March 13, 2012

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

RE: California Independent System Operator Corporation
Docket No. ER11-4580

Responses to Specific Data Requests by Intervening Parties

Dear Secretary Bose:

After the Technical Conference Discussing CAISO's Proposal to Eliminate Convergence Bidding at Intertie Scheduling Points held in Washington D.C., on February 2, 2012, three parties submitted specific data requests. The ISO responds to those below.

I. Western Power Trading Forum (WPTF)

WPTF Request 1:

WPTF requests the CAISO provide data in support of its graphics presented before FERC at the Intertie Convergence Bidding Technical Conference.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

WPTF Request 2:

Please provide the Excel workbooks or other processed data that support the charts included in the CAISO's filed technical conference slides. Please include references to source data (e.g., descriptors such as "from day-ahead OASIS LMP data for the PG&E LAP") and include hourly data to the extent the CAISO has it contained within the Excel workbook or another easily read data source such as Access.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

WPTF Request 3:

For the graphic provided on slide 19 related to the Dual Constraint, please provide an explanation of the derivation and practical interpretation of the blue and red bars shown on the graph as well as the hourly values underlying the data.

ISO Response:

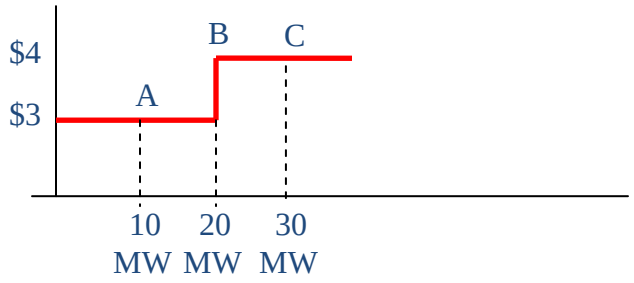
ISO Slide 19 illustrates the monthly impact of price inconsistency arising from the dual intertie constraint the ISO enforces in the pricing and scheduling run of the hour-ahead scheduling process. This practice is described in the ISO's initial filing in this proceeding on pages 12-13 of the Transmittal Letter and pages 25-33 of the Direct Testimony of Mark A. Rothleder attached as Attachment C to the Transmittal letter. On March 1, 2012, the ISO also provided the data it used to produce ISO Slide 19 in the data file labeled "Technical Conference Dual Constraint." In column b of that spreadsheet the ISO provides the sum for each month of the value of import schedules priced over the resource's bid-in price due to the dual pricing constraint. In column c, the ISO provides the sum for each month of the value of export schedules priced over the resource's submitted bid.

The ISO determined these values by comparing the clearing price with the cleared megawatt (MW) level and the bid price just to the right of the cleared MW level. If the bid price to the right of the dispatch MW level is less than the cleared Locational Marginal Price (LMP) then the import could have been dispatched for additional MW based on the cleared LMP. However, since the cleared LMP is inconsistent with the dispatch level then it appears the cleared LMP has increased above the bid level due to the dual constraint. The overpayment is calculated as the cleared MW * (LMP – bid price (@cleared MW)). If the bid price to the right of the dispatch level is greater than the cleared LMP then the import would not have been dispatched more and there would be no overpayment.

Example:

Assume the clearing price for the import is $35:

Figure 1: Illustrative Example



- Dispatch level A=10MW @ bid level just to the right of dispatch level = $30.

  Overpayment at level A dispatch= 10MW*($35-$30) = $300

- Dispatch level B=20MW @ bid level just to the right of dispatch level = $40.

  Since bid price to right of dispatch MW > LMP, there is no overpayment.

- Dispatch level C=30MW @ bid level just to the right of dispatch level = $40.

Since bid price to right of dispatch MW > LMP, there is no overpayment. There is an underpayment in this case. But that underpayment is not represented in the "blue" import overpayment data illustrated in ISO Slide 19.

The example bellow illustrates why the LMP which is set by the physical plus virtual constraint can rise above the cleared physical import bid or a physical export bid:

Example data			Current Method	
Resource	Bid	Bid MW	Award MW	LMP current
Physical Import (PI)	$50	200	150	$60
Physical Export (PE)	$59	50	50	$60
Virtual Import (VI)	$60	150	55	$60
Virtual Export (VE)	$100	55	55	$60
Physical Internal Generation (PG)	$80	1500	900	$80
Physical External Load (PL)	$500	1000	1000	$80

Inter tie import limit 100 MW, export limit 100 MW.

