

Settlements Meeting Summary

May 28, 2008

General Updates

The CAISO has closed down the U2 testing environment until June 1, 2008. During the down time, the CAISO continues to generate settlement statements at T+5.

The CAISO has completed the March month-end statement, although it has not yet published the statement. It is working on the April month-end statement. In response to Participants' concerns about the month-end statement file size, the CAISO has been working with its vendor to develop an improvement and has implemented a change that has reduced one of the largest March month-end statements from about 2.09 GB to about 680 MB. Once the CAISO has validated that all of the data from the larger file is included on the reduced-size file, it will publish the March month-end statement.

The CAISO has implemented use of multiple servers (15) to allow it to run multiple statements simultaneously.

Participants' Comments and Questions

- It is critical that Participants be able to validate their statements completely. Otherwise, they will not approve payments on the invoices, thus disrupting the cash flow for the CAISO and the market. The CAISO needs to make sure that Participants know how to access all of the needed files.

Responses to Participants' Questions

- The March month-end statements will not include ETC data.
- The March month-end statements will not include TO Charge Codes 384 and 385. Those CCs will be available in the May statements and maybe as soon as the April statements.
- The March statements used the Configuration file versions that were current at the time of the Trade Dated to which the statements applied. The CAISO will confirm which Configuration files were used.
- If Participants identify Billing Determinants that are missing, they should send an e-mail to Tri Huynh at thuynh@caiso.com to identify which ones are missing.
- The CAISO will run all daily statements before running the monthly statement, including the statement, the CAISO Billing Determinant (BD) file and the Participant's BD file. The month-end file contains only the month-end Charge Codes.
- The CAISO likely will begin recalculations following the May invoice, but will produce invoices for March and April, as well.
- Market Participants likely will not see a full monthly settlements run that includes all Charge Codes until July.

Statement File Size

Participants have voiced their concerns regarding the large file size for both daily and monthly statements, so the CAISO has been exploring options to reduce the file sizes. The CAISO's vendor has provided a solution that has made a significant improvement, reducing the largest files by as much as 65%. The CAISO also seeks suggestions from Participants for additional opportunities for file size reduction.

Participants' Questions and Comments

- The CAISO BD file contains thousands of LMPs that individual Participants do not use. Consider moving them from the CAISO BD file and including only the LMPs relevant to individual SCs in the SCs' BD files. This would increase individual SCs' files somewhat, but may reduce the CAISO BD file by as much as 80%. Also, provide an example using a large SC's file to show the extent to which this could reduce file size. This would be consistent with other ISOs that provide Participants with only the data they need. Vendors present at the meeting indicated that this change would have no impact on their work.

Dual Zip Methodology

The CAISO has implemented a methodology of zipping settlement files twice to improve performance and to allow file downloading as quickly as possible. The CAISO seeks input as to whether this approach is necessary and whether it produces savings to Participants.

Participants' Comments and Questions

- Participants' main concern with the dual zip methodology was communication—the CAISO did not communicate the change with sufficient lead time for Participants to accommodate it.
- The dual zip approach is inconvenient, but does not present any major problems.
- For smaller files, the dual zip approach does not affect processing time significantly.
- Participants would like the CAISO to maintain files on CMRI throughout the settlement time frame.

Correlation between Statement Date and Operations Date

There are cases when Participants would like to retrieve only recently-posted statements, rather than all statements related to a specific Trade Date. However, there is currently no method to retrieve statements according to the dates they were posted.

Participants' Comments and Questions

- Could the CAISO develop a file naming convention that would allow Participants to retrieve statement files according to the date they were posted? It may be appropriate to schedule a meeting with Participants to discuss how this could be accomplished.

Responses to Participants' Questions

- The CAISO must post statements according to the Tariff. In the last 10 years, there have only been two statements that the CAISO did not publish by midnight of the scheduled publication date. The concern expressed by Participants regarding file retrieval by posting date only should occur on the rare occasion when a statement is not published according to the Tariff-specified timeline.

Historic Re-Runs

Under MRTU, the CAISO will calculate historic re-runs the same way that it calculates production reruns currently, the difference being that the re-run will produce a Pass Through Bill (PTB) that appears on a statement in eterra. There are three situations that could lead to a re-run:

- 1.) Good Faith Negotiations or Alternate Dispute Resolution (GFN/ADR). In this case, the details would be confidential and there would be no supporting documentation (other than Market Notice and supporting details required for validation) for the charges appearing on the PTB.
- 2.) Re-runs resulting from recalculations for various reasons. These are not confidential, so Participants would receive supporting details.
- 3.) Special re-runs (e.g., the FERC proceedings in 2000/2001). These generally would include full disclosure of all details.

The CAISO would announce any re-run under MRTU via a Market Notice that also would identify the cause for the re-run.

