
Another solution quality concern arising during market simulation, involves high RUC prices. In some cases, bids were insufficient to serve as much as 35% of the ISO forecast. Consistent with the market design, the systems procured additional RUC capacity to serve load, after accounting for service from units with resource adequacy contracts. The heavy reliance on RUC drives abnormally high RUC prices and has caused concern among market participants. Resource adequacy units, however, would typically cover the difference between bids and forecast load. Moreover, the average cost increase even under such extreme conditions was less than \$15/Mwh, as shown below.



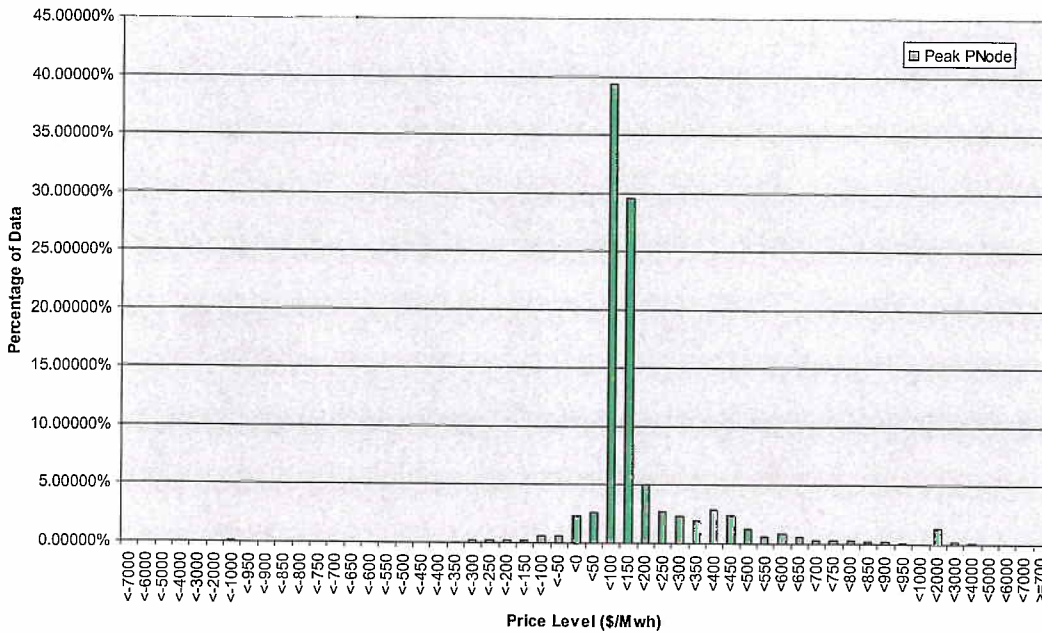
An additional RUC concern recently raised by participants has to do with the market simulation results for RUC procurement. Market participants were concerned that certain RUC results were driven by system constraint settings. At their request, the ISO changed certain settings to test the impact on RUC pricing. The changes did not result in significant changes in RUC prices. Further analysis revealed that the RUC prices reflected capacity deficiencies related either to a specific Market Simulation scenario or a large gap between the load forecast and scheduled bids. In short, the systems appear to be working as designed.

Overall, the pricing solutions are appropriate. The charts below show the price distribution in market simulation for September 11, 2008 to October 10, 2008. Although we observed low frequency high price excursions, we were conducting scenario tests during this time, which tends to cause prices to deviate from the norm. Nevertheless, the vast majority of the real-time prices fell within the bid cap range of -\$30 to \$500, with the majority of prices less than \$150 and greater than \$0.

PNode Price Frequency Distribution (Sept. 11, 2008-Oct. 10, 2008)
(Average of Off-Peak Hours PNodes)



PNode Price Frequency Distribution (Sept. 11, 2008-Oct. 10, 2008)
(Average of Peak Hours PNodes)



The data displayed above is a small snapshot of the entire data set and is included in the regular analysis the ISO is sharing with market participants. The ISO will continue to provide detailed analysis and explanation of prices and the context for observed price outliers. We also will continue to review results using the same LECG validation tools to ensure that we maintain the high quality of results.

e) Settlements

Based on the current market design, MRTU includes a total of 125 charge codes, of which 123 have been validated bid-to-bill. The remaining two charge codes are associated with a shortfall which would occur if a Scheduling Coordinator (SC) were to fail to pay the full amount due to the ISO. In order to validate charge codes, the ISO takes specific SC bids, confirms the published awards and schedules, and uses OASIS data to calculate the settlement amount. The ISO then compares this result with the settlement statement produced by the settlement system. This tedious, manual process assures that results can be traced bid-to-bill in MRTU systems.

