

Market Monitor Report

MC Webinar

December 14, 2020

IMM

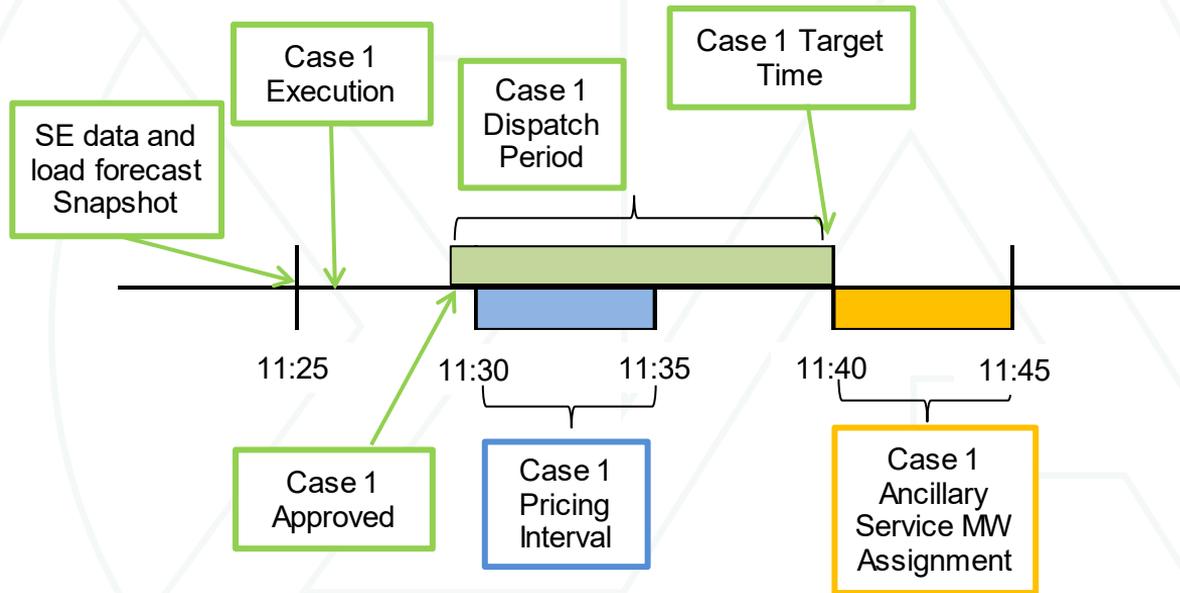


Monitoring Analytics

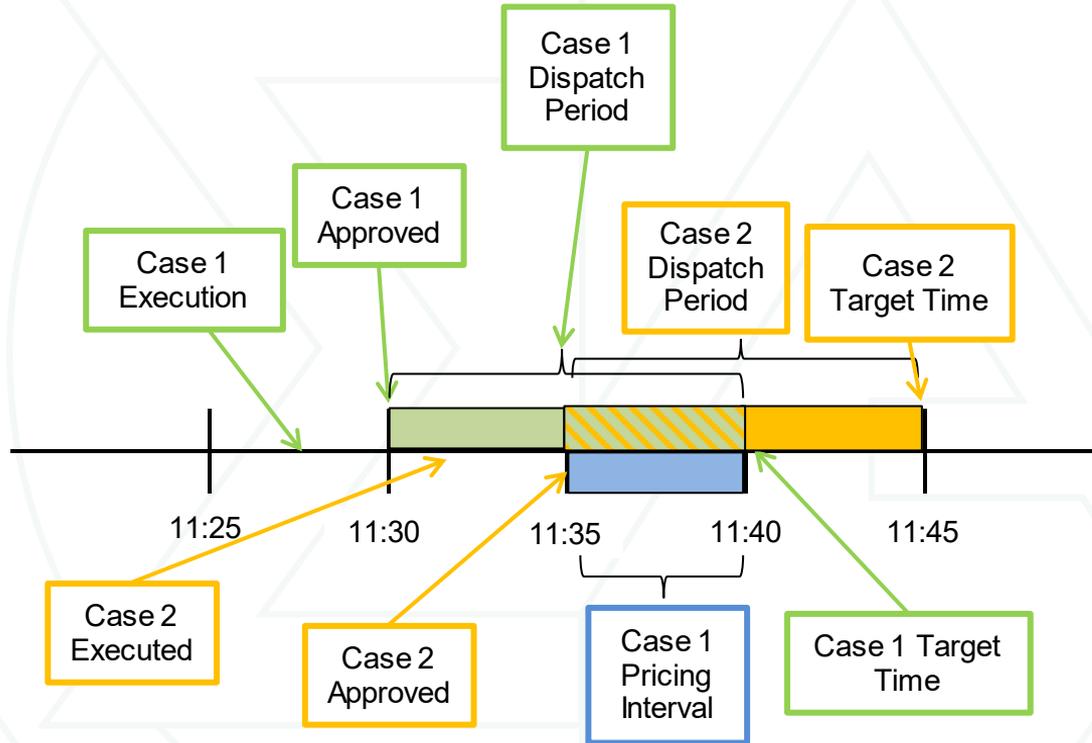
Five Minute Dispatch and Pricing

- **PJM implemented the short term changes to the five minute dispatch and pricing process on October 15, 2020.**
- **Prior to October 15, LPC used the latest approved RT SCED solution available regardless of the target time of the solution.**
- **Since October 15, LPC uses the latest approved RT SCED solution with the same target time as the end of the five minute pricing interval.**
- **These changes made the mismatch between dispatch and pricing worse.**

Pricing and dispatch: Pre Oct 15, 2020



Pricing and dispatch: Post Oct 15, 2020



Dispatch and Pricing Alignment

- **From October 15 through November 30, 2020, prices were consistent with dispatch, on average, for only 38 seconds out of each five minute interval.**
- **Prices reflected the current dispatch instructions only 9.9 percent of the time.**
- **If done perfectly, prices would never have been consistent with dispatch. The small remaining overlap was the result of delays in approving the second RT SCED solution.**

Dispatch and Pricing Alignment

Period	RT SCED Automatic Execution Frequency	Dispatch Duration Reflected in Prices (Minutes:Seconds)	Percent Dispatch Duration Reflected in Prices
Jan 1, 2020 - Feb 23, 2020	Every 3 minutes	03:11	67.9%
Feb 24, 2020 - Jun 22, 2020	Every 4 minutes	03:27	67.2%
Jun 23, 2020 - Oct 14, 2020	Every 5 minutes	03:37	70.1%
Oct 15, 2020 - Nov 30, 2020	Every 5 minutes	00:38	9.9%

Dispatch and Pricing Alignment

- **Low overlap between dispatch and pricing due to:**
 - **Use of 10 minute ramp time in SCED, with prices in LPC for five minute intervals.**
 - **Dispatch signals sent about 10 minutes ahead of target time (slightly more than 10 minutes), while prices apply to five minute interval ending at target time.**