Participants' Questions and Comments

- If there is more than one PTB for a charge, Participants need to be able to separate them out as PTB per charge. PTBs should be treated like any other charge with a unique ID.

Responses to Participants' Questions

- The CAISO plans to test the PTB functionality in IMS, although there is no firm schedule of when it will do so. Most likely, PTB testing would be tied to one of the scenario tests.
- A historic re-run PTB would include the dollar amount of the adjustment along with a data CD containing the details, like what is provided today. The details may include multiple Trade Dates
- A historic re-run only appears on an initial statement for the applicable Trade Day(s), but not as part of the initial statement for a different Trade Day.
- The dispute process and timeline under MRTU will be the same as today (see the BPM for Settlements and Billing for a dialogue on the dispute process). The CAISO needs enough information from the SC to understand what the SC believes is incorrect about the statement, just like the current dispute process.
- If a GFN results in a re-run, it would appear to the SC as a recalculation, but may not include the GFN number in the statement file. The CAISO will provide the GFN number (if needed given statement versioning) via another means..
- The main body of the BPM for Settlements and Billing describes the process for historic re-runs. Attachment B of the BPM will be updated to provide details regarding which Charge Codes are represented by which Consolidated Historic Rerun Charge Code.

Scenario-Based Charge Codes

The CAISO has worked with Participants to create a schedule for testing scenarios in market simulation. Mike Turner is part of the team that meets daily to plan the scenarios. The CAISO then posts on its web site the Charge Codes that will be impacted by the scenarios for each day. Each SC will be affected differently by each scenario, depending on their resource mix.

Many Charge Codes have not yet been released into the IMS environment as validated bid-to-bill through internal testing. As the scenarios being tested trigger individual Charge Codes, the CAISO will be relying on Market Participants impacted by the Charge Codes to advise us on whether they produced the expected results, both through the Market Simulation touch point calls and through the SaMC User Group.

Participants' Questions and Comments

- We will run out of scenarios to test if we don't get the RT Energy right. We may want to consider halting market simulation until we get Expected Energy working right.
- We should prioritize the Charge Codes to be tested in market simulation to ensure that we test the most important ones first.
- Charge Code 6011 does not work properly, as it does not yet include ETCs and the Expected Energy calculation is not working properly. Can we take it out of scope?
- The CAISO cannot validate scenarios without validating the settlements for the scenarios. Applicable Charge Codes need to be in-scope and working in order for the scenario to be valid.

Responses to Participants' Questions

- If a Charge Code does not function properly when triggered in scenario testing, the CAISO will need to determine how to re-trigger it in a future scenario. It may be possible to re-trigger the Charge Code without re-running the entire scenario.
- The CAISO is working to get Expected Energy right the first time so that it does not have to implement post-market corrections in market simulation.
- The CAISO is aware of gaps in RTD and RTPD EE calculations—it is a known issue. Other than that, EE should work.

Cutover and Reversion Planning

Participants have commented in the past that the settlements portion of the Cutover and Reversion Plan is light in the settlements area. This may be due to the fact that if there are problems in implementation that require reversion, they are most likely to occur early in the bid-to-bill process, long before the market activities are settled.

In the event of a reversion, the CAISO would do a special billing to settle and invoice whichever days were run in the new market design during the pre-reversion period.

Re-Issue and Re-Calculation Statements

The CAISO has been trying to mirror the existing settlements calendar with the new SaMC system that was designed to operate quite differently from the current systems. SaMC was designed to accommodate Payment Acceleration and can issue an invoice at any time.

The re-calculation invoice is rolled up by Charge Code, but differentiated by the statement from which each re-calculation came.

Participants' Questions and Comments

- Would it be possible to break down the re-calculation invoice by Charge Code for each Trade Day?

Responses to Participants' Questions

- The CAISO expects that when we go live, Participants will have enough confidence in the market and settlement process that it should not be necessary to extend the dispute time line beyond the current time line. In the event that events after go live indicated that an extended dispute time line was needed, the CAISO would consider extending it.
- The CAISO will consider calculating CC 6011 hourly by Resource as a post-go-live enhancement. It would be extremely difficult to implement this before go-live.

Statement Validation in Market Simulation

PG&E uses a three-step process to complete its settlement statement validation process:

- 1.) Validate with settlements documentation (BPM, Configuration Guide, Billing Determinant Files, etc.)
- 2.) Validate bid-to-bill using market data sources (SIBR, CMRI, OASIS, etc.)
- 3.) Maintain consistency—validate that all systems and data work consistently over time.

Participants' Questions and Comments

- We cannot go into production with the current Configuration Guide.
- Although SCE was quoted as verifying that it had validated 27 Charge Codes, it believes that none of the Charge Codes have been validated with sufficient stability and repeatability to say that they are “validated.”
- The CAISO still should consider an on-site settlements validation team. It may expedite resolving settlement issues if an on-site team had easier access to SMEs.
- Could the CAISO add a column to the Daily Charge Code Status report showing the scenario(s) that will trigger that Charge Code?

