

Congestion Revenue Rights Study

CRR Analysis Working Group

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DC Energy submits transparency is a critical tool for efficient market results

- **FERC recognizes in AD14-14 that transparency plays a critical role in improving price formation**
 - “Ideally, the locational energy market prices in the energy and ancillary services markets would reflect the true marginal cost of production, taking into account all physical system constraints, and these prices would fully compensate all resources for the variable cost of providing service” - Price Formation Notice, Docket No. AD14-14-000, at 2 (June 19, 2014)
- **Transparency enables hedging of market transactions**
 - Allows resource owners to better understand and mitigate the deliverability risk of energy schedules, i.e. constraints caused by an outage or ISO operational practices might impact the ability of a resource to source contracted energy
- **Transparency fosters competition and prices that reflect underlying market risks**
 - Transparency into the fundamental drivers of energy prices allow market participants to compete for investment opportunities and rationalize the cost of products between ISO sequential markets



The CAISO's CRR study is an important first step in identifying potential market inefficiencies and appropriate solutions

- **The DMM has raised perceived issues regarding the spread between the purchase price and congestion rents paid to CRR holders**
- **Before jumping to conclusions and any solutions the ISO has initiated a review the CRR market**
- **The CAISO is well suited to study the drivers of market pricing results**
 - CAISO has the information necessary to conduct this type of study
 - Gets to the root of the issue
 - Allows for more appropriate solutions to be discovered



Drivers of artificial risk, operational changes, and market events must be reviewed in order to explain market results

List of items to review

- **Information asymmetries between CAISO markets that could be addressed with improved practices**
 - Impact of late-scheduled outages
 - Lack of advanced notification for the introduction of CAISO-initiated nomograms (e.g. introduction of the crosstrip nomogram in late December 2016)
 - Outage posting improvements delivered on June 1, 2016
- **CAISO operational and modeling practices that could be improved**
 - Congestion management practices (e.g. inconsistent application across markets and general transparency to operational procedures for managing congestion)
 - Consistency of contingency modeling between CRR and IFM
 - Impact of introducing nodal group constrains in the CRR market starting in the Summer of 2014
- **Review market events producing energy price volatility (e.g. SONGS retirement, extreme heat/drought)**



Risk profiles and market uncertainty must be considered when comparing forward market prices to actual settlement

Risk considerations

- **Explaining price differentials between forward markets and spot prices must be performed with a keen awareness of market uncertainty and market risk profiles**
 - The premise that CRR auction revenues will have to exactly offset payments to CRR holders for the CRR auction market to be deemed efficient is incorrect
 - Market uncertainty is a key determinant in comparing price differentials between markets. Even in a forward market where all key market inputs are known, risk premium/discount arise due to uncertain outcomes
 - The risk appetite of participants in the market is another key determinant of the price paid for a forward investment and must be considered when explaining price differentials