

Market Monitor Report

MC Webinar

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Joe Bowring



Monitoring Analytics

2019/2020 RPM Base Residual Auction Sensitivity Results

Scenario	Scenario Description	Scenario Impact		
		RPM Revenue (\$ per Delivery Year)	RPM Revenue (\$ per Delivery Year)	Percent
0	Actual Results	\$6,999,893,108	NA	NA
1	Revised Shape of the VRR Curve	\$6,584,436,158	\$415,456,950	6.3%
2	ComEd CETL at 2017/2108 Level	\$6,612,836,020	\$387,057,088	5.9%
3	Forecast Peak Load Reduced by 2.6 Percent	\$8,101,386,204	(\$1,101,493,096)	(13.6%)
4	Net Revenue Offset Calculation	\$6,956,448,094	\$43,445,014	0.6%
5	Inclusion of DR/EE Offers	\$9,099,465,731	(\$2,099,572,623)	(23.1%)
6	Inclusion of EE Offers and EE Add Back	\$6,905,618,435	\$94,274,673	1.4%
7	EE Cleared MW Equal to EE Add Back MW	\$6,983,867,441	\$16,025,667	0.2%
8	Inclusion of Base Capacity DR/EE Offers	\$8,206,198,971	(\$1,206,305,862)	(14.7%)
9	Inclusion of CP DR/EE Offers	\$6,861,332,713	\$138,560,395	2.0%
10	Inclusion of 75 Percent of Offers for External Generation	\$7,089,724,034	(\$89,830,926)	(1.3%)
11	Inclusion of 50 Percent of Offers for External Generation	\$7,280,090,853	(\$280,197,745)	(3.8%)
12	Inclusion of 25 Percent of Offers for External Generation	\$7,399,063,952	(\$399,170,844)	(5.4%)
13	Inclusion of Base Capacity and Base Capacity DR/EE Offers	\$12,248,291,567	(\$5,248,398,459)	(42.9%)
14	Inclusion of Base Capacity and Base Capacity DR/EE Offers, and CP DR/EE Offers	\$13,595,336,649	(\$6,595,443,541)	(48.5%)
15	Inclusion of Base Capacity and Base Capacity DR/EE Offers, CP DR/EE Offers, and 50 Percent of Offers for External Generation	\$14,599,974,126	(\$7,600,081,018)	(52.1%)