In this case, physical export is overpaying (short of money), because it's bid at the cleared MWs is $59, but the ISO charges $60 as a result of the dual constraint. In the chart in ISO Slide 19, (59 – 60)*50 will show up as export short. On the other hand, physical import is overpaid, because its bid is $50 and still has 50 MW (200 – 150) available, but the ISO pays $60. In the chart on Slide 19, (60 – 50)*150 will show up as import over payment.

This can happen for both the marginal and the infra-marginal physical resources. In addition to the physical resource in the table above (PI1), for illustrative purposes add another physical import (PI2) with 10 MW @$10. PI2 will clear before the PI1, and thus PI2 is infra-marginal. PI will be awarded 140 MW (10 MW less because of PI2's 10 MW), and remains marginal. But both PI and PI2 will be overpaid at the $60/MWh price.

II. Powerex

Powerex Request 1:

Powerex requests the following data related to Slides 11-12 of the Feb. 2, 2012 presentation of Dr. Eric Hildebrandt and to Slide 14 of the Feb. 2, 2012 presentation of Mr. Mark Rothleder:

1. For each hour and for each intertie for the period January 1, 2010 through December 31, 2011, please provide the following:
    a. [Integrated Forward Market] IFM import awards
    b. IFM export awards
    c. Import awards after completion of [Hour-Ahead Scheduling Process] HASP
    d. Export awards after completion of HASP
    e. Import tagged volumes as of the close of scheduling window (T-20)
    f. Export tagged volumes as of the close of scheduling window (T-20)
    g. Final import tagged volumes (i.e., actual delivered volumes accounting for any changes in tags after T-20)
    h. Final export tagged volumes (*Id.*)

ISO Response:

On March 1, 2012, the ISO posted the data used to create DMM Slide 12. DMM Slide 11 provides summary data of the information provided in DMM Slide 12. The ISO also filed with the Commission in the above referenced docket an explanation of the underlying data and how the data can be obtained through its OASIS. Items a, b, c and d can be calculated based on data available through OASIS. As explained in the ISO March response, "the red line in DMM Slide 12 depicts the percentage of gross hour-ahead import schedules that were

ultimately imported into the ISO each month. These include hour-ahead import schedules that were not e-tagged by the responsible scheduling coordinator, as well as hour-ahead schedules that were "cut" by the ISO and/or another control area (e.g. due to a transmission de-rate)." DMM based these calculations on data from the ISO's Control Area Scheduling (CAS) system, which DMM believes corresponds to the data described in item g (i.e., actual delivered volumes accounting for any changes in tags after T-20). DMM does not know if or how data in this system could be used to differentiate between the data requested in items e and g (tagged imports before and after T-20) and items f and g (tagged exports before and after T-20).

The data used to calculate the red line in DMM Slide 12 were derived from monthly system totals that were generated using DMM's monitoring system. The request in items e through h are unduly burdensome as the level of data requested in those items (hourly data by intertie) are not calculated as part of this process and would require extensive additional work by DMM staff or the ISO to generate.
In addition, DMM would express concern that in some cases this level of data might be combined with other e-tag available to Powerex and/or other entities to determine data of other participants and/or for analysis aimed at giving them a competitive advantage in the market. The ISO shares the concern that the release of such data, or any derivation of such data, can expose confidential market data. Moreover, any attempts to limit the potential exposure of sensitive information would require significant effort on the part of the ISO or DMM, which renders this request further burdensome.

Powerex Request 2:

For each Scheduling Coordinator (with specific identities masked for confidentiality), please provide the following statistics based on 2011 data:

i. Total gross volume of final import awards (Firm and Unit Contingent energy types only)
j. Total volume of import schedules tagged as of T-20
k. Number of hours in which item b was less than item a
l. Average award percentage not tagged (i.e., for hours in which item b was less than item a, provide the value of (a-b)/a)
m. Is CAISO aware of any relationship between the incidence of Firm or Unit Contingent import awards not being delivered and the HASP price? (*e.g.*, is the incidence of import awards not being delivered higher when HASP clears at or above $70/MWh than when it clears below $70/MWh?)

ISO Response:

The ISO has provided all the data used to create the information presented by the ISO and DMM during the February 2, 2012, Technical Conference. This request is unduly burdensome as it requires the ISO to conduct additional analysis on matters beyond the scope of the ISO's and DMMs presentations.