Although the ISO has been publishing daily settlement statements since mid-February 2008 and monthly statements since May 2008, meaningful statements could not be produced until this month when nearly all charge codes had been fully validated. Currently, the ISO publishes eight types of settlement statements during market simulation:

- 1) Credit settlement statement at Trade Date plus 3 business days
- 2) Initial settlement statement at Trade Date plus 7 business days
- 3) For the first half of a month, generally the 1st to the 15th, we are publishing an initial reissue settlement statement at Trade Date plus 19 business days
- 4) For the second half of a month, generally the 16th to the 31st, we are publishing a recalculation settlement statement also at Trade Date plus 19 business days
- 5) Recalculation settlement statement at Trade Date plus 30 business days
- 6) An additional recalculation settlement statement at Trade Date plus 47 business days
- 7) Monthly initial invoice at month end plus 7 business days
- 8) Monthly recalculation invoice at month end plus 19 business days.

Since September 15, 2008, FERC has issued orders that impact charge codes, and several are still pending. Management does not anticipate that any of the MRTU policy changes that the Board is considering at the October Board meeting will impact any settlements requirements or charge codes.

f) Remaining MRTU Activities

Below are the key activities that the ISO must complete before MRTU *go live*. Management is confident that each of these criteria will be met.

- Achieve Update 2 exit criteria
- Support participant charge code validation
- File necessary tariff amendments and MRTU certification with the FERC
- Complete annual and monthly CRR auction and allocation
- Update network model
- Initiate parallel operations and cutover/reversion

Achieve Update 2 Exit Criteria: The ISO is on track to meet the 19 criteria necessary to exit the Update 2 market simulation, as discussed more fully in Attachment A. The criteria fall into five categories – 1) variance closure; 2) market simulation participation; 3) settlements publication and accuracy; 4) day-ahead and real-time market systems stability; and 5) completion of MRTU failover and fallback testing. The program management and market simulation team monitors progress toward completion of these metrics on a daily basis. The criteria that are of most concern are resolution of all critical and very high variances,

resolution or mitigation of all high variances and resolution of participant settlement issues. Management will provide a current update in the Board presentation.

Support participant charge code validation: As previously reported, the ISO has validated almost all of the charge codes. Market participants that have adopted our validation process should be able to validate their charge codes. A number of market participants have either purchased or developed their own shadow settlement systems. Because of the complexity of the data coupled with residual software variances either in our settlement system or shadow systems, a number of participants are still struggling to validate their charge codes. Consequently, the ISO has stepped up individual one-on-one sessions with market participants and their vendors to resolve issues more quickly and ensure that participants become comfortable over the next few months with their settlement statements and invoices.

File necessary tariff amendments, agreements and MRTU certification with the FERC: The ISO is on track to make the following required filings on time for a January 31, 2009 implementation date:

- 1) Miscellaneous tariff amendments arising from findings by the SAIC audit of the tariff, system specifications and business practices manuals, including ISO's own analysis of implementation specifications and tariff. (These items do not require approval from the Board as they are consistent with prior Board approval of MRTU policies and/or authorization to file the MRTU tariff.)
- 2) MRTU deferred or limited functionality items discussed with the Board of Governors that will be discussed at the October meeting.
- 3) Tariff sheets for opening the day-ahead market seven days before the first trading day.
- 4) Information filing of the MRTU Tariff sheets with January 31, 2009 effective date.
- 5) The 60-day MRTU Readiness Certification to be filed by December 1 to meet a January 31, 2009 effective date.
- 6) Metered Subsystem Agreements updated for MRTU.
- 7) Policy changes related to uneconomic adjustments in the day-ahead and real-time markets, in accordance with the July 14th Board decision and in compliance with the FERC June 25 Order (P 162-164) regarding load aggregation demand clearing; and pricing parameters details.
- 8) Price cap/price minimum tariff amendment, if approved by the Board of Governors in the October meeting.
- 9) OASIS waiver under MRTU similar to the existing OASIS waiver in production.
- 10) Big Creek physical scheduling plant agreement to conform to MRTU.
- 11) The transition for Blythe from merchant firm transmission rights to merchant CRRs.
- 12) The calculation of available transmission capacity under MRTU.
- 13) Informational filing of CRRs released for MRTU *go live*.

