

### Validation of CRR Notional Value

The purpose of this document is to provide some guidance on how to validate CC6700 notional value amounts using OASIS LMP/MCC pricing data and CMRI CRR Revenue Adjustment Details report or the CMRI Revenue Adjustment report. The CMRI details report provides data at the CRR ID, while the CMRI Revenue Adjustment report shows data at an aggregated CRR level. Prior to the implementation of CRR 1B, CRR participants would use the OASIS LMP/MCC pricing data to compare to the CC6700 Settlements data to provide some assurance that the CRRs were being settled properly. With the new CRR 1B CRR settlement process the data that participants see is at a different granularity than what they used to see so the process to perform a similar type validation will involve additional data and a few more steps. This document will provide the list of additional data that is required and where to get it and the steps needed to get to the same validation process that used to be performed with only the LMP/MCC data.

#### Data Needed

There are three sets of data needed to validate the CRR notional value.

- 1) LMP/MCC data from OASIS – This is the same data that CRR participants would have collected before the implementation of CRR 1B
- 2) CMRI CRR Reports – There are now two CMRI CRR reports made available to participants, one is an aggregated report (CRR Revenue Adjustment report) and the newer report is at the CRR ID level (CRR Revenue Adjustment Details report). The CRR ID level report is at the same granularity that CRR participants used to see their CC6700 CRR settlements at. This means that the netting that was done for purposes of CC6700 and for settling GMC charges prior to CRR 1B is the same. For example if a CRR participant is an LSE and has load migration it is possible to have an allocated CRR ID #1 from A to B for 10MW and a load migration CRR ID #5 from B to A for 1MW. On the CMRI CRR Revenue Adjustment Details report there would be one record to reflect this ownership. The report would show CRR ID #1 from A to B for 9MW.
- 3) CC6700 Settlements Statement – CC6700 is a daily settlement so CRR participants will now see daily settlements by constraint.

#### Validation Steps

The following steps will provide a validation of the notional value for a CRR portfolio. For purposes of this example we are using trade day 3/25/2019. Along with this write up please refer to the CRR 1B Notional Value Validation Example Data spreadsheet.

- 1) The first step is the same as participants would have done prior to CRR 1B, obtain the MCC pricing data for the CRR Holders portfolio from OASIS. The MCC at the sink minus the MCC at the source times the netted MW amount (as described in bullet #2 above) will provide the CRR notional value. The MCC data aggregates the shift factor times all binding constraints for any source/sink CRR pair.

Example:

CRR\_ID = 1031  
 SINK =SLAP\_PGST-APND  
 SOURCE = MALIN\_5\_N101  
 TOU = ON  
 TRADE\_HOUR = HE 8  
 SINK MCC = -1.65582  
 SOURCE MCC = -10.54773  
 CRR MW = 22.658  
 CRR payment prior to CRR1B = CRR\_MW \* (SINK MCC – SOURCE MCC)  
 = 22.658 \* 8.89191 = \$201.47

For all interface related source or sink locations you must pull the SP-Tie LMP/MCC data. To identify the appropriate Tie location to use for pricing CRRs please refer to the Source and Sink APNode list posted on the CRR webpage at:

<http://www.caiso.com/market/Pages/ProductsServices/CongestionRevenueRights/Default.aspx> .

- 2) The next step involves pulling the CMRI data to get the notional value of the CRR portfolio. For purposes of this example we will use the CRR Revenue Adjustment Details report, which provides notional value data at the CRR ID level by constraint. In order to tie back to the data that was derived from step 1 above filter on the HE8 time period and further filter for CRR ID 1031. The data will show the notional value for each constraint related to CRR ID 1031. In this example there were two binding constraints that CRR ID 1031 had a shift factor to. By summing up the notional values of the two binding constraints you will get \$201.47 which equals the value calculated in step #1 above. After this step you will have validated the notional value for each CRR at the constraint level. Once you have validated that the notional values in the CMRI CRR Revenue Adjustment Details report ties out to the calculated MCC notional value the final step is to aggregate this data to the daily constraint level in order to validate your CC6700 settlement statement.
- 3) The CC6700 settlement statement is at the daily, constraint level. For this example we have removed certain billing attributes that don't provide any additional information to make the data easier to view so on your actual statement you will see more data elements/attributes than in this example. To view the notional value used in the calculation of CC6700 you will need to look at the BA bill determinant file and select the BILL\_DETERMINANT\_NAME equal to BA\_DAY\_CRR\_NOTIONAL\_AMT from your "Business Associate (BA) Bill Determinants" file from MRI-S. If you sum the values we validated in step #2 above at the daily constraint level, the value in the row BA\_DAY\_CRR\_NOTIONAL\_AMT will tie back to these values.