Responses to Participants' Questions

- The CAISO uses payloads from U2 to test and validate Charge Codes internally.
- It may be possible to give Participants advance notice of Charge Codes that the CAISO expects to release into U2 in the near future to give them an opportunity to begin reviewing them.
- The CAISO is willing to reconsider an on-site Participant settlements validation team. We would need to be clear on realistic expectations of the effort and would need to resolve concerns and issues related to having vendors on-site. Such a team would need SMEs available only part of the time, not full-time.
- Most Charge Codes are already generating in IMS, but have not yet been validated bid-to-bid internally.
- The CAISO will write a BPM for the Interim Capacity Procurement Mechanism (ICPM), but it will not be ready by go-live.

Other Issues

- The independent auditor has validated some Charge Codes, but the auditor's process that identifies issues is faster than the CAISO's process for responding. As a result, responses to issues are still a work in progress. The auditors have validated about 20 Charge Codes and will publish their findings. But, we do not have a publication date.
- Participants would prefer to see the results of Physical Inter-SC Trades identified by unit name, rather than by Pnode price. The unit name should be in the Depend On Attribute.
- A CAISO notice of a change in settlements starts the process for Participants to promote the change with their vendors. Participants need advance notice of the effective date of any change that is appropriate to the magnitude of the change *i.e.*, bigger changes need longer lead times. Notices of changes should include the target effective date of each change.

Action Items

- 1.) Confirm and publish the version(s) of the Configuration File that was(were) used to prepare the March month-end statements.
- 2.) Discuss with Areva the possibility of moving LMPs from the CAISO BD file to the individual SCs' BD files.
- 3.) Prepare example showing how the previous item could reduce file size.
- 4.) Clarify the data retention policy for files on SIBR and CMRI—should be consistent with settlement data retention
- 5.) Consider copying Inter-SC Trade results from SIBR to CMRI so that the data will be available to Participants longer than the five days that it is kept in SIBR.
- 6.) Consider file naming convention that would allow Participants to retrieve files by "created date," in addition to retrieving by Trade Day, so they can retrieve only the recently-posted files, rather than all files related to a Trade Date. May need to schedule a meeting with Participants to work it out.
- 7.) Identify correlation between IMS scenarios and the Charge Codes they will trigger, along with a schedule showing when each will be triggered and tested. Consider adding a column to the Daily Charge Code Status report showing the scenario(s) that will trigger that Charge Code
- 8.) Produce a schedule of when we expect each of the remaining Charge Codes to be released into IMS as validated bid-to-bill
- 9.) Communicate when Pass-Through Bills will be tested in IMS
- 10.) If a GFN results in a rerun, will the recalculation include the GFN number?
- 11.) Create prioritized list of which Charge Codes are most important to Participants for releasing into IMS
- 12.) Consider providing mocked-up data so Participants can test settlements calculations separately from data flows.
- 13.) Implement and communicate versioning convention for Configuration Guide
- 14.) Share the results of testing for mid-month configuration changes

- 15.) Follow up (Tri) on when we expect CRR Charge Codes to be fixed
- 16.) On the recalculation invoice, break down the invoice by Charge Code by Trade Day
- 17.) Create a payment calendar for IMS
- 18.) Consider identifying the upstream systems that feed SaMC and the sources of data.
- 19.) Consider providing unit names, rather than Pnode prices, on Physical Inter-SC Trade results
- 20.) Communicate planned effective dates for applied patches/fixes
- 21.) Create Critical variances for CC 6011 to recognize that ETCs are not included and that EE is not working properly. The CAISO needs to manage the perception that this is really important to Participants, since Participants cannot identify an issue as “Critical.”
- 22.) Create a time line for P1 and P2 Charge Code releases.

CAISO Participants

Brad Bouillon, Elizabeth Caldwell, Tri Huynh, Meghna Khatri, James Lynn, Brian Rothstein, Mike Turner, Byron Woertz

Market Participants

| Name | Organization | On-Site | Remote |
|------------------|----------------------|---------|--------|
| Caroline Emmert | ACES Power Marketing | X | |
| Bill Reinwald | APX | | X |
| Crystal Baird | APX | | X |
| Moises Melgoza | APX | | X |
| Newonda Nichols | APX | | X |
| Spence Gerber | APX | X | |
| Vivian Lee | APX | | X |
| Robert Griffiths | Bear Energy | | X |
| Dave Brown | CDWR | X | |
| Hamid Kharazi | CDWR | X | |
| Hong Chan | CDWR | X | |
| Kathleen Wright | CDWR | | X |
| Chris McLean | CES | | X |
| Ryan Burkhalter | Citigroup Energy | | X |
| Graham Bowen | City of Anaheim | X | |