Powerex Request 3:

For each Scheduling Coordinator (with specific identities masked for confidentiality), please provide the following statistics based on 2011 data:

n. Total gross volume of final export awards (Firm and Unit Contingent energy types only)
o. Total volume of export schedules tagged as of T-20
p. Number of hours in which item b was less than item a
q. Average award percentage not tagged (*i.e.*, for hours in which item b was less than item a, provide the value of (a-b)/a)
r. Is CAISO aware of any relationship between the incidence of Firm or Unit Contingent export awards not being delivered and the HASP price? (*e.g.*, is the incidence of export awards not being delivered higher when HASP clears at or below $0/MWh than when it clears above $0/MWh?)

ISO Response:

On March 1, 2012, the ISO provided all the data used to create the information presented by the ISO and DMM during the February 2, 2012, Technical Conference. This request is unduly burdensome as it requires the ISO to conduct additional analysis on matters beyond the scope of the ISO's and DMMs presentations.

Powerex Request 4:

For each source Balancing Authority (with specific identities masked for confidentiality), please provide the following statistics based on 2011 data:

s. Total volume of import schedules tagged as of T-20 (G-F or G-FC product codes only)
t. Total volume of import schedules actually delivered, based on final tagged quantity
u. Number of hours in which item b was less than item a
v. Average tagged volume not delivered, as a percent of tagged volume (i.e., for hours in which item b was less than item a, provide the value of (a-b)/a)

ISO Response:

The ISO has provided all the data used to create the information presented by the ISO and DMM during the February 2, 2012, Technical Conference. This request is unduly burdensome as it requires the ISO to conduct additional analysis on matters beyond the scope of the ISO's and DMMs presentations.

Powerex Request 5:

Do CAISO operators "skew" or "bias" the HASP (as opposed to using an unbiased forecast of demand)? If so:

w. What factors determine whether and how much to "skew" the HASP?
x. Do operators "skew" the HASP specifically in consideration of the failure of imports to be delivered for reasons OTHER than transmission outages or other qualifying contingency events?
y. Specifically for the July 5-7 HASP events documented in the Department of Market Analysis reports, did CAISO operators skew the HASP due to concerns that some import awards would not be delivered (again, for reasons OTHER than transmission outages or other qualifying contingency events)?

ISO Response:

The ISO has provided all the data used to create the information presented by the ISO and DMM during the February 2, 2012, Technical Conference. This request is unduly burdensome as it requires the ISO to conduct additional analysis on matters beyond the scope of the ISO's and DMMs presentations.

Powerex Request 6:

Is CAISO aware of some Balancing Authorities failing to fully deliver on Firm or Unit Contingent intertie awards for reasons OTHER than transmission outages or other qualifying contingency events?

z. Specifically, is CAISO aware of some Balancing Authorities curtailing etags associated with such Firm or Unit Contingent awards due to insufficient regulation?

ISO Response:

The ISO has provided all the data used to create the information presented by the ISO and DMM during the February 2, 2012, Technical Conference. This request is unduly burdensome as it requires the ISO to conduct additional analysis on matters beyond the scope of the ISO's and DMMs presentations.

III. Financial Marketers[1]

Financial Marketers Request 1:

Slide 3, Off Peak and On Peak Price Divergence 2010-2012: Please provide the actual off peak and on peak price divergence numbers for IFM, HASP and RTD represented in the charts and for the dates covered in the chart. Please explain why this particular data point was selected. Please provide the actual data for the other DLAPs as well. Please provide an explanation of the data on the right side of this slide.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

This ISO selected the PG&E DLAP because showing all three default LAPs would reduce the ability to visually represent difference between IFM, HASP and Real-Time Market on a single slide.

The data on the right hand side of the slide is a simple count of the months in which the prices for the various markets on average were as represented in each row. Since the bar chart on the left side of the side may be difficult for technical conference attendees to differentiate the price levels, the ISO included the table in the slide to provide additional clarity for technical conference attendees. For example, in the first row of the first table, the Hour-Ahead Scheduling Process and Real-time Market prices were greater than the Integrated Forward Market prices for none of the months. Whereas, the second row represents that for 13 of the months the prices in the Hour-Ahead Scheduling Process and Real-Time Market were less than the Integrated Forward Market.

Financial Marketers Request 2:

Slide 4, Convergence Bidding on the Interties Undermined the Market Efficiency Benefits of Convergence Bidding Design: Please provide the actual prices and the scale used to develop this slide. Please explain how this data/chart supports the point noted at the top of the slide. Provide all data that supports this conclusion. What are the market efficiency benefits that CAISO claims are being undermined here?