- **Prices lag dispatch signals by about five minutes.**
- **Long term solution will reduce ramp time in SCED to five minutes, aligning prices with dispatch signals.**

Intermediate Term Changes

- **PJM changed the automatic execution times for RT SCED:**
 - **February 24, 2020: from one case every three minutes to one case every four minutes.**
 - **June 22, 2020: changed from one case every four minutes to one case every five minutes.**
- **Dispatchers continue to have the ability to manually execute additional RT SCED cases at any time.**
- **Result was fewer approved RT SCED solutions.**
- **Result was more approved RT SCED solutions reflected in prices.**
- **Made mismatch between dispatch and pricing worse.**

Approved RT SCED Solutions in Prices

Month (2020)	Number of RT SCED Solutions	Number of Approved RT SCED Solutions	Number of Approved RT SCED Solutions Used in LPC	RT SCED Solutions Used in LPC as Percent of Approved RT SCED Solutions
Jan	51,022	11,860	7,612	64.2%
Feb	46,247	10,149	7,005	69.0%
Mar	38,680	9,914	7,799	78.7%
Apr	36,543	8,888	7,132	80.2%
May	36,648	9,416	7,590	80.6%
Jun	34,327	9,165	7,666	83.6%
Jul	30,342	9,241	8,190	88.6%
Aug	30,775	8,962	7,868	87.8%
Sep	30,632	8,972	7,881	87.8%
Oct	32,429	9,145	8,199	89.7%
Nov	30,360	8,695	8,004	92.1%
Dec				
Total	398,005	104,407	84,946	81.4%

Southeast Interface Pricing Point

- **PJM consolidated the Southeast and Southwest interface pricing points to a single interface with separate import and export prices (SouthIMP and SouthEXP) on October 1, 2006.**
- **PJM should replace SouthIMP and SouthEXP with a single South interface pricing point.**
- **The definitions of SouthIMP and SouthEXP are identical.**
 - **The values vary only when there is a failure to reflect actual line outages on virtual buses.**