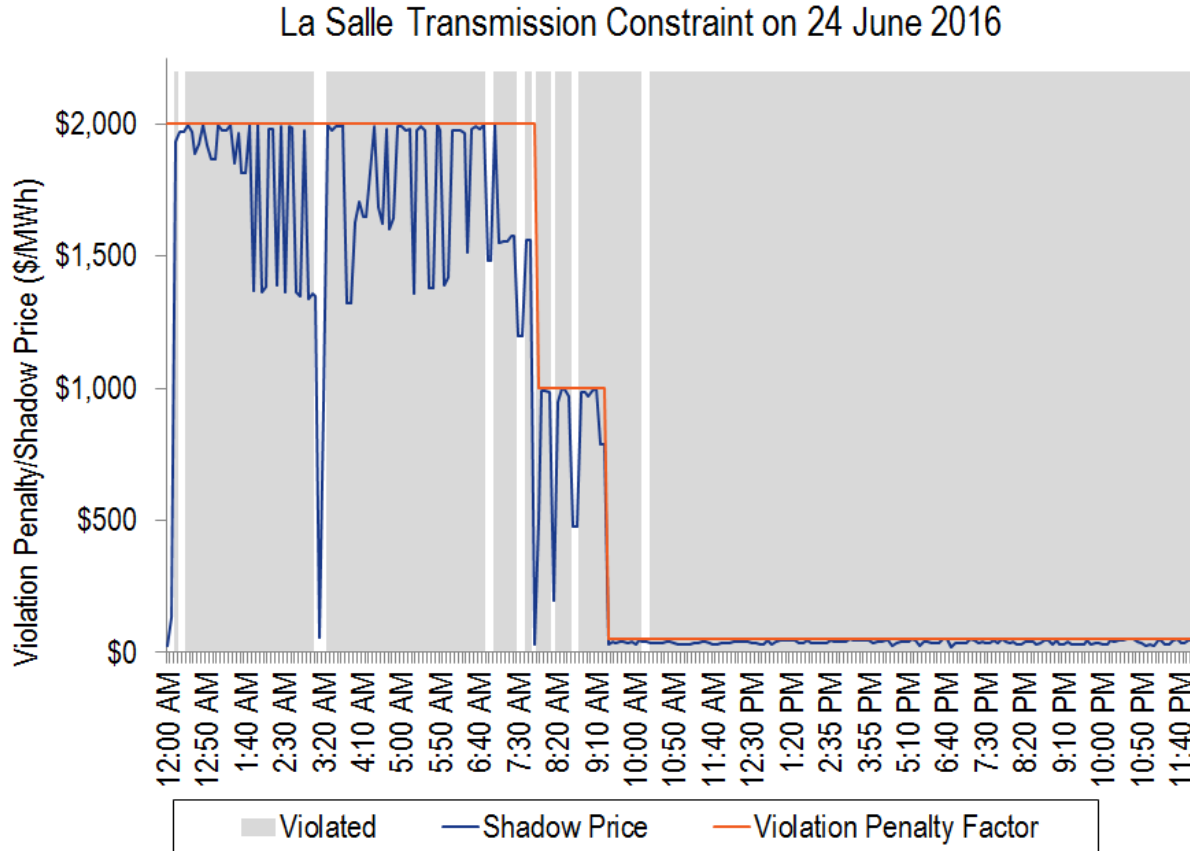
Transmission Constraint Penalty Factors

- **In the PJM dispatch model, transmission constraints are allowed to be violated under some conditions; flow is allowed to exceed the specified line limit**
- **Violated transmission constraints have defined penalty factors**
- **LMPs are affected by the penalty factors**
- **LMPs reflect the local scarcity**
- **PJM states that PJM does not use penalty factors in setting LMPs (PJM response to 2015 SOM)**

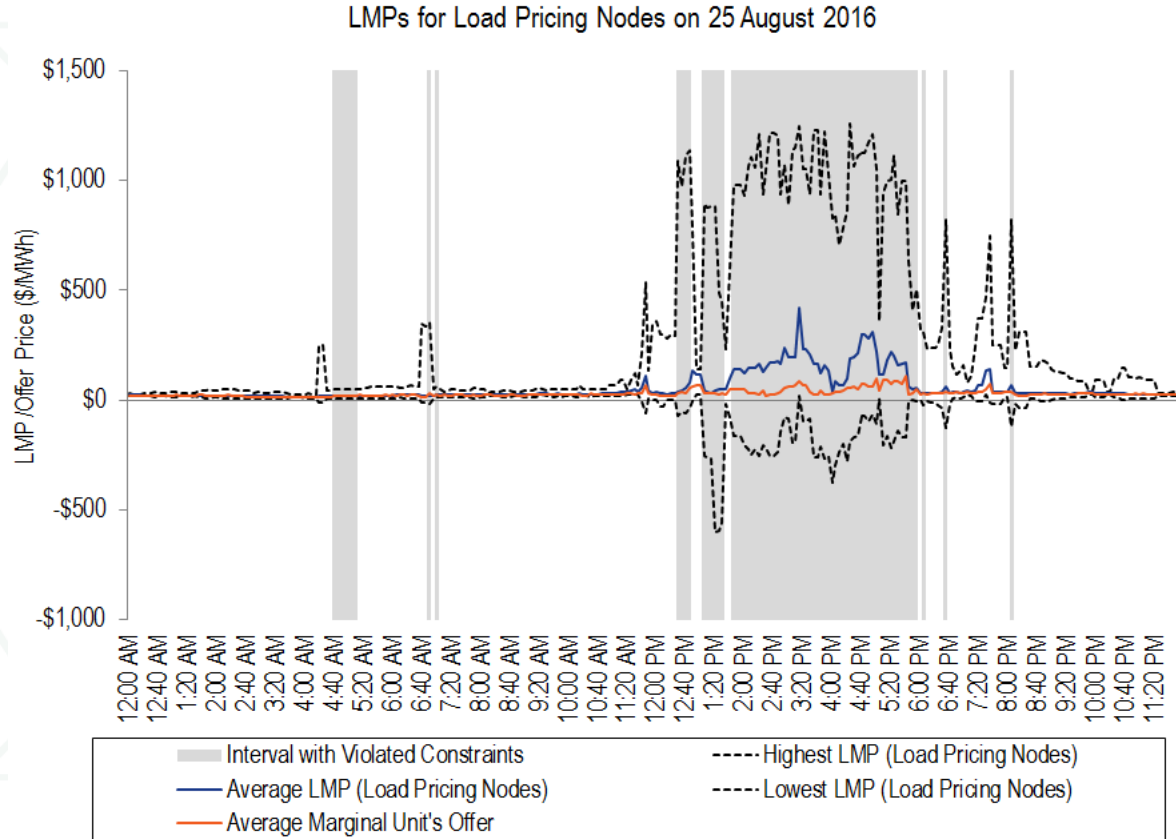
Constraint Relaxation Logic

- **The shadow price of a violated constraint should equal the transmission penalty factor**
- **PJM uses a method called “constraint relaxation logic” to affect shadow prices of violated transmission constraints**
- **The logic typically results in reducing the shadow prices to be slightly below the defined constraint violation penalty factor**
- **LMP is not related to marginal unit offers**

Relationship between Shadow Price and Violation Penalty Factor



Example of Violation Penalty Factors Affecting LMPs



MMU Recommendations

- **The MMU recommends that PJM explicitly state its policy on the use of transmission penalty factors including: the level of the penalty factors; the triggers for the use of the penalty factors, the appropriate line ratings to trigger the use of penalty factors, the allowed duration of a violation, and when the transmission penalty factors will be used to set the shadow price.**
- **The MMU recommends that PJM explicitly state its policy on the use of constraint relaxation logic and price setting logic.**

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