Complete annual and monthly CRR auction and allocation: To date the ISO has completed the allocation process for Tier 1 and Tier 2 CRRs. The long-term CRR allocation results will post on October 28th. The Tier 3 allocation process starts on October 31st with results scheduled to be posted on November 11th. The annual CRR auction process will begin on November 18th and complete on December 2nd with the market

clearing by December 9th. Once the annual process is completed, the ISO will commence the monthly process to ensure that monthly CRRs are available for the January 1 *go live*.

Update network model: The Energy Management System (“EMS”) used to provide unit and system telemetry is incorporated in the market model to ensure that a combined network model is used in production. The market simulation has just upgraded to database (“DB”) 32 whereas in current production the ISO is running on DB35. We will use the next two months to converge the network models such that by the time parallel operation begins on January 1, 2009, both production and MRTU testing will be using the same model.

Initiate parallel operations and cutover: Starting on January 1, 2009, ISO operations will run 24 hours a day in pre-production. The ISO has asked market participants, beginning on January 15, 2009, to place bids and trades consistent with each day’s actual ISO demand forecast, generator availability and trades they are making in non-MRTU production. This will allow pre-production results to reflect how market participants are actually meeting their load and resource configuration each day. With regard to cutover and reversion, the ISO has worked with participants over the last year on the plan previously presented to the Board. The ISO has internally affirmed the plan and has scheduled an external table-top review with market participants for November 20. If needed, the ISO will conduct a second review on December 18.

II. INTERNAL BUSINESS UNIT READINESS

All ISO business units are currently on track for readiness before the January 31, 2009 *go live* date. In an effort to accurately monitor, track, and report the readiness activities of each ISO business unit, we created several phases, each with different milestones for deliverables, training, and process identification: Plan, Analysis, Design, Build, and the Implement Assessment.

Phase	Group A Milestone	Group B Milestone
Plan	10/1/06 – 11/31/06	11/1/06 – 1/31/07
Analysis	10/1/07 – 11/31/07	2/1/07 – 3/31/07
Design	3/1/07 – 5/31/07	3/1/07 – 5/31/07
Build	6/1/07 – 8/31/07	6/1/07 – 8/31/07
Implement Phase	9/1/07 – 11/30/07	9/1/07 – 11/30/07
Go Live Punch List	1/16/08 – Go-live	1/16/08 – Go-live

As of June 2008, each business unit has completed the Plan, Analysis, Design, Build, and Implement Phase Assessments and is currently tracking remaining activities to *go live*.

Related readiness metrics have been clearly defined and are tracked on a weekly basis. This effort includes planning for and testing specific business scenarios. The majority of the business applications have been transitioned to the business units who are currently supporting the market simulation and testing efforts by conducting their *go live* business processes.

Final sign-off for all 14 high priority business processes was completed by the business owners as of September 30. Sign-off included end-to-end testing, identification and mitigation of gaps and drafted SAS 70 controls for each business process.

With regard to training, the ISO has provided Level 100 and 200 training courses for all staff. In addition, 300 level courses were required for certain staff. Grid Operations training continues, including hands-on, operational scenarios and specific focused training. An end-to-end walkthrough was conducted in June that incorporated each operations position, system functionality and business processes. The walkthrough was successful and identified gaps are currently being addressed. Also, Grid Operations has been supporting the market simulation activities by conducting the day-ahead market runs on a daily basis. In the upcoming weeks, this support will expand to other aspects of the end-to-end operations processes. Grid Operations is currently preparing to support real time markets, outage scheduling, and intertie scheduling.

III. *EXTERNAL READINESS*

The ISO has observed a consistent participation rate of market participants in the implementation workshops, market simulation planning sessions, the daily phone call update, client hot line and open bridge, System Interface User Group and Settlements and Market Clearing meetings.