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[1] Financial Marketers include: SESCO Enterprises LLC, XO Energy Companies, Monterey Enterprises, LLC and West Oaks Energy, LLC.

ISO Response:

No data was used to create this slide. This slide was used to illustrate how the relative difference in prices between the day-ahead market, hour-ahead scheduling process and real-time market creates incentives for virtual demand bids and virtual supply bids. If day-ahead prices are higher than hour-ahead or real-time prices, virtual supply bids are profitable. If day-ahead prices are lower than hour-ahead or real-time prices, virtual demand bids are profitable. Because internal virtual bids are settled at the real-time price and intertie virtual bids are settled at the hour-ahead price, if the profitable virtual position in based upon real-time and hour-ahead prices, then offsetting virtual positions will be profitable and will not change the day-ahead unit commitment.

Financial Marketers Request 3:

Slide 5, Convergence Bidding Resulting in Net Virtual Supply Which Decreases Day Ahead Unit Commitment: Please provide the actual numbers used to compute the 10 day moving average in these two charts, the actual dollar values presented, and explain in detail the methodology that was used. Most of the price differences shown in this chart range between $5.00 and -$5.00. Please provide the actual prices for each month.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

Financial Marketers Request 4:

Slide 6, Residual Unit Commitment: Please provide the actual residual unit commitments used in this slide for the dates presented. Also provide the comparable IFM data. Explain how you define a residual unit for the purpose of this chart.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. This chart represents actual Residual Unit Commitment (RUC) awards as defined by the ISO tariff. The RUC process commits incremental capacity from the Integrated Forward Market. The incremental capacity awarded is known as the RUC capacity. However, because much of the capacity available to the ISO is compensated under a resource

adequacy contract, not all capacity committed in RUC is compensated based on the RUC availability price. As defined in the ISO tariff, the RUC award represents the non-resource adequacy capacity that is compensated at the RUC availability price.

Financial Marketers Request 5:

Slide 7, Price Expectation and Convergence Bidding Awards Not Well Aligned for Internal Nodes: Explain the methodology and data used to support this slide. Also provide the actual data used to compute the 10 day moving average for net internal and day-ahead to real time for this slide. Explain the comment made by Mr. Rothleder at the technical conference that some of the data on this chart represents "physicals" and that physical supply "was not separated out." Why were physical supplies not "separated out" from this chart and what quantities of physicals were included? Does this data represent a straight average of prices or was it weighted?

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving average is provided in the data files provided on March 1. The data represents a simple average of differences between the day-ahead and real-time price for the three default LAPs. Mr. Rothleder did not make the statement asserted in Financial Marketers Request 5. The data reflected in ISO Slide 7 does not include physical bids.

Financial Marketers Request 6:

Slide 8, Price Expectation and Convergence Bidding Awards Better Aligned for Interties: Explain and provide the data used to compute the 10 day moving averages for this slide and the actual dollar values for the net internal shown, the net intertie shown and real-time to HASP shown. Please elaborate on the explanation provided at the Technical Conference for the large negative prices shown in the July 5 - 7 period that according to Mr. Rothleder, were "bad day periods," related to "extended transmission issues" and that "we [CAISO] are learning from this."

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving

average is provided in the data files provided on March 1. The events of July 5-7 are addressed in DMM 3rd Quarter reports on Section 3.1. http://www.caiso.com/Documents/QuarterlyReport-MarketIssues_Performance-November2011.pdf

Financial Marketers Request 7:

Slide 9, Balanced Trade: Price Expectation and Convergence Bidding Awards Aligned: Provide the data used to compute the 10 day moving averages for the net internal, net intertie and the real-time to HASP numbers indicated on the slide. What were the average price differences during the period covered by the chart?

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving average is provided in the data files provided on March 1. The data provided includes all the prices from which one can calculate the average price differences.

Financial Marketers Request 8:

Slide 10, Price Expectation and Convergence Bidding Awards for Internal Nodes Improved Alignment Since September: Provide the data used to compute the 10 day moving average for the net internal and the day-ahead to real-time, as well as the actual dollar amounts.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving average is provided in the data files provided on March 1.

Financial Marketers Request 9:

Slide 11, Price Expectation and Convergence Bidding Awards for Interties Aligned: Please provide the numbers used to compute the 10 day moving average for the net intertie and the day-ahead to HASP on this slide, with actual dollar amounts, rather than increments. Provide the actual price for each month shown.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving average is provided in the data files provided on March 1. Actual prices for each month are provided in that data set. Hourly prices can be extracted from the ISO OASIS as explained in the March 1 filing.