CAISO Public—For Stakeholder Review

| Name | Organization | On-Site | Remote |
|-------------------|----------------------|----------------|---------------|
| Nancy Le | City of Anaheim | | X |
| Scott Shimoda | City of Anaheim | | X |
| Richard Torres | City of Azusa | X | |
| Tim Vuong | City of Azusa | X | |
| Erik Johnson | City of Pasadena | X | |
| Herman Leung | City of Pasadena | X | |
| Jesus Martinez | City of Riverside | | X |
| Martin Ochotorena | City of Riverside | X | |
| Michele Kovach | City of Riverside | | X |
| Philip Fernandez | City of Riverside | | X |
| Efrain Sandoval | City of Vernon | | X |
| Lisa Lotterman | Commerce Energy | | X |
| Virginia Thompson | Constellation Power | | X |
| Ken Czarnecki | CYCG | X | |
| Mike Yester | CYCG | X | |
| Brian Theaker | Dynegy | | X |
| Philip Bacon | Dynegy | | X |
| Brian Simmons | ECCO International | X | |
| Robert Stanton | GWF Power | | X |
| David Neiss | J.P. Morgan Ventures | | X |
| Jennifer Lindsey | Macquarie Cook | | X |
| Devang Parikh | MapVision | X | |
| Jeff Davis | MID | | X |
| Emmie Stenstedt | Midway Sunset | X | |
| Drew Whiteman | Mirant | | X |
| Patricia Kramer | Mirant | | X |
| Tiffany Meyer | Mirant | | X |
| Bob Caracristi | NCPA | X | |
| James Gunderson | NCPA | | X |

| Name | Organization | On-Site | Remote |
|------------------|---------------------------|----------------|---------------|
| Mike Whitney | NCPA | | X |
| Miranda Shumaker | NCPA | | X |
| James Reschke | Nevada Power Company | | X |
| Sherise Marshall | NRG Energy | | X |
| Cynthia Justice | Occidental Power Service | | X |
| Donna O'Kelley | Occidental Power Service | | X |
| Brent Leith | Oracle | | X |
| Debbie Hudkins | Pacificorp | | X |
| Al Borno | PCI | | X |
| Calli Delacluyse | PCI | | X |
| Doug Logan | PCI | X | |
| Tony Delacluyse | PCI | X | |
| Connie Ko | PG&E | X | |
| Cynthia Clark | PG&E | X | |
| Darryl Bennett | PG&E | | X |
| Joseph Carreon | PG&E | | X |
| Stephen Kung | PG&E | X | |
| Xiaofeng Zhang | PG&E | X | |
| Elene Radinskaia | PG&E/EnDimensions | | X |
| Sharon Oleksak | Portland General Electric | X | |
| David Dan | Power Settlements | X | |
| Michael Aparicio | Power Settlements | | X |
| Joanna Yam | Powerex | | X |
| Lisa Hopkins | Powerex | | X |
| Mike Bida | Powerex | | X |
| Jane Mann | Rainbow Energy Marketing | | X |
| Guinette Haas | Reliant | | X |
| Ellen Wolfe | Resero Consulting | | X |
| Adrienne Luck | SCE | | X |

CAISO Public—For Stakeholder Review

| Name | Organization | On-Site | Remote |
|----------------------|---------------------|----------------|---------------|
| Carol Damm | SCE | | X |
| Caroline Pan | SCE | X | |
| Caroline Pespisa | SCE | | X |
| Clarissa Chan | SCE | | X |
| Jack Peterson | SCE | X | |
| Kenneth Siu | SCE | | X |
| Michael Sindelar | SCE | | X |
| Rajesh Sampath | SCE | | X |
| Robin Lee | SCE | | X |
| Vinay Doijobe | SCE | | X |
| Carl Funke | SDG&E | | X |
| Jeff Trace | SDG&E | | X |
| Tiff Nelson | SDG&E | | X |
| Mike Evans | Shell Energy | | X |
| Mike McGuffin | Shell Energy | X | |
| John Coleman | Shell Trading | X | |
| Brian Holmes | Structure | X | |
| Jeff Kinney | Structure | | X |
| Kim Allen | Structure | | X |
| Paul Schnitger | Structure | | X |
| Stanley Eng | Structure | X | |
| Tom O'Meara | Structure | X | |
| John Perry | TID | | X |
| Brian Sprague | WAPA | X | |
| Gloria Edwards | WAPA | X | |
| Lilly Olaski | WAPA | X | |
| Sean Sanderson | WAPA | X | |
| Christine Vangelatos | ZGlobal | | X |
| Masoud Shafa | ZGlobal | | X |