In addition, the ISO has conducted three market participant readiness assessments consisting of questions regarding people, process, and technology in the areas of communication, market simulation, training, organizational readiness and technical readiness. The initial participant assessment began in November 2006 and ended January 2007. The ISO used this assessment to ensure that SCs had what they needed to obtain information, training and answers to their questions. The first follow-up assessment began in June 2007 and ended in August 2007. The primary focus was to gauge the participants' MRTU implementation progress. The assessment also provided the market participants with another venue to ask questions about MRTU implementation and readiness. The readiness team recently conducted its third readiness assessment. The results are being compiled and will be shared in Executive Session at the Board of Governors meeting. The team is also preparing for the final assessment scheduled for December 2008.

With regard to training, the ISO has offered 100 through 300 level training and settlements workshops for market participants through computer based training and instructor led training. Over 1000 representatives of market participants have attended the instructor led training sessions hosted at the ISO and at the sites of several scheduling coordinators.

Recognizing that most of the formal ISO training has been presented to the market and made available on DVDs or on the ISO website, ISO has focused on the development and presentation of a series of refresher training courses over the last few months. These courses included refresher training on day-ahead and real-time scheduling activities, bidding and scheduling resource adequacy and more focused training on the metered subsystem activities. All classes have been well attended and received high marks from market participants.

IV. *REPORTING AND UPCOMING EVENTS*

Between now and *go live*, the ISO will continue to post the following reports on its website:

- Daily charge code status
- Daily participation reports
- Daily market simulation issue reports;
- Daily market simulation status reports;
- Market simulation real time data exchange reports;

- Weekly Market Simulation Issues Reports;
- Weekly Market Simulation Results; and,
- Weekly Market Simulation Report Cards.

Key upcoming dates between now and *go live* include:

November 15	Target completion of Update 2 Exit Criteria
November 20	MRTU implementation workshop
December 16 – 17	ISO Governing Board Meeting: update the Board on MRTU status
December 18	MRTU cutover/reversion workshop
December 20	Conclude market simulation testing and start holiday testing
January 1	Start pre-production
January 15	Start parallel operations
January 22	Market notice affirming MRTU readiness and launch date
January 24	Open MRTU day-ahead market
January 26 – 27	ISO Governing Board Meeting: update the Board on MRTU status
January 30	Market notice that MRTU will start on January 31, 2009
January 31	Run MRTU day-ahead market and launch MRTU

Attachment A

MARKET SIMULATION EXIT CRITERIA

The ISO has also worked with market participants to define Exit Criteria for Update 2, and is tracking the progress and completion of each exit criteria on a consolidated dashboard and progress chart. The Update 2 exit criteria will help ensure the readiness of both ISO and market participants before entering pre-production in January 2009. The Update 2 exit criteria consist of the following:

Number	Updated Criteria	Status
Variance Availability		
U2.01	Simulation concludes without any open Critical and Very High variances. At least one meeting will be scheduled with market participants as a collaborative effort to review all variances prior to exiting IMS Update 2. High variances will be repaired and tested when possible while remaining High variances will be mitigated.	Currently 0 Critical issues and 17 Very High issues exist and are being resolved. ISO has met twice with market participants to review the issues. Currently 188 High issues exist and ISO is evaluating them to determine which will be resolved versus which will be mitigated.
U2.17	Patches in ISO systems to address Critical ,Very High or High variances that require market participant software changes will be fully tested, installed by ISO and validated by participants prior to exiting IMS Update 2.	ISO is following this on an on-going basis. The implementation of the Change Management process on October 1 st will help ensure that participants have sufficient notice prior to deployment of a variance fix.
IMS Participation		
U2.02	CASIO will make all externally facing MRTU applications available for 100% of SCs to participate.	All external interfaces are available to participants.
U2.03	CASIO will publish the daily list of SCs participating in IMS Update 2 for SIBR, BAPI, and CMRI for market participants to evaluate what SCs that have an obligation to bid resources but are not participating.	ISO resumed posting this list on a weekly basis as of October 8 th .
Settlements		
U2.04	ISO publishes Settlement Statements and all supporting Settlement documentation including Configuration Guides and Bill Determinants for each Trade Date within TD+15 BD for each initial settlement statement through 2/8/2008 for each SC that participated in IMS Update 2 consistent with the respective SC's participation.	ISO is currently publishing settlement statements at TD + 7BD for each initial daily settlement statement. In addition, effective on the October 1 st trade date, ISO began publishing a credit statement on TD+3BD. ISO has been publishing configurations guides and billing determinants in advance of publishing statements.
U2.05	ISO publishes Settlement Statements and all supporting Settlements documentation for Month End within TD + 25 BD for each SC that participated in IMS Update 2 consistent with the respective SC's participation.	ISO has published settlement statements since March. We will continue publishing statements through the January 2009 Trade Month.
U2.06	ISO publishes Settlement Statements and all supporting Settlements documentation for CRR Auction for each SC that participated in IMS Update 2 consistent with the respective SC's participation.	CRR charge types were validated in the August monthly settlement statement.
U2.07	ISO publishes accurate Invoices and supporting Settlements documentation for a Trade Month based on respective monthly Settlement Statements for each SC that participated in IMS Update 2.	July published on August 18 th , August published on September 23 rd and September invoice published on October 14 th . These statements have become much more meaningful since validation of charge codes. As discussed earlier, two charge codes remain to be validated.