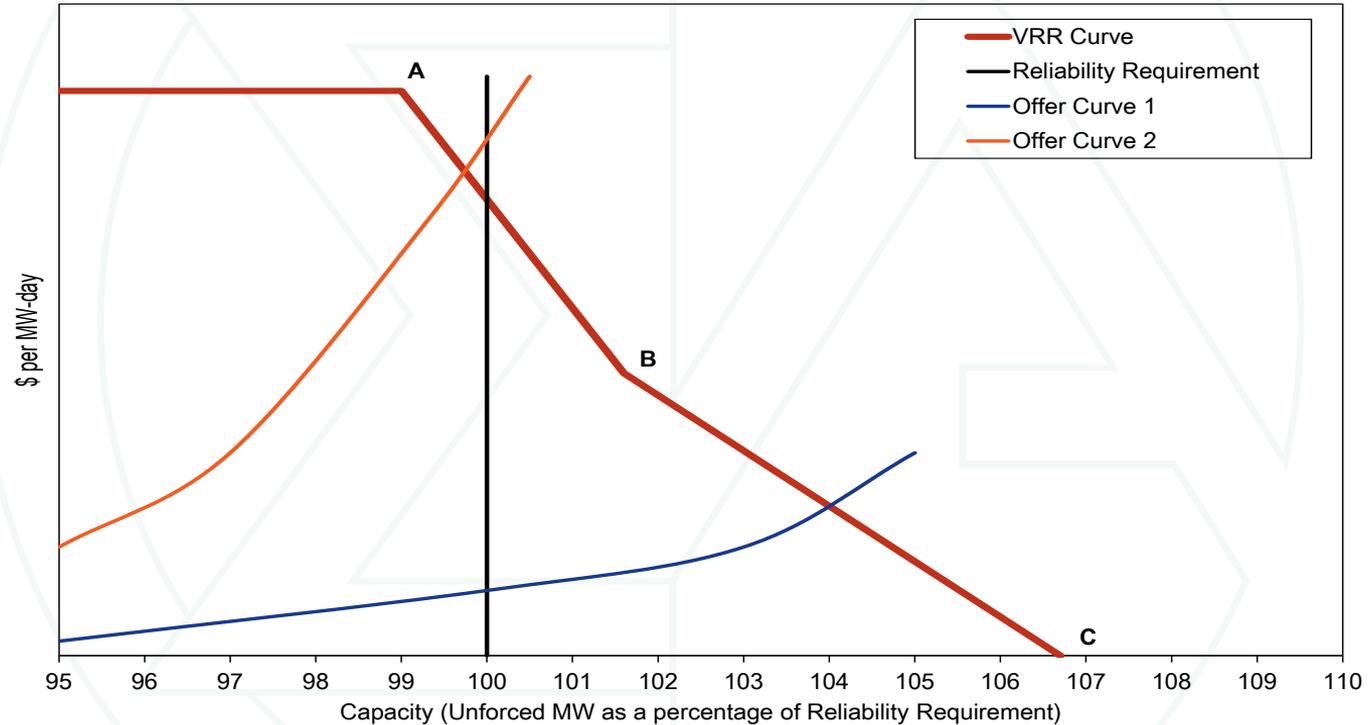
Southeast Interface Pricing Point

- **The real-time Southeast interface pricing point remains only to price energy under the reserve sharing agreement with VACAR.**
- **The Southeast interface pricing point is not eligible for INCs, DECAs or UTC transactions, or for FTRs.**

Southeast Interface Pricing Point

- **There are no provisions for grandfathering the Southeast interface pricing point in the VACAR reserve sharing agreements.**
- **The Southeast interface pricing point should be immediately terminated and any future emergency transactions scheduled under the VACAR reserve sharing agreement should be priced at the SouthIMP/EXP pricing point.**
 - **In the event future changes are made to the SouthIMP/EXP pricing points, these transactions should be assigned to the applicable default pricing point for that area.**

VRR curve impact on customer payments



CRF Issues

- **CRF: capital recovery factor**
 - **A rate, multiplied by the investment, which provides for a return on and of capital over a defined time period**
 - **CRFs are calculated using a standard financial model that accounts for the weighted average cost of capital and its components, including depreciation and taxes.**
 - **For example, a five year CRF will allow the recovery of 100 percent of the investment plus a return over five years.**

CRF History

- **The CRF table was created in 2007 as part of the new RPM capacity market design**
 - **The CRF table provided for the accelerated return of incremental investment in capacity resources based on concerns about the fact that some old units would be making substantial investments related to pollution control.**
 - **The same CRF table was used in the black start rules.**



CRF Issues

- **The CRF table includes assumptions that are no longer correct. The CRF values are significantly too high.**
 - **Tax depreciation rules reduce taxes**
 - **Corporate tax rate lower**
- **CRF tables should be revised immediately.**
 - **Capacity market tariff.**
 - **Black start tariff.**
- **The IMM posted a market message on CRF issue.**
 - **Attached**

Notification of Subpoena

- https://www.monitoringanalytics.com/reports/Market_Messages/Messages/IMM_Notification_to_Members_of_Subpoena_20201209.pdf



Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