Financial Marketers Request 10:

Slide 12, Balanced Trade: Price Expectation and Convergence Bidding Awards Aligned: Provide the actual numbers used to compute the 10 day moving average in this slide, with the actual MWs and dollar amounts. At the Technical Conference Mr. Rothleder stated that "[CAISO] cannot say that convergence bidding has caused divergence"; please explain.

ISO Response:

On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket. The methodology used to compute the 10 day moving average is provided in the data files provided on March 1.

There are many factor that contribute HASP and RTD price convergence including but not limited to: 1) forecast differences between HASP and Real-Time Market, 2) deviations of actual expected actual deliveries from supply (generation and import) and 3) the lack of sufficient flexibility to absorb changes in imbalance conditions. Since both HASP and Real-Time Market have no convergence bids and only physical schedules and ISO forecast of ISO demand, convergence bids themselves do not contribute to divergence between and HASP and RT prices.

Financial Marketers Request 11:

Slide 13, Real-Time Imbalance Energy Offset Increase Even with Lower Price HASP/RTD Price Differences: Please explain what the red line on this slide represents. Also, provide the data used to compute the RTIEO and explain why entire month averages are used. Provide the correlation between the RTIEO and the actual energy price and provide the actual prices for each month shown.

ISO Response:

The red line shows the Real-Time Market to Hour Ahead Scheduling Process price differences. The RTIEO is computed through settlement data produced through the market clearing processes. The ISO has made this data available

through the March 1 filing in this proceeding. The monthly averages were used to illustrate the monthly trends. The last question in Financial Marketers Request 10 is unduly burdensome as it requires that the ISO conduct additional analysis.

Financial Marketers Request 12:

Slide 15, Real Time Imbalance Energy Offset Since Convergence Bidding Implemented: Provide the actual numbers used to compute the 30-day rolling cumulative and the precise dollar amounts, as opposed to the increments. Provide more detail as to what falls into the "other" category. Please provide the import and export contribution broken out. Also explain how the totals for each category were calculated, including any assumptions used, data excluded or weighting.

ISO Response:

This question seems to mistakenly refer to ISO Slide 15. The ISO responds to this as if it were posed for ISO Slide 16. On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

The “other” category includes the costs that are not attributed to MWhs from convergence bidding. The ISO outlined the drivers of the real-time imbalance energy offset on ISO Slide 14. The ISO did not further decompose the other bucket in to further granularity as these drivers are independent of convergence bidding.

The “other” category was is derived as the total Real-time Imbalance Energy Offset minus the amount that is attributable to balanced convergence bidding positions.

The break-down contribution of imports and exports is not provided because that request is unduly burdensome as it requires the ISO to conduct additional analysis.

The totals for each category were provided in ISO Slide18. The totals are the sum of daily contributions for each category from February 2011 through December-2011.

Financial Marketers Request 13:

Slide 16, Volume of Offsetting Intertie and Internal Convergence Bids: Explain the categories used and how the monthly results for each category were calculated. Provide the actual numbers used to compute the 30-day rolling

cumulative for the SC balanced virtual and the residual balanced virtual across the SCs.

ISO Response:

This question seems to mistakenly refer to ISO Slide 16. The ISO responds to this as if it were posed for ISO Slide 17. On March 1, 2012, the ISO posted the requested data on its website and submitted an explanation of the same information with the Commission in the above referenced docket.

Financial Marketers Request 14:

Slide 18, Profit from Balanced SC Convergence Bidding Positions: Please provide the actual dollar amount per scheduling coordinator broken down by month and display it in aggregate per month. Explain how the profits were calculated for each SC and in aggregate.

ISO Response:

This request appears to be mistakenly referring to ISO Slide 18. The ISO will respond to it as if it pertained to ISO Slide 15. The data requested was provided on March 1. Profit was calculated as the product of the MW awarded and the difference between day-ahead and real-time prices for virtual awards on internal nodes plus the product of the MW awarded and the difference between day-ahead and hour-ahead prices for virtual awards on interties scheduling points.

Financial Marketers Request 15:

Slide 19, Monthly Impact of Price Inconsistency from Dual Intertie Constraint: Please provide the exact numbers for the bars shown on this slide.

ISO Response:

The data requested was provided on March 1.

