

MRTU Implementation Questions and Answers

New Postings: April 1, 2008

New Questions: CRR-33, CRR-34

New Responses: C-08, CRR-33, CRR-34, RD-34, S-55, S-56, S-57

Revised Responses:

CRR's

Date	Number	Reference – Document / Page / Section	Question	Response Date	Response
03/31/2008	CRR-33	Client Inquiry	<p>In the spreadsheet named "2008 Annual Auction APNode Clearing Prices", clearing prices are produced at most, if not all, the generator nodes, scheduling points, pricing points, trading hubs and LAPs in the Full Network Model (FNM) for each of the 8 season, TOU periods. The "Readme" tab gives the formula for determining the Auction clearing price, using the PaloVerde 500 Kv bus as reference node. The permutations of source and sink point combinations in the Clearing Price spreadsheet far exceed the specific CRRs shown in the spreadsheet named "2008 Annual CRR Auction Results".</p> <p>Does a clearing price calculated between a selected source and sink</p>	03/31/08	<p>CRR published all APNODE Clearing Prices regardless if the APNode used in CRR Auction nominations. The prices represent the value of 1 MW that inject into the APnode and withdraw from the Reference Bus (PaloVerde 500 Kv bus, Price = 0), based on the current CRR auction bids. 1 MW CRR from Apnode1 to Apnode2 equivalents to inject 1 MW at Apnode1, withdraw 1 MW from Reference Bus, plus 1 MW inject to Reference Bus, withdraw 1 MW from Apnode2.</p> <p>The Clearing price of a CRR from Apnode1 to Apnode2</p> <p>= The value of 1 MW from Apnode1 to Apnode2</p> <p>= the value of 1 MW from Apnode1 to Reference Bus + the value of 1 MW from Reference Bus to Apnode2</p> <p>= Clearing Price of Apnode1 + (-Clearing Price</p>

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			<p>point that was not awarded as a specific CRR in the CRR Auction have any meaning? Is it reflective of the price that would cleared had a CRR with those source/sink points had been bid into the Auction.</p>		<p>of Apnode2) = Clearing Price of Apnode1 - Clearing Price of Apnode2 As CAISO stated in Readme TAB: The information provided in the Apnode Prices tab is intended for use by Market Participants to derive the CRR clearing prices between any two Apnodes or Pnodes used in the 2008 auction. The clearing prices may be derived by subtracting the sink clearing price from the source clearing price. For example, suppose the CRR auction clearing price is desired between SourceA and SinkB and the clearing prices at SourceA and SinkB are -\$40 and -\$50, respectively. Therefore, the auction clearing price between SourceA and SinkB = -\$40 - (-\$50) = \$10.</p>
03/31/2008	CRR-34	Client Inquiry	<p>In "Binding Constraints" files available from the CRR Portal following the CRR Auction, the files contain a record named "ClearingPrice". What is the relationship between the clearing prices in the 2008 Annual Auction APNode Clearing Prices file and the clearing prices in the Binding Constraints" file, in particular for FNM Interfaces? For Binding Constraints that occur at FNM Interfaces, which are defined by more more than one path (i.e. From/To point), does the Clearing Price apply at all paths that make up the FNM</p>	03/31/2008	<p>The Binding Constraint's Clearing Price represents the total system-wide CRR value incremental change if the limit of this constraint increases by 1 MW, given all other inputs not change. For an interface constraint, Clearing Price represents the value of the interface as a whole. Each individual branches defined in the interface contribute to the total flow of the interface. If one of the branches in the interface definition is a binding constraint, the model will report separate clearing price for it. The two clearing prices can be different. It is also possible one of the branches is binding but the interface is not binding, or no branch is binding</p>

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			Interface. If not, is it possible to determine which path created the binding constraint at the Interface?		<p>but the interface is binding. The relationship between APnode Clearing prices and Binding constraint Clearing prices are: Sink and source Market Clearing Prices (MCP) differences equal to sum of (shift Factor * Clearing price of the binding constraint.) over all the binding constraints.</p> $MCP_i - MCP_j = \sum_l \mu_l \bullet SF_{i,j,l}$ <p>μ_l: Clearing price of the binding constraint l $SF_{i,j,l}$: Shift Factor on l from injection at i and withdraw from j</p> <p>CAISO did not publish the shift factors, however, CAISO published full network model (FNM) used in CRR. Market participants should be able to verify the relationship.</p>

Compliance (C)

Date	Number	Reference – Document / Page / Section	Question	Response Date	Response
02/04/2008	C-08	MRTU Implementation Mailbox	<p>Regarding the Positive/Negative UDP charges:</p> <p>In the compliance monitoring document, they speak of the Positive/Negative UDP charge for Aggregations, is this calculated for just the grouping of generators under an aggregate? Or is it calculated for the</p>	03/31/2008	It seems this question may have been answered. Compliance asked to return ticket to Submitter (they did not have access to Train at the time question was submitted).

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			physical aggregate generator? Could you please clarify this?		

Reference Data (RD)

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10/23/2007	RD-34	Client Inquiry	What does a unit outside of the CAISO control area need to do in order to bid into the DAM? Is it simply a matter of registering the Resource through the Master File with the Intertie Resource Data Template, for example, NES1_MEAD_2_WALC_IF_001?	03/31/2008	Yes, register the Resource through the Master File with the Intertie Resource Data Template. If dynamic functionality is desired

Settlements (S)

Date	Number	Reference – Document / Page / Section	Question	Response Date	Response
01/30/2008	S-55	MRTU Implementation Inbox	The Settlements & Billing, BPM Configuration Guide: Supplemental Reactive Energy Settlement, CC 3303, Version 1.7 is in conflict with the posted "P1, P2 and P3 Charge Code SaMC BD Matrix.xls" posted on 11/14/2007 for Charge Code 3303. There are three determinants used in the BPM which are	03/31/2008	Charge Code 3303 BPM had been updated to correct BD issues. The CAISO also posted the new BD Matrix with updated Bill Determinants.

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			<p>indicated to be in 5 minute intervals, but the matrix file doesn't show it that way. The three determinants are: ExceptionalDispatchIIEprice, ExceptionalDispatchIIEQty, and SettlementIntervalRealTimeLMP. Please correct the appropriate documentation.</p>		
02/04/2008	S-56	MRTU Implementation Inbox	<p>Please confirm that the Dispatch Interval Exceptional Incremental IIE Bid Price applies only to the Incremental Exceptional Energy quantity and the flip-side of that (Dispatch Interval Exceptional Decremental IIE Bid Price applies to Decremental Exceptional Energy quantity).</p>	03/31/2008	<p>The Exceptional Dispatch IIE Bid Price applies both to the Incremental Exceptional Energy quantity and the Decremental Exceptional Energy quantity. Please review latest Charge Code requirements.</p>
02/04/2008	S-57	MRTU Implementation Inbox	<p>For the Positive/Negative UDP charge type: In the compliance monitoring document it specifies how to calculate DOPD for non-dynamic resources as:</p> <p>"DOPD for Non-Dynamic System Resource [MWh] = System Resource Checkout/6 – Expected Energy"</p> <p>What exactly is the System Resource Checkout? How would it be calculated?</p>	3/31/2008	<p>System Resource Checkout means the E-tagged quantity for the Static System Resource. This is equivalent to the agreed upon amount of MW that will flow into the CAISO.</p>