Number	Updated Criteria	Status
U2.14	Every Charge Type must be exercised and valid in accordance with the BPM for Settlements & Billing and ISO Tariff during IMS Update 1 or 2 between 12/10/2007 and 2/8/2008 Trade Dates but not every SC will necessarily be assessed the Charge Type.	123 of 125 Charge Codes have been validated and the BPM for Settlements & Billing has been updated and published to market participants.
Markets Run/Solve		
U2.08	DAM successfully solves and results are published by 1:00 PM for 7 consecutive trading days during IMS Update 2 Semi-Structured testing.	The DAM has consistently solved for the past several months, with the latest occurrence of six consecutive trade days (8/27-9/1) having published prior to or by 1 PM. We continue to track progress toward this criterion.
U2.09	No more than 5 consecutive 5-minute RT cases fail for 7 consecutive trading days during IMS Update 2 Semi-Structured testing (except in scenarios specifically testing RT failure and contingency plans or during planned outages for patch deployment). RT case failure means no dispatchable solution was reached; does not include DC solutions or solutions achieved through constraint relaxation.	RTD has successfully met this criteria for 10 consecutive days (8/19-8/28) and 8 consecutive days (9/17-9/24)
U2.10	Market Portal, SIBR, CMRI, OASIS, SLIC, ADS, BAPI, OMAR, and Programmatic Interfaces are available 97.5% of the time during the last 4 weeks of IMS Update 2 (other than periods of disaster recovery testing and backup and restore testing).	Application availability has met this criterion.
U2.13	Quality of solution to be 90% AC solution over the last 4 weeks of IMS Update 2.	Solution quality has been 100% AC since September 1 st .
U2.15	All scenarios agreed to by market participants and ISO will be successfully completed and market participants affirm completion in accordance with scenario dashboard.	Twenty-five Priority 1 scenarios were initially executed by September 26th, with 5 scenarios unsuccessful. Of these 5, 4 have been successfully re-run and 1 passed. Preliminary reports on 24 scenarios and 2 final reports are posted. Two Priority 2 scenarios are executed and 7 remain to be run.
U2.16	Market results are based on market inputs and consistent across external markets application.	Market simulation has been consistently running with market participant bids and data traceability available to participants.
U2.18	HASP Market successfully solves and publishes within timing guidelines 95% of the time for 7 consecutive trading days during IMS Update 2 Semi-Structured testing.	HASP has successfully solved 95% of the time for 6 consecutive trading days (9/17-9/22).
U2.19	RTM successfully solves and publishes within timing guidelines 95% of the time for 7 consecutive trading days during IMS Update 2 Semi-Structured testing.	RTM has successfully solved 95% of the time for 8 consecutive trading days (8/21-8/28) and 9 consecutive days (9/17-9/25).
ISO IT		
U2.11	Backup and restore plans executed for 100% of the market simulation impacted servers deemed operational critical during normal operating hours.	The initial testing was successful and the ISO will continue to execute the plans over the coming months.
U2.12	Archiving and data retention plans for all market simulation systems performed for each day of phase.	Scheduled for October.