Financial Marketers Request 16:

Slide 2, Net Virtual Supply/Demand on Interties were Generally Consistent with Hourly Price Differences in IFM and HASP Prices: Please provide the net virtuals on interties and the day-ahead minus hour-ahead LMP data by day as opposed to an operating hourly average. Please provide this same data from March, 2011 through December, 2011.

ISO Response:

This request is unduly burdensome as it requires that the ISO conduct additional analysis. In addition, as described in the ISO's March 1 posting, all data necessary to perform this analysis is available on OASIS.

Financial Marketers Request 17:

Slide 3, Net Virtual Supply/Demand within the ISO were also Generally Consistent with Hourly Price Differences in IFM and RTD: Please provide the net virtuals within the ISO and the day-ahead minus real-time LMP data by day, as opposed to an operating hourly average. In addition, please provide this same data from March, 2011 through December, 2011. Please provide the actual quantity and dollar amounts shown for each bar or point on the chart.

ISO Response:

On March 1 the ISO provided the data used to create DMM Slide 3. The additional requests in Financial Marketers Request 16 are unduly burdensome as they require that the DMM conduct additional analysis. In addition, as described in the ISO's March 1 posting, all data necessary to perform this analysis is available on OASIS.

Financial Marketers Request 18:

Slide 4, Due to Virtual Supply on Interties, Total Net Virtual Supply/Demand in Day-Ahead Market was Often Inconsistent with Hourly Average Price Differences in IFM and RTD Markets: Please provide the net virtuals and the day-ahead minus real-time LMP data by day as opposed to the operating hourly average. Also provide the exact dollar amounts, as opposed to the increments. Please provide this same data from March, 2011 through December, 2011.

ISO Response:

On March 1 the ISO provided the data used to create DMM Slide 4. The additional requests in Financial Marketers Request 17 are unduly burdensome as they require that the DMM conduct additional analysis. In addition, as described in the ISO's March 1 posting, all data necessary to perform this analysis is available on OASIS.

Financial Marketers Request 19:

Slide 5, During the First Month Without Virtual Bidding on Interties, Bidders Took Some Time to Adjust to New Trend of Real-Time Prices Lower than Day-Ahead:

Please provide the net virtuals and the day-ahead minus real-time LMP data by operating day and the exact dollar amounts, as opposed to the increments.

ISO Response:

On March 1 the ISO provided the data used to create DMM Slide 5. The additional requests in Financial Marketers Request 18 are unduly burdensome as they require that the DMM conduct additional analysis. In addition, as described in the ISO's March 1 posting, all data necessary to perform this analysis is available on OASIS.

Financial Marketers Request 20:

Slide 6, By January, Net Virtuals within ISO Became Very Consistent with Hourly Average Price Differences Between IFM and RTD Markets: Provide the exact net virtuals and day-ahead minus real-time system marginal price by operating day, instead of the average hourly rate. In addition, please provide the exact dollar amounts.

ISO Response:

On March 1 the ISO provided the data used to create DMM Slide 6. The additional requests in Financial Marketers Request 19 are unduly burdensome as they require that the DMM conduct additional analysis. In addition, as described in the ISO's March 1 posting, all data necessary to perform this analysis is available on OASIS.

Financial Marketers Request 21:

Please explain why the metrics used in the CAISO graphs are the best metric to evaluate the impact of convergence bidding at the interties.

ISO Response:

The ISO is not asserting that these are necessarily the best metrics. The ISO selected these metrics because they were the ones used in its analysis. The graphs also responded to the various informational requests included in the Supplemental Notice of Agenda and Discussion Topics for Staff Technical Conference issued by the Commission on December 16, 2011.

Financial Marketers Request 22:

Please explain how CAISO determines that a schedule coordinator has a balanced portfolio trade. Is there a specific test?

ISO Response:

Each scheduling coordinator has a unique identification number in our market systems. The ISO compared virtual positions based upon the scheduling coordinator identification number.

Financial Marketers Request 23:

Please provide a complete breakdown of RTIEO for the March through December, 2011 period, and include the charges attributed to import and export transactions.

ISO Response:

This request is unduly burdensome as it requires the ISO to conduct additional analysis.

Financial Marketers Request 24:

What have the total aggregate monthly values of the real-time imbalance energy offset been since April 2009?

ISO Response:

The ISO provided the requested data on March 1 as part of the data in support for ISO Slide 13.

Respectfully submitted,
By: *<u>/s/ Anna McKenna</u>*
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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 13th day of March, 2012.

/s/ Anna Pascuzzo

Anna Pascuzzo